

# Targeted Industrial Investment Projects of Qingdao

(Year 2010)

Qingdao Municipal Economic & Information Promotion Commission  
Office of Qingdao Municipal Leadership Team for Targeted Investment  
Promotion and Industrial Adjustment and Development

February 2010

# **Organizational Structure of Qingdao Municipal Leadership Team for Targeted Investment Promotion and Industrial Adjustment and Development**

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Zhang Hui, Member of the Standing Committee of the Municipal Party Committee and Vice Mayor of Qingdao

Wu Jingjian, Vice Mayor of Qingdao

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## **Office of the Leadership Team**

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**Member Organizations:** Qingdao Economic & Information Technology Committee, Qingdao Municipal Development and Reform Committee, Qingdao Municipal Bureau of Commerce, Qingdao Municipal Bureau of Science and Technology, Qingdao Municipal Commission for State-owned Assets Supervision and Administration, Qingdao Municipal Office for Economic Cooperation, Qingdao Municipal Foreign Affairs Office, Qingdao Municipal Taiwan Affairs Office, Qingdao Municipal Overseas Chinese Affairs Office, Qingdao Municipal Council for the Promotion of International Trade, Qingdao Municipal Bureau of Finance, Qingdao Municipal Urban Planning Bureau,

Qingdao Municipal Public Utility Administration, Qingdao  
Municipal Land & Housing Administration, Qingdao Municipal  
Bureau for Environmental Protection, Qingdao Municipal  
Ocean & Fishery Administration, Qingdao Municipal State  
Tax Bureau, Qingdao Municipal Local Tax Bureau,  
Qingdao Municipal Bureau for Investment Promotion,  
Qingdao Municipal Office for Administrative Supervision,  
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## Home Appliances and Electronics Industries

Project No: A1-1001001

Project Name: Magnetic Refrigeration Technology

Description: This technology can be used in air-conditioners and refrigerators to improve refrigerating efficiency, reduce noise, and minimize pollution to the environment. The intellectual property rights will be jointly owned by the parties involved. The term of the project is from January 2010 to December 2011.

Project No: A1-1001002

Project Name: Plasma Sterilization Technology

Description: This technology can be used to kill germs and remove odors in air-conditioners and refrigerators. The intellectual property rights will be jointly owned by the parties involved. The term of the project is from January 2010 to December 2011.

Project No: A1-1001003

Project Name: Stack Mold Technology

Description: With this technology, the productivity for plastic products may double or redouble. Currently, our company has finished design and manufacturing processes for stack molds through independent research and development. Now we need related technological support.

Project No: A1-1001004

Project Name: Infrared and Electromagnetic Induction Technology

Description: This project involves technical exchanges with leading manufacturers of

infrared and electromagnetic induction products.

**Project No:** A1-1001005

**Project Name:** DTS Technology

**Description:** DTS (Digital Theater System) provides more perfect sound effects than CD and Dolby systems and thus can provide the best 5.1 surround sound systems. DTS technology belongs to DTS Corporation in the US. The term of the project is 5 years.

**Project No:** A1-1001006

**Project Name:** Embedded System-based Facial Recognition Technology

**Description:** Through recognition of unusual facial features (e.g. a masked face), the system will provide warnings.

**Project No:** A1-1001007

**Project Name:** ATM Remote Data Real-time Collection and Transmission Technology

**Description:**

1. ATM Remote Data Real-time Collection and Transmission Technology;
2. Including ID recognition information, image and photo information, etc; and
3. Real-time interfacing with corresponding alarm systems.

**Project No:** A1-1001008

**Project Name:** OFDM-based Power Line Communication Technology

**Description:** This project involves the development of an OFDM-based power line communication network with a transmission rate of 100K bits/s. It is expected to start production by the end of next year. It can be jointly developed with an IC design company.

**Project No:** A1-1001009

**Project Name:** Power Line Communication Network Technology

**Description:** This project involves the development of a platform with 3-layer communication protocols (transmission layer, network layer and link layer) embedded in communication chips. Like an Internet platform, this one is independent of specific applications. Based on this platform, a variety of applications will be developed. It is expected that there will be a huge market for communication chips based on power line communication network protocols.

**Project No:** A1-1001010

**Project Name:** Embedded System Development Platform

**Description:** In the course of embedded system development, different development platforms are usually required for different industries and products. In particular, there are a lack of platforms for the development of new technologies and products such as 3G embedded software. Embedded system development platforms provide support for layers from OS, development platform to driver and product.

**Project No:** A1-1001011

**Project Name:** Intelligent Tire Production Technology

**Description:** Intelligent tire products are a new direction for product research and development. The RFID technology is relatively mature. Pressure and temperature sensors, RFID and sensor packaging and signal testing techniques are required for intelligent tire production.

**Project No:** A1-1001012



**Project Name:** Digital Home Production Technology

**Description:** The development of STBs which have the functions of media access, Internet access, media center (online and local media players), security, alarm, and the dissemination of information (district management) are available for digital homes. We are seeking technical partners in order to integrate external services into STBs and develop integration protocols for control of other appliances.

**Project No:** A1-1001013

**Project Name:** Robot Technology

**Description:** This project involves the introduction of robot technologies (reconfigurable hybrid robot key technology, typical robot modular component design, robot modular structure design, technological research for bionic robot components, micro-robot technology, etc.). The term of the project is from January 2010 to December 2011.

**Project No:** A1-1001014

**Project Name:** High-efficiency Heat Exchange Technology for Air-conditioning Systems

**Description:** This project involves the analysis of heat exchange capacity of copper pipes, aluminum foil or similar materials using funds and facilities provided by enterprises and the development of high-efficiency, material-saving and low-noise solutions.

**Project No:** A1-1001015

**Project Name:** Flow Field, Vibration Research and Noise Control Technologies for Air-conditioners

**Description:** This project involves the researching of air ducts, flow fields and piping in air-conditioners using funds and facilities provided by enterprises; simulation and analysis

by means of software; the production of jade models and mathematical models for the purposes of testing, evaluating and modifying; and creation of applicable software systems.

**Project No:** A1-1001016

**Project Name:** Pro: Idiom Technology

**Description:** Pro: Idiom is a digital television encryption technology which provides P2P protection for television networks in hotels. Pro: Idiom technology is owned by the Zenith Corp. in the US. The term of the project is 5 years.

**Project No:** A1-1001017

**Project Name:** Development of TD-LTE (4G) Terminal Technology

**Description:** 1. TD-LTE data card radio frequency, baseband circuit research, development of key indices, and solutions to platform chip design problems in circuit and PCB design;

2. Supporting PLMN search, measuring, district reselection, switch and high-speed data grouping between TD-LTE and TD-SCDMA;

3. Research and development of TD-LTE testing technology, establishment of related research and development, testing and calibration facilities, and basic equipment for follow-up TD-LTE product development;

4. Research and development of TD-LTE data card related production techniques including testing software and terminal equipment calibration software in order to solve problems affecting mass production;

5. Testing of instruments, networks and chips in order to detect problems concerning network construction, standards and norms, and solve TD-LTE related technical problems.

The term of the project is from January 2010 to December 2011.

**Project No:** A1-1001018

**Project Name:** Single-stage Auto Cascade Super-low Temperature Refrigeration

**Technology**

**Description:** This project involves the application of mixed refrigerants and refrigeration systems, joint research and development, basic testing, parameter measurement and simulative analysis, performance verification using self-developed prototypes, and the application of verified products. The ownership of related intellectual property rights is to be determined through friendly negotiation. Information and products developed under this project shall not be revealed to third parties without the consent of the project owner.

**Project No:** A1-1001019

**Project Name:** Power Line Communication Data Compression Technology

**Description:** Highly efficient data compression is important to the reliability of power line communication. General data compression technology is applicable to long messages, but short messages cannot be compressed. Considering that power line communication technology mostly involves short messages, this project focuses on solving compression problems related to short messages.

**Project No:** A1-1001020

**Project Name:** Analytical Technology for Power Line Communication

**Description:** The causes for the nonconformity between phenomenon and substance in power line communication are complicated. This project is aimed at studying the basic nature and discovering the basic rules of power line communication. It is as important and significant to power line communication technology as Ohm's Law is to electricity. Since

related academic research from home and abroad is not available in this area, joint intellectual efforts are required to accomplish this project.

**Project No:** A1-1001021

**Project Name:** Active Noise Reduction Technology

**Description:** Active noise reduction technology is a revolution in the noise reduction field. It involves the establishment of a secondary sound field in the target sound field with the same sound intensity but in an inversed phase. It eliminates noise by using man-made sounds based on wave interference theory. This technology can be used to reduce the noises of home appliances such as gas ranges and air-conditioners. It can also be used to reduce the noise in rooms, central air-conditioning systems and automobiles. The project can be accomplished through technology introduction. The term of the project is from January 2010 to December 2011.

**Project No:** A1-1001022

**Project Name:** Fingerprint Recognition, Palm Vein Scan and Related Bionic Recognition Technologies

**Description:** This project involves the use of fingerprint recognition algorithm and control software as well as other bionic recognition techniques such as face and iris recognition.

**Project No:** A1-1001023

**Project Name:** Photo-transmission Platform

**Description:** This Company is willing to cooperate in research and development with domestic and foreign partners the fields of photo-transmission products, fiber optic cables for home transmissions (EPON), high-power lasers and photo shunts (PLC or FBT). The

Company can provide land and facilities as part of its participation. Partners are welcome to negotiate for cooperation with their own projects or products.

**Project No:** A1-1001024

**Project Name:** Big Dipper Time Service

**Description:** This project proposes to utilize time service provided by the Big Dipper satellite navigational and positional system to develop civilian time apparatuses such as clocks and watches. The technology for this project should equal highest international levels and production should reach an annual turnover of RMB 80 million and tax RMB 10 million.

**Project No:** A1-1001025

**Project Name:** Intelligent Traffic Management and Information Systems for Urban Areas

**Description:** Rapid urbanization in China has created immense traffic pressure and congestion in urban areas. These are serious problems which will require research and development of key technologies for intelligent traffic management and information systems for urban areas. At present, no domestic institute has the core technology or plans for such research and development. Therefore, foreign cooperation is urgently required to introduce the technology, provide designs and “know-how” to develop an overall program for intelligent traffic management and information systems. It is anticipated that mature products will be imported as an initial step. Through the use these products, key technologies will be mastered allowing the development of our own products with independent intellectual property rights.

## **Petrochemical and Chemical Industries**

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**Project No:** A2-1001001

**Project Name:** Light Catalyst Stabilization Technology

**Description:** TiO<sub>2</sub> photo Catalyst has many shortcomings such as bad adsorption of organics, low collection of harmful pollutants, high aggregation rate and low recovery rate.

The purpose of this project is to:

1. Seek international experts or domestic university specialists and professors in this field;
2. Seek capital support for technical development.

**Project No:** A2-1001002

**Project Name:** Photo Catalyst Activity Analytical Technology

**Description:** One of the main factors affecting photo catalyzing effect is that nm-TiO<sub>2</sub> may lose its strong oxidizing effect after electrons and hole pairs are generated under ultraviolet rays. This purpose of this project is:

1. To seek international experts or domestic university specialists and professors in this field;
2. To seek capital support for technical development.

**Project No:** A2-1001003

**Project Name:** Related Equipment for Photo Catalytic Water Treatment Technology

**Description:** Currently, most photo catalyzing technology research is done in laboratories in China, but few research results are put into production. One of the main reasons is the lack of related equipment. The purpose of this project is:

1. To seek international experts or domestic university specialists and professors in this field;

2. To seek capital support for technical development.

Project No: A2-1001004

Project Name: Low-energy-consuming Drying Technology

Description: Silicon products need a lot of steam for drying. With the rise in the price of steam, production costs are increasing. Low-energy-consuming drying technology is required for the purpose of reducing production costs.

Project No: A2-1001005

Project Name: Acid Gas Sulfur Recovering Catalyst Technology in Oil Refining and Coal Chemical Industry

Description: Jointly development of acid gas sulfur recovering Catalyst technology in oil refining and coal chemical industry.

Project No: A2-1001006

Project Name: T534, New-type Condensate-reducing Agent, Crude Oil Demulsifying Agent and Diesel Stabilizer Production Technology

Description:

1. T534 is used to improve the production technology for high-grade lubricants, reduce production cost, and improve anti-oxidation performance and marketing of products;
2. New-type condensate-reducing agent is mainly used to reduce the setting point and cold filter plugging point of diesel oil and improve its filtering and pumping performance. It is also used to reduce the setting point of fuel. Condensate-reducing agent is classified into two types, one for crude oil and one for diesel oil. Crude oil agent is used to facilitate transmission of crude oil while diesel agent is used to increase the yield of diesel oil and

reduce the production cost;

3. Crude oil demulsifying agent is used to increase the yield of crude oil at oil refineries by separating crude oil faster and better;

4. Diesel Stabilizer: Without the existence of a hydrogenation unit, diesel stabilizer can delay the coloring of diesel oil, improve its stability and keep its cost below 30.00 RMB per ton.

**Project No:** A2-1001007

**Project Name:** Research and Application of CPE Rubber in Rubber Processing; Caustic Soda Consumption of Fine Chemicals

**Description:**

1. Application of CPE rubber in the rubber processing field;
2. Extension of chlorine and caustic soda applications;
3. Pollutant control and treatment technologies.

**Project No:** A2-1001008

**Project Name:** Powder Recycling Technology for Catalyzing/Cracking Units in Oil Refineries

**Description:** Key powder recycling technology for catalyzing/cracking units in oil refineries.

**Project No:** A2-1001009

**Project Name:** Soda, Biological and Fine Chemical Technology

**Description:** Research and development of soda, biological and fine chemicals.



Project No: A2-1001010

Project Name: Development of Stealth Coating Technology

Description: Key microwave absorption stealth material technologies.

Project No: A2-1001011

Project Name: Fuel Alcohol and Biological Diesel Technology

Description: Biological fuel alcohol and diesel composition technology.

Project No: A2-1001012

Project Name: Technology for High Value-added, Environment-friendly Products

Description: Development of high value-added resin products.

Project No: A2-1001013

Project Name: Extended Application of Fluorocarbon Resin Emulsion,  
Polychlorotrifluoroethylene, etc

Description: Improvement of properties of trifluoroethylene materials and extended application; leather coating modifying technology.

Project No: A2-1001014

Project Name: Technology for Caustic Soda-consuming Fine Chemicals

Description: Research on the application of CPE rubber in the rubber processing industry; caustic soda-consuming fine chemicals (proven technology and market).

Project No: A2-1001015

Project Name: Technology for Ultra-high Molecular Weight Polyethylene (UHMWPE)

## Oil Well Pipes

**Description:** Geographic conditions and the depth of oil wells impacts UHMWPE pipes. The restitution coefficient of UHMWPE varies with changes in the environment, temperature and geologic conditions. If the UHMWPE pipe in the steel pipe is shorter than required, the well pipes cannot be joined. A gap is left in between and the exposed pipe will be subject to wear and corrosion. If the UHMWPE pipe is longer, the plastic will elongate after restitution takes place under high temperature affecting and even obstructing movement of the pumping rod. In order to promote and improve the application of UHMWPE pipes, problems such as restitution coefficient and underground temperature coefficient must be solved.

**Project No:** A2-1001016

**Project Name:** Application of Sodium Metasilicate in Dyeing Additives

**Description:** Application technology for sodium metasilicate in dyeing additives and application of dyeing additives in textile products.

**Project No:** A2-1001017

**Project Name:** Application of Sodium Metasilicate in Petroleum Drilling

**Description:** Application technology for quick-dissolving sodium silicate and sodium metasilicate in petroleum drilling.

**Project No:** A2-1001018

**Project Name:** Application of Sodium Metasilicate in Quick-drying Concrete Engineering

**Description:** Application technology for quick-dissolving sodium silicate and sodium metasilicate in quick-drying concrete engineering.

Project No: A2-1001019

Project Name: Sustained / Controlled Release Technology

Description: Sustained/controlled release technology for the controlled release of nitrogen in urea.

Project No: A2-1001020

Project Name: PVG Exclusion Process Optimization Technology

Description: In recent years, an efficient, energy-saving production method for solid-woven PVG conveyor belts used in mines has been popular in China. By using the extrusion technique and TPE thermoplastic elastomer cover compounds, production efficiency can be increased five times as compared to using the vulcanization method. It can also substantially reduce the consumption of energy in production thanks to omission of the rubber coating and vulcanization processes. It involves the adjustment of formulas and fabric structure as well as formulation of production processes.

Project No: A2-1001021

Project Name: Coil Embedding for Tear Proof Conveyor Belts

Description: The monitoring unit for embedded coil tear proof conveyor belts is usually designed and made by other companies, so production cost is high. Each set costs about several hundred thousand RMB. This project involves the joint development of such units and will last one year.

Project No: A2-1001022

Project Name: Spacer Block Technology

**Description:** During the production of conveyor belts, spacer blocks are needed between the belt edge and the automatic top bar or the cauldron edge of the plate vulcanizing machine. In addition, the spacer blocks need to be turned for each cycle. It is likely that there will be overlaps between the blocks or between the block and the conveyor belt. If an overlap is not corrected in time, it will lead to an accident, damaging the belt and the vulcanizing machine. This project is aimed at solving this problem through joint research and development. It will last one year.

**Project No:** A2-1001023

**Project Name:** Research and Application of Immobilizing Technologies for the Catalyst of Ammonium Molybdate

**Description:** To immobilize the catalyst of ammonium molybdate using resin or other inorganic substances and put it into use in production. This will significantly reduce the consumption of ammonium molybdate, provided there is no negative influence on the conversion process.

**Project No:** A2-1001024

**Project Name:** Stain-resistant Elastic Paint Technology for Exterior Walls

**Description:** Currently, elastic paint has problems of poor stain resistance and low adhesion. This project involves research into synthetic resin emulsion, selection of pigments and extenders, and modification with nano-materials to solve the contradictions between stain resistance, elongation rate and adhesion of elastic paint. It is expected that the stain resistance (5 cycles) / % (white or slight coloring) is  $<10$ ; elongation at break / % is  $\geq 300$  (under normal conditions),  $\geq 60$  (at  $-10$  ) , or  $\geq 120$  (heat treatment); and tensile strength / Mpa under normal conditions is  $\geq 1.0$ .

**Project No:** A2-1001025

**Project Name:** Large-Diameter All Welded Ball-Valves for Long-Distance Pipelines

**Description:** Valves for the petrochemical industry have high added-value. At present, almost all of these imported. This costs China RMB 20 billion per annum. Design and manufacturing technology and standards for these valves needs to be developed and the technical parameters must meet the internationally accepted rules and regulations such ASME, ISO and JIS. The design and manufacture of large-diameter welded ball-valves for long-distance pipelines should reach world advanced levels.

**Project No:** A2-1001026

**Project Name:** 1 Million Sets per Annum Semi-steel Radial Tire Project

**Description:** The major products of this project are radial tires with an annual capacity of 1 million sets. It is planned to introduce mature and advanced Goodyear technology from the USA with specific requirements for production lines, technology, equipment, and production conditions. Experts will be invited to supervise the installation of equipment and to train staff on the technology and operations. The equipment should be purchased from reputable companies at home and abroad in order to guarantee the quality of the products.

## **Automobile and Railway Industries**

**Project No:** A3-1001001

**Project Name:** Key Technologies for Railway Traction Converter, etc.

**Description:** Key Technologies for Railway Traction Converter, etc.

Project No: A3-1001002

Project Name: High-speed Train Related Technology

Description: Light materials, digital management system for high-speed train manufacturing processes, train control system platform, train bus, etc.

Project No: A3-1001003

Project Name: Irregular Tank Welding & Testing Techniques

Description: This project involves quick, efficient welding of irregular tanks, quality control and testing methods.

Project No: A3-1001004

Project Name: Axle Housing Low or Normal Temperature Washing Technology

Description: To wash axle housings and components under low or normal temperatures with a rustproof period of 72 hours or more.

Project No: A3-1001005

Project Name: Brake Drum Failure Mode, Mechanism Analysis and Solutions

Description: Analyzing the cracking modes and mechanisms of brake drums for heavy-duty trucks and finding better formulas and structural materials through research and development.

Project No: A3-1001006

Project Name: Design Optimization Technology for Multi-level Warehouses

Description: This project mainly involves researching the design of multi-level

warehouses. The mode of cooperation and objectives are not restricted. The term of cooperation is within Year 2010.

**Project No:** A3-1001007

**Project Name:** Structural Design, Calculation and Simulation of Automatic Clearance Adjusters for Heavy-duty Air Disc Brakes

**Description:** Structural design, calculation and simulation of automatic clearance adjusters for heavy-duty air disc brakes.

**Project No:** A3-1001008

**Project Name:** Effects of Residual Stress in Welds on Axle Housings on the Service Life of Axle Housings

**Description:** To study the effects of residual stress in welds on welded steel axle housings (friction welding and carbon dioxide gas shield welding) on the service life of axle housings in order to find reasonable methods to relieve residual stress.

**Project No:** A3-1001009

**Project Name:** Spray Lubrication Technology

**Description:** To determine the filling quantity of spray lubricated drive axles and the relationship between filling quantity, gear wear and temperature increases in rear axles in order to reduce gear wear without causing temperature increases in axles.

**Project No:** A3-1001010

**Project Name:** Strength Design Technology for Drive Axles or Steering Stub Axles

**Description:** Through optimized design, evenly distribute stress in welded or cast axle

housings so as to save materials and improve strength.

**Project No:** A3-1001011

**Project Name:** Development of CAE Models for Drive Axle Components and Rationality Analysis

**Description:** To study the loading and restraint of key components of axle housings, gears and half-axle assemblies so as to obtain rational mathematical models.

**Project No:** A3-1001012

**Project Name:** Matching Analysis of Brake Friction Pairs

**Description:** To study drum-type brake friction pairs (pads, drums, etc) so as to find the equilibrium between temperature rise, heat fading, noise and service life.

**Project No:** A3-1001013

**Project Name:** Analysis of Response of Suspension Systems to Random Loads

**Description:** To determine the stress in suspension components under different loading and road conditions and establish related mathematical relationships.

**Project No:** A3-1001014

**Project Name:** Analysis of Effect of Simulative Loading on the Service Life of Axle Assemblies

**Description:** To analyze the fatigue life of axle assembly components under computer simulated road conditions.

**Project No:** A3-1001015



**Project Name:** Vehicles for Aerial Live-line Operation

**Description:** Material analysis and manufacturing techniques for insulation arms to satisfy high load and high insulation requirements; overall design safety.

**Project No:** A3-1001016

**Project Name:** Design and Manufacture of Concrete Pump Trucks

**Description:** This project mainly involves analysis of the following: rationality and adaptability of boom structures; reliability of pumping, hydraulic and electrical systems.

**Project No:** A3-1001017

**Project Name:** Development of Power Steering Hoses with New High-performance Materials

**Description:** With the development of the auto industry, demands for auto parts, including various power steering hoses, is increasing. This project involves research and development of high-performance power steering hoses using CPE elastomer as the main material in accordance with the requirements of the EA6G91-3A719-AA standards.

Considering the relatively short development period (it must be completed in June 2010), any form of cooperation will be acceptable.

**Project No:** A3-1001018

**Project Name:** Oil Seal and O-ring Finite Element Analysis

**Description:** Development of models for structural and material analysis for engine seals and O-rings, and optimization of designs to improve the performance of products through early-stage analysis.

Project No: A3-1001019

Project Name: Electric Cars

Description: Electric car business development (storage battery management system, converters, chargers, etc).

Project No: A3-1001020

Project Name: Automobile Electrical System Development

Description: Development of electronics for automobiles (network control, etc).

Project No: A3-1001021

Project Name: Overall Design of Aerial Operation Vehicles

Description: Overall safety design and guarantee of safe operations for the electrical and hydraulic systems of aerial operating vehicles with a reach exceeding 40 meters, and safety design of related structures.

Project No: A3-1001022

Project Name: All-hydraulic Drive Medium-sized Road Sweeping Vehicles

Description: Hydraulic system designs and calculations for driving, braking and operation systems; matching of power; noise control; design of special-purpose fans; ergonomic cab design; design of steering axles.

Project No: A3-1001023

Project Name: Methods and Procedures for Fast and Accurate Calculations of Leaf Spring Stiffness

Description:

1. Fast and accurate calculations of leaf spring stiffness, establishment of leaf spring parameter models and calculation analysis systems;
2. Analysis of response of suspension systems to random loads;
3. Improvement of axle brake torque without affecting the service life of components and maintaining braking safety.

**Project No:** A3-1001024

**Project Name:** Solution to Sand Sticking Problems on Brake Drums during Production on the Molding Line

**Description:** To solve sand sticking problems on small-sized brake drums during production on the molding line (larger drums have no such problem when the same sand is used).

**Project No:** A3-1001025

**Project Name:** Research on High-strength and High-Hardening Spring Materials

**Description:** With the rapid development of China's expressways, traffic growth and increasing demand for high-performance vehicles, there should be stricter requirements on the controllability, reliability, running performance, safety, environmental-friendliness and economy of cars. To this end, the design stress of springs should be improved, section thicknesses should be increased, and the hardened layer should be thickened. Only in this way can deadweight and cost be reduced and performance of leaf-spring suspension systems improved. It is expected that the maximum strength is 2000Mpa or above, and the hardened thickness is 50mm or above.

**Project No:** A3-1001026

**Project Name:** High-performance Air Cleaner and Silencer Assemblies for High-end Cars

**Description:** Design and manufacture of air cleaner and silencer assemblies in accordance with Euro IV standards.

**Project No:** A3-1001027

**Project Name:** Application of Finite Element Analysis in the Design of Automobile Leaf Springs

**Description:** Application of finite element analysis and design technology in the design of leaf springs.

**Project No:** A3-1001028

**Project Name:** High-Functional Automobile Chain R & D and Production Base

**Description:** At the moment, China is highly dependent on the importation of chains for high and medium grade automobiles. This project aims at developing and manufacturing gasoline and diesel engine chains and gearbox chains for domestic and foreign built high and medium grade automobiles. This will speed up the domestic production of key components for automobile engines and gearboxes. The Company is willing to provide existing equipment, buildings or funds towards its share of the project. The amount of contribution is negotiable. Potential partners may invest in the form of funds, technology or purchase orders. Upon completion, the project will be capable of producing 10 million automobile chains per annum, with annual revenues of RMB 300 million and profits of RMB 50 million.

## Ship and Marine Engineering Industries

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Project No: A4-1001001

Project Name: Shipping Science & Technology Monitoring System

Description: Ship oil spill monitoring and controlling systems; ship-borne AIS, GPS, echo sounders, logs, and GPS compasses.

Project No: A4-1001002

Project Name: Screw Pump with Scraper

Description: It is required that the pumps for oil-collecting ships have the same pumping capacity and performance as Danish pumps.

Project No: A4-1001003

Project Name: Automatic Mooring Chain Production Line with Damage Testing

Description:

The mooring chain should be tested for damage during production. Method for testing:

Magnetic powder, ultrasonic wave;

Class and specification of mooring chain product: R3/R3S/R4, max.130mm;

Point to be tested: The welded spot and the place on both sides of the welded spot to be held by the motor.

It is required that the technology introduced should be integrated into the existing mooring chain production line for on-line magnetic powder and ultrasonic testing of the chain.

## Textile and Garment Industries

Project No: A5-1001001

**Project Name:** Upgrading and Development of New Modal Materials

**Description:** This project involves in-depth cooperation in textile engineering such as applications for new Modal materials, optimization of existing production techniques and cost control. Textile engineers and experts in the field will be asked to examine existing equipment and technology by means of cooperation agreements or turnkey contracts.

Pursuant to their suggestions and recommendations, equipment and technical layouts will be adjusted, mid-term research and development strategy reviewed and evaluated so as to improve overall productivity in a highly efficient manner.

**Project No:** A5-1001002

**Project Name:** Made to Measure (MTM) Production

**Description:** MTM is a new mode of production all over the world. It can solve a range of problems for manufacturing companies from order generation, body measurement, template making, fabric cutting, production, finishing and delivery. MTM has grown into a mature technique in many foreign countries. It is expected to be first introduced, then modified and optimized according to actual production requirements in order to establish a practical MTM system for the company.

**Project No:** A5-1001003

**Project Name:** Development of 3D Body Scanning Technology

**Description:** Compared with manual measurement, 3D body scanning technology will increase measuring speed and accuracy, and improve the fit of finished clothing.

**Project No:** A5-1001004

**Project Name:** Body Measurement to Template Converter

**Description:** To develop software for the conversion of body measurements into templates. Now, this work is done manually by professionals in some companies. This results in problems of various sorts affecting the fit and wearing comfort of finished products.

**Project No:** A5-1001005

**Project Name:** Simulative Fitting System

**Description:** The simulative fitting system can simulate 3D human figures in accordance with measurement data put into the computer system to determine the proper fit of products.

**Project No:** A5-1001006

**Project Name:** Warp-knitting Equipment

**Description:** This project mainly involves the introduction of advanced warp-knitting equipment and auxiliary machinery, especially those produced by Germany's Karl Mayer Company, for production of middle and high-grade car textiles. The goals are to expand productivity and meet the requirements for upgrading car textiles at home and abroad. The quality of the textiles produced should equal that of imported products.

**Project No:** A5-1001007

**Project Name:** Complete Set of Evening Techniques for Drawing Frames

**Description:** It is planned to introduce a complete set of evening systems for drawing frames, with operating programs and circuit diagrams.

**Project No:** A5-1001008

**Project Name:** Application of CAD in the Textile Industry

**Description:** Currently, CAD is widely used in the textile and clothing industries. It plays a positive role in improving productivity, reducing consumption of materials and promoting standardized production. However, due to the characteristics of clothing fabrics such as softness and lack of stiffness, it is difficult to apply the system in this sector.

**Project No:** A5-1001009

**Project Name:** 100,000 Pieces/annum Bedclothes

**Description:** The owner of this project has 40 mu (2.67 ha.) of idle land with water and power supply. It is planned to invest USD 3 million to set up a production line with capacity of processing 100,000 pieces of bedclothes per annum. The production line must adopt international advanced technology. The owner of the project will offer its land and buildings as shares. The foreign investor can also rent or purchase the property for a solely-owned operation. Upon completion, project will produce 100,000 pieces of bedclothes per annum, realize annual revenues of RMB 50 million, provide tax-payments of RMB 6 million, and create 300 jobs.

## Food and Beverage Industries

**Project No:** A6-1001001

**Project Name:** Carbon Footprint Calculation Standards and Models

**Description:** In order to lower carbon emissions during beer production, it is planned to introduce carbon footprint calculation standards and models used in beer production and sales at home and abroad.



Project No: A6-1001002

Project Name: Energy Management and Control Technology

Description: To introduce energy management and control techniques in the beer brewing industry in order to reduce consumption of water, electricity and steam through the use of new equipment, new technology and new management methods.

Project No: A6-1001003

Project Name: Carbon Dioxide Recovery Technology and Equipment for Beer Production

Description: To introduce carbon dioxide recovery technology and equipment for beer production in order to achieve zero carbon dioxide emissions.

Project No: A6-1001004

Project Name: No Kieselguhr Beer Filtration Technology

Description: This technology can promote the conservation of resources and development of ecological economy.

Project No: A6-1001005

Project Name: Breeding Technology for Meat Rabbits and Breeding Rabbits

Description: To introduce breeding technology to boost reproduction in breeding rabbits, raise the quality of meat rabbits and improve the taste of rabbit meat. The company provides facilities for research, testing and breeding.

Project No: A6-1001006

Project Name: Deep-processing of Rabbit Meat, Chicken Meat and Byproducts

**Description:** Measures for improving production efficiency, detailed formulas, implementation plans, complete production processes, and new products for market analysis.

**Project No:** A6-1001007

**Project Name:** Testing Techniques for Trace Elements in Beer

**Description:** To check food safety indices and test for trace elements in beer such as beer aging and flavoring substances and residual pesticides in order to ensure consistency of flavor and food safety.

**Project No:** A6-1001008

**Project Name:** Application of Alginates in Meat Products

**Description:** Includes application techniques using alginates to improve the water-holding capacity, emulsifiability and elasticity of meat products.

**Project No:** A6-1001009

**Project Name:** Application of Alginates in Pastries

**Description:** Includes application techniques using alginates to improve the strength and boiling fastness of common pastries such as noodles and ravioli casings; dough fermenting techniques for bakers.

**Project No:** A6-1001010

**Project Name:** Analysis of Peanut Processing Characteristics and Deep-processing Techniques

**Description:** Includes use of peanut skin and shells; cultivation of varieties with strong

resistance to pests, diseases and low aflatoxin; establishment of a peanut processing information system; and measures to reduce the peroxide value in dry nuts and prolong shelf life.

**Project No:** A6-1001011

**Project Name:** Peanut Oil Production Technology

**Description:** Includes new techniques for peanut oil production and the processing of leftovers in order to increase the economic value of peanuts. The term of the project is from December 2009 to April 2010.

**Project No:** A6-1001012

**Project Name:** Production of Feed Using Alga Dregs

**Description:** To seek partners for the production of value-added feed using alga dregs which have rich nutritious contents such as coarse fiber, crude protein and organic iodine. Feed products made with alga dregs meet the standards of feed for aquatic animals, livestock or poultry.

**Project No:** A6-1001013

**Project Name:** Bio-products Production Technology for Rabbit Liver Metallothionein, Rabbit Brain Powder and Rabbit Heparin

**Description:** Metallothionein is a cysteine-rich metal-binding protein existing commonly in living organisms. Metallothionein in humans and other mammals has great biological functions. This project involves the highly efficient industrial production of metallothionein from rabbit livers. The product can be used as an additive for many cosmetics and health foods. It can also be used as raw material in the pharmaceutical

industry and for research purposes. It is required that the production technique be easy to apply and highly efficient with high yield, good quality, low cost, and appropriate for industrial production. The technical indices should meet the following conditions: Raw material: Zn 4-5/mole, purity 60-70%; refined products: Zn 6-7/mole, purity 95% or above; being at a leading technical level at home and abroad.

**Project No:** A6-1001014

**Project Name:** Food Testing Technology and Methods

**Description:** To seek technical partners in order to raise the company's testing level, enable the company to conduct effective testing of residues of pesticides and vet drugs in exported food products, ensure exported products are in conformity with the relevant standards of importing countries, and prevent unnecessary losses caused by product quality problems.

**Project No:** A6-1001015

**Project Name:** Meat Rabbit Breeding Support System

**Description:** To solve such technical problems as low reproduction capacity, slow growth, poor feed conversion rate and high death rate among common meat rabbits. To raise the reproduction capacity to 9.2 pups per birth, the growth rate to 2.5kg within 77 days, and the feed conversion rate to 2.8-3.0 : 1.

**Project No:** A6-1001016

**Project Name:** Low-temperature Production of Peanut Oil Byproduct - Peanut Protein Powder

**Description:** Synchronous production of peanut protein powder during low-temperature

production of peanut oil. The oil content of peanut protein powder is below 3%.

**Project No:** A6-1001017

**Project Name:** Pepper Color Test and Benzopyrene Control

**Description:** (1) European and American chromatic test techniques to ensure consistent test results; and (2) Benzopyrene control methods in accordance with Japanese standards.

**Project No:** A6-1001018

**Project Name:** Intensive Processing Technology for Vegetables and Aquatic Products

**Description:** This project will introduce advanced production technology and innovations to production lines for quick-frozen vegetable, fruit, aquatic product and opsonic foods in order to improve quality, intensity of processing, and reduce loss. Reasonable economic benefit must be created and overall competitiveness of the enterprise increased. Through joint venture or technical cooperation, production technology must be updated, science and technology improved, quality of products enhanced, processing of raw material intensified, and market competitiveness strengthened.

**Project No:** A6-1001019

**Project Name:** Comprehensive Utilization of Poultry Wastes

**Description:** The target of the project is to comprehensively treat poultry wastes created by 2.4 million chickens in 12 breeding farms and 9 broiler farms. Calculated on 0.11 kg of droppings per chicken per day, 2.4 million chickens create approximately 264 tons of wastes per day, or 96,000 tons per annum. Two sets of treatment systems are required for the project to attain a capacity of 96,000 tons per year.

## Mechanical, Steel and Iron Industries

Project No: A7-1001001

Project Name: Large Mold Accommodation Plastic Injectors

Description: Large-mold high-speed plastic injectors and large-height multilayer mold equipment. We seek partners for the manufacture of plastic injectors with large mold accommodations.

Project No: A7-1001002

Project Name: Fitness Equipment Production Equipment

Description: ROHS testers, antistatic guns, laser cutters and welders; CNC machining center; CNC bending machines; and harmful substance testers.

Project No: A7-1001003

Project Name: Complete Set of Refractory Material Production Technology

Description: To facilitate continuous casting, it is planned to introduce a complete set of world advanced techniques such as ladle-used refractories, mechanisms, slide plates, tundish swift exchangers, and gas curtains.

Project No: A7-1001004

Project Name: Complete Set of New Refractory Material Technology for Production of Amorphous Metals

Description: In order to promote the use of new materials, it is planned to introduce a complete set of new world advanced refractory material techniques for the production of

amorphous metals.

Project No: A7-1001005

Project Name: Carding Machine Automatic Control Technology

Description:

- 1.Rotor material;
- 2.Core testing device;
- 3.Special-purpose controller with programmable controls, frequency conversion, intelligent, networking capabilities, and user-friendly features;
- 4.Only equipment testing and monitoring techniques.

Project No: A7-1001006

Project Name: MOCVD Equipment Automatic Control Technology

Description: Production process management technique, special-purpose equipment controller and controller R&D, automatic control software platform.

Project No: A7-1001007

Project Name: Physical Information Collecting System

Description: Using a physical information collecting system, the physical needs of exercisers are to be determined and collected in order to give them proper instructions on selecting the right equipment. We need the following technical support: physical information collecting system, health data analysis, calculation and display system, and an instruction enforcement and control system.

Project No: A7-1001008

**Project Name:** Metal Laser Sintering Equipment

**Description:** Metal powder laser sintering equipment can provide efficient sintering and shaping of key areas of molds that are difficult to shaped using common techniques. This shortens the production cycle and improves mold productivity. Currently, there are 90-plus such devices in the world.

**Project No:** A7-1001009

**Project Name:** Development of CNC Equipment Functions

**Description:** The aim of this project is to develop the functions of the tool magazine of CNC equipment; expand the clamping functions; standardize the machining and operating processes; achieve high utilization rates, high machining efficiency and low rework rates; and reduce energy consumption per unit.

**Project No:** A7-1001010

**Project Name:** Spiral-winding Fully-annealed Trapezoid Highly-conductive Aluminum Wires

**Description:** Rolling and pultrusion techniques for the core parts of cables –  
“Spiral-winding Fully-annealed Trapezoid Highly-conductive Aluminum Wires.”

**Project No:** A7-1001011

**Project Name:** ACCC Cables

**Description:** ACCC cable is a new product for aerial power transmission lines. At this time, it is the only substitute used in commercial applications worldwide for traditional steel-reinforced aluminum stranded cables, aluminum alloy cables, and aluminum-clad steel cables. It is planned to introduce patented technologies such as carbon fiber, glass



fiber and epoxy resin formulas, and pole-making techniques using carbon fiber and glass fiber.

**Project No:** A7-1001012

**Project Name:** LNG Cold Recovery

**Description:** This project includes project development or trial production (which should be finished within a specified time), and mass production of new products. All the technical and economic indices for the project should satisfy national, industrial and departmental requirements.

**Project No:** A7-1001013

**Project Name:** 27.5kV Railway Gas Insulation Metal Switching Equipment

**Description:** By 2020, China's rail system will exceed 120,000km. More than 60% of this total will include electrified rails. This will be a great business opportunity for the high-voltage switch industry. This project involves technical cooperation in a feasibility study of relevant technologies, quality and productivity.

**Project No:** A7-1001014

**Project Name:** Special-purpose Two-color Rotary Injection Machines

**Description:** This project involves special-purpose two-color rotary injection machines for large rotary two-color injection molds. So far, 40% of the mold development work has been finished. It needs the support of large injection machines for use on two-color television sets.

**Project No:** A7-1001015

**Project Name:** Boring Techniques for High-hardness Materials

**Description:** Crank Bore: After press-fitted, the crank pin should be able to withstand a minimum torque of 26Kg.m and the bore diameter should be 19 mm. Specifications for Connecting Rod Bore: Hardness, HRC60-64; Thickness, H<30mm; Bore Diameter, 10mm-50mm; Center-to-center Spacing, L±0.03mm; Perpendicularity with Respect to End Surface, <=0.03mm; Parallelity in Center-to-center Spacing Direction, 0.04/80; Horizontal, 0.08/80; Diameter Tolerance, H7, Ra 0.2. The present output of the above parts is about 3 million pieces per year, so advanced boring techniques are required to ensure high product quality and efficiency at lower costs.

**Project No:** A7-1001016

**Project Name:** Straight Welding Techniques

**Description:** Now, power transmission lines are using steel tube towers to replace the original angle steel, so straight welding techniques are playing an important role. This project requires the one-time welding quality qualification rate to be 95% or above.

**Project No:** A7-1001017

**Project Name:** Research and Development of Heat-resisting Cast Steel Products

**Description:** Supercritical and extra supercritical thermal power generating units will be the main forces in the future power industry. This project is aimed at introducing research and development techniques for heat-resistant steel cast parts used in generating units.

There are three kinds of steel:

1.ASTM A335-P92 Steel: chemical compositions and physical properties should meet the requirements of this standard, but technical requirements should comply

with ASTM A 217;

2.ASTM A217-C12A;

3.DIN EN10028-1/2 15NiCuMoNb5 (WB36): chemical compositions and physical properties should meet the requirements of this standard, but technical requirements should comply with ASTM A 217.

**Project No:** A7-1001018

**Project Name:** Steel Wire Ring Surface Treatment

**Description:** To seek anti-wear treatment techniques to prolong the service life of products. After surface treatment is completed, the steel wire ring should have good wear resistance, a service life exceeding 10 days and less fuzz.

**Project No:** A7-1001019

**Project Name:** Steel Wire Ring Heat Treatment Techniques

**Description:** Currently, steel wire rings are quenched in an oscillation stove resulting in 3% defective products. We are seeking new quenching equipment and technology in order to solve the problem and substantially bring down the rejection rate.

**Project No:** A7-1001020

**Project Name:** Nylon-coated Wire Heald Anti-rusting Solutions

**Description:** Nylon-coated wire heald is made by tying up two steel wires coated with a layer of nylon. The ring may rust after a long period in storage. It is required that a solution be developed that will ensure no rust or corrosion for up to three years.

**Project No:** A7-1001021

**Project Name:** Improvement the Fastness and Stiffness of Reed Blades

**Description:** Irregular reeds, rapier reeds and cotton-weaving reeds are made by gluing stainless steel or carbon steel blades to aluminum girders and wood battens, so there is a lack of stiffness. It is required that all of the above reeds can be securely glued to girders and the blades have sufficient stiffness.

**Project No:** A7-1001022

**Project Name:** Intelligent Multilevel Warehouses

**Description:** Intelligent multilevel warehouses have the following features; occupying less land, high space utilization rate, man-machine communication interface, and quick positioning. They are environmentally friendly and easy to clean.

**Project No:** A7-1001023

**Project Name:** Pig Breeding Facilities and Light Farm Machinery

**Description:** Joint research and development of pig breeding facilities and light farm machinery in the form of a joint venture, provision of complete techniques or other forms of cooperation.

**Project No:** A7-1001024

**Project Name:** Plasma Arc Metal Surface Treatment Technology

**Description:** The quality of metal surface treatment should meet relevant national standards.

**Project No:** A7-1001025

**Project Name:** Large-capacity Barrel Drying Equipment

**Description:** Now, there are mainly two types of dryers; single barrel and three returns. The single barrel unit has a large body. The three-return unit has low production efficiency. It is required that the equipment meet the following conditions: small size; hourly output 40, 50 or 60 tons; coal consumption <8kg/ton.

**Project No:** A7-1001026

**Project Name:** Pig Carcass Splitting Robot

**Description:**

- 1.Pig carcass splitting robot - to be installed on the automatic production line, with automatic positioning and automatic splitting functions;
- 2.Pig blood collection - vacuum knife slaughtering and vacuum blood collection;
- 3.Belt splitting saw - belt-type, light-weight and durable, suitable for splitting cattle and pig carcasses.

The technical parameters and performance should meet top world levels.

**Project No:** A7-1001027

**Project Name:** Transformer Dynamic Short-Circuiting Force and Temperature Field, Electromagnetic Field and Wave Process Calculations

**Description:** Through calculation of temperature fields, electromagnetic fields and wave processes, ensure reliable product indices and reduce the main insulation and longitudinal insulation distances.

The aim and quality requirements are to reduce the consumption of materials and energy through reliable calculations.

**Project No:** A7-1001028

**Project Name:** 110kV Transformer

**Description:** Meeting the national standards for 9 or 10 series of products or China's leading level.

**Project No:** A7-1001029

**Project Name:** High-speed Single-head Drawing Frame with Autoleveller

**Description:** The machine should have a bus control system with improved productivity and product quality, and the technical parameters should meet the advanced world levels.

**Delivery Speed:** 1000m/min (or more); **Yarn:**  $cv\% \leq 2.5$ ; **Irregularity:**  $u\% < 1$ 。

**Project No:** A7-1001030

**Project Name:** Stand Spinning Machine and Electrical Control System

**Description:** To seek partners for joint development of stand spinning machines and electrical control systems. This control system will be able to raise the spindles' rotating speed, control the yarn shape, reduce yarn breakage, and expand capacity to 40 or more woolen yarns. The overall technical indices will reach advanced world levels. After the project is completed, annual production will exceed 100 sets.

**Project No:** A7-1001031

**Project Name:** Technology Innovations for Wind-Driven Generators

**Description:** The owner of this project has recently acquired 133,333 m<sup>2</sup> of land for a wind powered generator project. The scope of operation includes: accessory equipment for wind-driven generators (cylinder tower, foundation ring), chemical industry equipment, Class I, II and III pressure containers, and whole set boiler accessories. The main

construction for this project includes five production workshops, one office block and one comprehensive block. Required accessory equipment includes: [1] Cranes: 50 ton, twelve sets; 10 ton, eight sets; 20 ton, thirty-six sets. [2] Four sets of heat treatment furnaces. [3] Sheet reelers, twelve sets. [4] Vertical lathes, four sets. [5] Automatic welding machines, forty sets. [6] Rotator, 50 ton, forty sets. [7] Electric welding machines, one hundred sets. [8] Air compressors, eight sets. The company is looking for partners for technology sharing and funds to expand and strengthen the company. It is estimated that, upon completion, the project can attain a daily capacity of two sets of equipment, annual revenues of RMB 400-500 million and tax payments of RMB 10 million.

Project No: A7-1001032

Project Name: High-grade Glass Production Line Equipment

Description:

High-grade float glass production line equipment (annealer and cool-end equipment)

The annealer includes shell, transmission system, electrical controls and transition rollers.

Cool-end equipment includes equipment for cutting and sheet-collecting zones.

Equipment for the cutting zone includes: conveying rollers, emergency doffer, breaker, vertical and horizontal cutters, accelerated separation rollers, edging equipment, width adjustment rollers, edge processor, leftover piece doffer, etc. Equipment for the sheet-collecting zone includes: conveying rollers and stacking machine.

Ultra-white photovoltaic solar energy glass production line equipment

Calender: key equipment to fix the shape of the glass

The annealer includes shell, transmission system and electrical controls.

Cool-end equipment includes conveying rollers, vertical and horizontal cutting machines, sheet processing machine, slant conveying machine, and sheet-collecting machine.

Cooperation in technology, production and marketing can be negotiated. It is our aim to produce the highest grade technical glass in China.

**Project No:** A7-1001033

**Project Name:** R & D and Production Base for Industrial and Agricultural Machinery Chains

**Description:** The aim of this project is to build the largest production base in China for industrial chains and agricultural machinery chains through R & D and production investments. The project needs a total investment of RMB 150 million, and is expected to be constructed in three years. Upon completion, it will have an annual capacity of producing 30 million meters of chain, including 20 million meters of industrial chain and 10 million meters of agricultural machinery chain. It will have annual sales revenues of RMB 500 million and profits of RMB 60 million. The owner of the project is willing to invest existing equipment, plant or capital as its share in the project. Specific investments and terms are subject to negotiation. The partner may invest in the form of funds, technology or purchase orders.

**Project No:** A7-1001034

**Project Name:** Boiler Safety Valves for Nuclear Generators, Super-Critical and Ultra-super-critical Heat-Engines

**Description:** China is currently dependent on the importation of boiler safety valves for nuclear generators and ultra-super-critical heat-engine generators which is very expensive. There is still a long way to go for China to develop its own safety valves with excellent quality and reliability. According to market demand, the owner of this project plans to introduce advanced international technology for manufacturing full-volume boiler safety



valves for nuclear generators and heat-engine generators of 1000MW and above. Design and manufacturing standards and various technical parameters must conform to generally accepted rules and regulations such as ASME, ISO and JIS to enable China to upgrade the quality and reliability of such safety valves to advanced international levels.

## New Energy Resource Industry

**Project No:** A8-1001001

**Project Name:** Dye-sensitized Solar Cells

**Description:** Technical cooperation in the testing and trial production of dye-sensitized solar cells. There are no specific requirements for the partner. The term of cooperation is one year (2010).

**Project No:** A8-1001002

**Project Name:** Wind Power Generation

**Description:** Wind power generation (inverter) and control technologies.

**Project No:** A8-1001003

**Project Name:** PV Cells

**Description:** PV cell power conversion and control technology.

**Project No:** A8-1001004

**Project Name:** Containers Assembled from Prefabricated Pieces in Environment

Protection Projects in China

**Description:** The technology for assembling prefabricated pieces into containers is used in large and medium scale biogas projects. This is still virgin territory in China. Instead, metal

welded and cast-in-place concrete containers which are costly, poor in antiseptic qualities and complicated in construction, are widely used in China. This project aims at using advanced foreign technology for assembling prefabricated pieces into containers to avoid the cost of independent research and development, increase efficiency, reduce the cost of building containers for biogas projects by 30%, and shorten the construction period by 20%.

## New Materials Industry

Project No: A9-1001001

Project Name: Introduction and Localization of High-tech Projects (Magnesium Alloys)

Description: To introduce high-tech projects for localized operations (magnesium alloys).

Project No: A9-1001002

Project Name: High-end Aluminum Alloys

Description: High-end aluminum alloys used in China's mold industry are mostly imported from the U.S. There is no supplier in China. The cost is very high.

Project No: A9-1001003

Project Name: Continuous Casting & Rolling Technology

Description: Production technology for 5052 alloys.

Project No: A9-1001004

Project Name:

1. Calcium-Zinc Heat Stabilizer for PVC Processing;
2. Halogen-free Flame Retardants for Rubber and Plastics

**Description:** Calcium-Zinc heat stabilizer is a heat resistant environment-friendly product used in the processing of hard PVC and transparent PVC products. It can improve the flame resistance of halogen-free retardants in rubber and plastics, reduce their consumption, improve the material properties and save material costs.

**Project No:** A9-1001005

**Project Name:** Substitution of Titanium Oxide for Monocrystalline Silicon or Polysilicon; Technical Innovations for LiFeP04 Cells

**Description:** The high capacity and cycling performance of Lithium Manganate as anode material; industrialization of new-type low-cost Titanium-based solar cells.

**Project No:** A9-1001006

**Project Name:** Finishing Techniques for Functional Anti-slip Floor Towels & Application of New Environment-friendly Materials

**Description:** Finishing techniques for functional anti-slip floor towels; application of new environment-friendly materials.

**Project No:** A9-1001007

**Project Name:** Carbon Refractory Materials

**Description:** Competent universities or research institutions will be entrusted to undertake some of the basic research work for new materials, some related technical research work as well as research and development of auxiliary materials. The funds will be provided by the project owner.

**Project No:** A9-1001008

**Project Name:** Copper-based Powder Metallurgy Friction Materials

**Description:** Technical cooperation in the research and development of formulas and production techniques for copper-based powder metallurgy friction materials. The friction materials should be able to withstand high-speed, high-pressure, and high-temperature braking.

**Project No:** A9-1001009

**Project Name:** Lead-free Low-melting-point Glass Powder

**Description:** As a glass sealing material, glass powder needs lead-free nontoxic additives to improve its sealing performance and fluidity after it is molten. It should meet the following requirements:

1. The glass powder is free of lead or has little lead;
2. The melting point of the glass powder is 350 or lower;
3. The expansion coefficient is similar to that of plate glass.

**Project No:** A9-1001010

**Project Name:** Vacuum Degree Measurement Techniques

**Description:** The vacuum degree measurement techniques should have a measuring range between 100Pa-10000Pa and have high precision measurement. The term of cooperation is one year (within 2010).

**Project No:** A9-1001011

**Project Name:** Application of PTFE Microporous Membrane in the Repair of Subcutaneous

#### Soft Tissue Defects

**Description:** Nearly a hundred successful cases have been reported of using PTFE microporous membrane to repair subcutaneous soft tissue injuries. This project involves joint research and development of world leading techniques in the field.

**Project No:** A9-1001012

**Project Name:** Application of PTFE Microporous Membrane in the Sea Water Desalination

**Description:** This project involves joint research and development of membrane pore diameter control techniques in order to control membrane thickness even for industrial production.

**Project No:** A9-1001013

**Project Name:** Special Steels for Nuclear Generators and Ultra-super-critical Heat-Engines

**Description:** China is currently not able to produce special steels for nuclear generators and ultra-super-critical heat-engine generators, and it is very expensive to import such materials. There is still a long way to go for China to develop new types of steel with special qualities and high reliability. According to market demand, the owner of this project plans to introduce advanced international technology for producing special steel for nuclear generators and heat-engine generators. The production of such steel must meet advanced international levels.

**Project No:** A9-1001014

**Project Name:** Short Service Life of Moulds in Horizontal Production

**Description:** At present, the service life of the granite lining in the crystallizer for the horizontal continuous production of copper ingots is very short - about 1-2 days. This

project is looking for a granite crystaller (or its technology) which can be used for 5-7 days. This will reduce production cost and increase quality. Potential partners are required to provide new types of granite linings for testing and sample production. If they are found to be acceptable, partners will become long-term suppliers. The new type of granite lining must reduce cost by 50%, and raise acceptance rate by 10%.

**Project No:** A9-1001015

**Project Name:** Eliminating Water Bubbles on the Surface of Extruded Tubes

**Description:** Currently, bronze tubes from extruders have a lot of water bubbles on the surface after water-sealing. This reduces the quality. Partners are required to provide new technology or extrusion lubricant to eliminate such bubbles from the tubes produced by our company.

**Project No:** A9-1001016

**Project Name:** Research and Production of Pickleball

**Description:** The traditional products for the owner of this project are a series of metal nails. Agreement has been reached with an American customer to provide Pickleball and accessories. However, the owner of the project lacks the funds for the development of new products, the mould and non-standard special equipment for pickleball production and market development. The company is seeking partners to provide the technology for the durability design of relevant materials for pickleball. The partners are required to provide the technology, funds for new product research and development, solutions to the problems of durability design and selection of applicable materials, and to produce moulds with specific standards for pickleball production.

Project No: A9-1001017

Project Name: R & D of Special Granite Materials for Monocrystalline Production

Description: Monocrystalline material is mainly used in solar-batteries and advanced electronic components. China is not able to produce such material at this time, so large quantities must be imported from abroad. The owner of this project has been producing granite materials for 15 years, has a granite production line with a team of experienced staff for R & D, and a QC system. It has worked closely with the Materials School of Hunan University, Harbin Electric-Carbon Institute, Japan ToyoTanso Company Limited, and the Chemistry School of China Ocean University in technology development and thus has unique advantages for the development of new materials. The Company is seeking cooperation with foreign partners to develop granite material for monocrystalline production. The material must conform to the following technical indexes: Large sizes, diameter  $\geq \Phi 650$ , length  $\geq 500$ ; isotropy/Anisotropic ratio  $\leq 1.02$ ; High purity, ash  $\leq 10$ ppm; compressive resistance  $\geq 90$ Mpa, specific resistance 12-15 $\Omega$ mm<sup>2</sup>/m; density  $\geq 1.9$ g/cm<sup>3</sup>. The quality of products must meet advanced international levels upon completion.

## Biomedicine Industry

Project No: A10-1001001

Project Name: Algae Deep-processing

Description: Algae Deep-processing.

Project No: A10-1001002

Project Name: Analysis of Grape Seed and Skin Compositions and Development of

Further-processed Products

Description: Further-processing of grape seeds and grape skin.

Project No: A10-1001003

Project Name: Development of Key Technologies for Artificial Organs, Intervention Equipment and Tissue Engineering

Description: Development of key technologies in the field of biomedical engineering for artificial organs, intervention equipment and tissue engineering.

Project No: A10-1001004

Project Name: Bioprocess Technologies

Description:

- 1.Consulting and research concerning original theories, original seed deep-processing, and heredity of original seeds;
- 2.Protection of “living fossil species” and biological technologies;
- 3.Consulting on the fundamental improvement of human physiological equilibrium, cultivation of medicinal and edible plants, process control and standardization.

Project No: A10-1001005

Project Name: Processing of Alga Wastes

Description: Development of new-type feeds using alga wastes for aquaculture and animal breeding industries.

Project No: A10-1001006

Project Name: Phosphate-removing Techniques in Agar Production



**Description:** Research and development of medium agar and agar sugar to solve technical problems such as removal of phosphate in agar production and expand production.

**Project No:** A10-1001007

**Project Name:** Development of New Bio-medicines

**Description:** Development of new bio-medicines including culture establishment, fermentation and downstream applications.

**Project No:** A10-1001008

**Project Name:** Application and Technical Innovation of Sustained and Controlled-release New Veterinary Drugs

**Description:** Absorption and Degradation of Drugs in poultry; preparation of sustained and controlled-release Enrofloxacin, Ceftiofur and Ivermectin, their pharmacokinetic, pharmacologic and toxicological features, special toxicity, body residue, environmental toxicity, clinical applications and medicinal stability, waste treatment, and product quality standards; development of drug absorption and degradation models in the alimentary canal of poultry and trial production of sustained and controlled-release drugs using the above three materials. The purpose is to reduce dosage, improve medicinal effects, lower the costs of drug use, raise the therapeutic effects of the drugs, increase income for farm owners, minimize residual drugs in poultry meat, and improve food safety and quality.

**Project No:** A10-1001009

**Project Name:** Development and Application of Mink Canine Distemper Attenuated Vaccine

**Description:** Isolation of canine distemper virus for attenuation through chicken embryo subculture in order to maintain good immunogenicity and safety; production of mink

canine distemper vaccine; improvement of the immunogenicity of the vaccine by using new vaccine adjuvant, and freeze-drying of vaccines for easy transport and storage.

**Project No:** A10-1001010

**Project Name:** Development of New-type Genetic Engineering Foot-and-mouth Disease Mucosal Immunity Vaccine

**Description:**

1. Design of genetic structure of the vaccine;
2. Establishment of highly active eukaryotic expression system;
3. Optimization of high-density fermentation techniques;
4. Isolation, purification and condensation of protein;
5. Determination of qualitative and quantitative methods and establishment of ELISA and Western Blot testing systems;
6. Determination of immunoreaction and reliability of vaccine;
7. Pre-clinical research and part of clinical experimentation of vaccine.

**Project No:** A10-1001011

**Project Name:** Research and Development of Animal-used Immuno-enhancers

**Description:** Synthesis of bulk drugs for immuno-enhancers and preparation of drugs using extracts of Chinese medicinal herbs.

**Project No:** A10-1001012

**Project Name:** Pathogen Biological Research

**Description:** Fundamental pathogen biological research, isolation and determination,

pathogen epidemiological research, production automation, and cell culture in bioreactor. It is expected that biological research and technical assays for vaccine development will be conducted using state-of-the-art equipment of research institutions. In-depth communications are also envisaged for further cooperation.

**Project No:** A10-1001013

**Project Name:** Development of Human Collagen Protein

**Description:** To solve the following technical problems in the production of human collagen protein through joint research, technical transfer, joint development or technical participation: 1. to raise the expression level of recombinant human collagen protein to 20% or more of that of the total protein of E. coli; 2. to raise the percentage of soluble recombinant human collagen protein and reduce the quantity of inclusion body; 3. to prevent or reduce degradation of recombinant human collagen protein in the course of purification; and 4. to simplify existing purification process and raise the yield of products.

**Project No:** A10-1001014

**Project Name:** Sustained and Controlled-release Drug Delivery Techniques

**Description:** The sustained and controlled-release drug delivery system (DDS) mainly includes the following techniques; membrane controlled release, matrix controlled release, osmotic controlled release, ion-exchange resin, inclusion and solid dispersion and tablet geometry. Membrane controlled-release drugs whose release rate is regulated by a coating film include micro porous membrane coated tablets, membrane controlled release tablets, enteric membrane controlled release tablets and membrane controlled release pellets. Osmotic controlled release drugs are composed of medicament, semi-permeable materials,

osmo-active substances and propellants.

**Project No:** A10-1001015

**Project Name:** Matrix Controlled-release Techniques

**Description:** A matrix controlled release drug is a solid preparation composed of medicament, matrix substance and excipients by means of preparation processes. Based on the matrix substance, it can be classified into the following: 1) Insoluble Matrix Preparation - the matrix substance is a water-insoluble or low-water-soluble polymer such as polyethylene, polyvinyl chloride and ethyl cellulose; 2) Soluble Matrix Preparation - the matrix substance is insoluble in water but soluble in hydrolyzed waxes, fatty acids and esters in vivo, such as carnauba wax and stearic acid; 3) Hydrogel Matrix Preparation - the matrix substance swells in water or digestive juice to form a gel barrier and controls the release of drugs such as hypromellose and sodium alginate.

**Project No:** A10-1001016

**Project Name:** Mannitol Production by Hydroprocessing of Fructose

**Description:** This project aims at adopting fructose hydroprocessing technology to produce mannitol and sorbitol, and to increase the yield of mannitol in production. The problem of low mannitol acquisition after hydroprocessing of fructose must be solved.

**Project No:** A10-1001017

**Project Name:** Glucose Epimerism Catalyst Solidification Technology

**Description:** The purpose of this project is to carry out epimerization on glucose by solidifying the catalyst (ammonium molybdate) to reduce consumption of the catalyst. The partners are required to overcome the difficulties in solidifying ammonium molybdate.

Project No: A10-1001018

Project Name: R & D of Material and Preparations for Tulathromycin---A State-level New Veterinary Medicine

Description: Respiratory diseases such as bird flue, swine flue, swine respiration and reproduction syndrome, new castle disease, swine fever, and swine blue-ear disease are difficult to control in livestock husbandry. Tulathromycin has good properties such as anti-bacteria activity, small dosage, extra-long half-life, and once-for-all administration. At the moment, China's production yield is low, so it must import most Tulathromycin from abroad. Tulathromycin material and preparations are green veterinary medicine with various advantages such as safety, broad-spectrum, high efficiency, low residue and exclusive animal use. These qualities are not found in other antibiotics.

The company proposing this project is seeking cooperation with foreign partners to jointly develop a State-level Category II new veterinary drug ---Tulathromycin. It wishes to obtain three products; material drug, injections, and premix. Specifically, the company seeks partners to (1) carry out studies on material drug production technology and complete the conformation of the chemical structure and components of Tulathromycin material; (2) To carry out studies on the prescription and technology of Tulathromycin premix and injections; (3)To undertake tests and studies on the quality criteria, stability, pharmacology and toxicology, major effectiveness, pharmaceutical safety, microorganism sensitivity, pharmacokinetics, acute toxicology, sub-chronic toxicology, mutagenesis, reproductive toxicity, chronic toxicity, sensitivity, haemolysis, local sensitivity, special safety, clinic experiments, target-animal safety experiments, residue experiments and ecological toxicity on Tulathromycin material and its two preparations. All indexes must conform to the standards and requirements of State-level regulations for new veterinary drugs, and certificates from the Ministry of Agriculture for the three products should be

applied for. Workshops and production lines for Tulathromycin material drug and their preparation should be established. Products should be used to treat animals in China.

The following targets should be met through joint R & D: (1) to innovate the synthesizing technology of Tulathromycin on the basis of foreign technology through the resolution of the problems and key points in the research and production of Tulathromycin material and its preparations, and integrate the advantages of the owner of the project so as to develop a new State-level veterinary drug Tulathromycin material and preparations; (2) to perfect the technology, and produce acceptable samples; (3) to complete the study on pharmaceutical technology of Tulathromycin material, its premix and injections; (4) to complete the tests and studies on pharmacology, its major effectiveness, clinical assessments and safety of Tulathromycin, its premix and injections; (5) to form three new drug quality criteria and three new products - Tulathromycin material drug, injections and premix; (6) to apply for three State certificates for new veterinary drugs; (7) to fill in the gap in China and put the drugs into massive use. It is assumed that the achievements of this research will reach advanced international levels.

## Energy Conservation & Environment Protection Industries

**Project No:** A11-1001001

**Project Name:** Key Techniques for Seawater-desalinating Membranes

**Description:** Currently, membranes used for sea water desalination cannot be produced in China. They are mostly imported from other countries at a high cost. This project involves research and development of key techniques for sea water desalinating membranes.

**Project No:** A11-1001002

**Project Name:** Additives for Reduction of Friction Coefficient of Fly Ash or Fly Ash Treatment Techniques

**Description:** Considering that fly ash leads to a lot of equipment wear during mixing and extrusion, it is proposed to introduce additives for reduction of the friction coefficient of fly ash or fly ash treatment techniques.

**Project No:** A11-1001003

**Project Name:** Anti-wear Equipment Materials

**Description:** Considering that fly ash leads to equipment wear during production, it is proposed to introduce wear-resistant materials for production equipment or techniques for the enhancement of wear resistance of existing equipment. Long service life and cost-effectiveness are required.

**Project No:** A11-1001004

**Project Name:** Technical Equipment for Large-caliber Paper, Plastic and Aluminum Pipes

**Description:** Considering that it is difficult to make large-caliber pipes through extrusion, it is proposed to introduce technical equipment for the production of large-caliber paper, plastic and aluminum pipes.

**Project No:** A11-1001005

**Project Name:** Key Techniques for Organic Exhaust Gas Recovery

**Description:** Development and production of cheap high-specific-surface-area adsorbents, high-performance gas-solid adsorption reactors, and new-type desorption techniques.

Project No: A11-1001006

Project Name: Glow Plasma Wastewater Treatment Equipment and Operational Control of Electroplating Industrial Wastewater

Description: Key technologies for wastewater purification treatment, etc.

Project No: A11-1001007

Project Name: Used Tire Recycling Techniques

Description: New material solutions to leakage in recapped tires; pollution-free transformation of used tires; recycling of fenders.

Project No: A11-1001008

Project Name: Application of Wastewater in Coal Slurry Production

Description: Development of new techniques to prevent wastewater from causing secondary air pollution after high-temperature treatment, reacting with additives, and corroding the boiler equipment during the burning process; lab analysis and burning experimentation of wastewater from various sectors and determination of the composition of waste gases.

Project No: A11-1001009

Project Name: Production of Bio-diesel Products

Description: Diversification of bio-diesel products; development of new techniques and processes for bio-diesel production and development of raw materials for bio-diesel production.

Project No: A11-1001010



**Project Name:** Wastewater Treatment System for Bio-diesel Production

**Description:** Wastewater from bio-diesel production is mainly classified into three parts. Each part contains large quantities of different organic substances and salts depending on the production processes. The treatment cost for such high-COD-value wastewater is high, producing an adverse impact on bio-diesel manufacturers and growth of the industry. A cost-effective solution to wastewater treatment is needed to ensure the sustainable development of the bio-diesel industry.

**Project No:** A11-1001011

**Project Name:** Research and Development of Biomass Boilers

**Description:** 1) Research and development of pre-treatment equipment for biomass fuels is needed to solve such problems as handling difficulties and high moisture content; flammability and low calorific value; biomass fuels, especially farm wastes, have higher chlorine and alkaline contents than petrochemical fuels. 2) In-depth research on heating surface contamination, corrosion, slagging and aerosol emissions from boilers. 3) Improvement of boiler design and manufacturing techniques.

**Project No:** A11-1001012

**Project Name:** New Techniques and New Materials for Solar Water Heaters

**Description:** Development of draining, container welding, and temperature control techniques for solar water heaters; application techniques for high-performance split-type solar heaters.

**Project No:** A11-1001013

**Project Name:** Anti-corrosion and Antifouling Techniques by Means of Electrolysis of Metal Alloy Electrodes

**Description:** Development of anti-corrosion and antifouling techniques through the

electrolysis of metal alloy electrodes in order to prevent the corrosion of marine pipes and contamination by sea animals; reduction in the pollution of harbors through the development of other protective measures or facilities; and the downsizing of equipment to facilitate protection of various small environments.

**Project No:** A11-1001014

**Project Name:** Application of Photovoltaic Technology in Environmental Monitoring Equipments

**Description:** In terms of environmental monitoring principles, there are optics, electrochemistry, chromatogram and mass spectrum. Photovoltaic environmental monitoring is a new high-technology integrating optics, precision mechanics, electronics and computer technology. It also utilizes a variety of new materials and techniques such as laser spectrum, differential optical absorption spectroscopy (DOAS), and tunable diode laser absorption spectroscopy (TDLAS). It is one of the dominating means for environmental monitoring, having the features of a wide monitoring range, high speed and capability of long-term dynamic monitoring.

**Project No:** A11-1001015

**Project Name:** Differential Optical Absorption Spectroscopy (DOAS) Technology

**Description:** DOAS was first proposed by U. Platt, at the Institute of Physical Chemistry, University of Heidelberg, Germany. It uses the differential light absorption structural features of gas molecules within the range of ultraviolet to visible light to determine various types of gases and, inversely, calculate gas concentrations according to the intensity of the absorption spectroscopy. This project involves the application of differential ultraviolet absorption spectroscopy technology in the flue gas monitoring

system, and development of a monitoring system for fixed polluting gas sources (SO<sub>2</sub>, NO<sub>x</sub>, CO, H<sub>2</sub>S) based on the DOAS technology.

**Project No:** A11-1001016

**Project Name:** Dioxin Sampling Technology

**Description:** Dioxins, including polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), mainly come from fixed pollution sources such as refuse incinerators, chemical plants and paper mills. Collection and analysis of the dioxin and/or furan-containing gases from fixed pollution sources are important for improving air quality and preventing air pollution. Presently, no dioxin sampling instruments with intellectual property rights are available in China.

**Project No:** A11-1001017

**Project Name:** Electrodialytic Equipment

**Description:** This project involves the introduction of an eletrodialytic equipment for the recondensation of condensed seawater (twice the concentration of common seawater) discharged from seawater desalination systems in order to make liquid salt.

**Project No:** A11-1001018

**Project Name:** Volatile Organic Compounds (VOC) Gas Monitoring

**Description:** Volatile organic compounds (VOC) gas monitoring.

**Project No:** A11-1001019

**Project Name:** Tunable diode laser

**Description:** To use a tunable diode laser to monitor toxic and harmful gases (ammonia, hydrogen chloride, hydrogen sulfide, etc.) by means of near infrared light source.

**Project No:** A11-1001020

**Project Name:** Resource Recycling Technology

**Description:** Waste steam heat recovery; comprehensive treatment of fresh chicken droppings; oil boiler desulfurization and dust removal; field recycling of waste oil from food processing

**Project No:** A11-1001021

**Project Name:** Recovery of Heavy Metals from Mixed Electroplating Wastewater by Means of Ion Exchange

**Description:** To improve the heavy metal recovery rate by using the ion exchange method. The concentration of metal ions of treated water must meet national Class I discharge standards.

**Project No:** A11-1001022

**Project Name:** Solutions to Scaling in the Recycling of Wastewater

**Description:** Now, more and more wastewater from paper mills is recycled. But long-term use of such water will lead to scaling in vacuum equipment which affects its performance. This project is aimed at introducing appropriate descaling agents or techniques for vacuum equipment in order to optimize the use of recycled wastewater from paper mills.

**Project No:** A11-1001023

**Project Name:** Photo-driven Electric Wave Watch Technology

**Description:** The purpose of this project is to integrate electric wave watch technology and photoelectric technology. The principle is as follows: A solar battery beneath the dial plate transforms solar energy into electricity which is kept in the rechargeable battery. The wrist watch is equipped with a radio receiver, which can receive time signals from the National Time Service Center (NTSC). After being decoded and calculated by the IC circuit, the signals are transformed into digital pulses to drive a step-motor and automatically adjust the time. This product is environment friendly. The owner of this project is seeking cooperation with foreign partners. The technology provided by the partners must be internationally advanced.

**Project No:** A11-1001024

**Project Name:** Sapphire Based Wafer Manufacture Technology

**Description:** This project aims at producing sapphire based wafers with higher added-value as compared with existing sapphire based wafers manufactured by the proposing company. The technology is to etch periodic pattern formations with high precision on the 2 in. or 4 in. sapphire substrate produced by the company. This product can alleviate stress caused by the mismatch of lattice due to the heterogeneous growth of epitaxy in the sapphire substrate and nitride layer in the epitaxial growth of GaN at the middle-and-down stream of the LED transistor industrial chain, greatly reduce the intensity of misplacement, and double the LED efficiency. This will help upgrade the LED industry in China.

Investments in the project can be in the form of technology as well as capital, depending on the results of negotiations. It is estimated that this project will result in an annual capacity of 500,000 sapphire based lined wafers in the first stage, and annual revenues of USD 15 million.

**Project No:** A11-1001025

**Project Name:** Adhesive Removing Techniques

**Description:** Sticky substances in the pulp made from waste paper seriously affect normal production operations and the paper quality. The available heat dispersion equipment and adhesive removal agents are costly, yet treatment results are not satisfactory. This project is to introduce cost-effective adhesive removing techniques in order to improve paper quality.



## Home Appliances and Electronics Industries

Project No: B1-1001001

Project Name: RPM Electronics Cooperative Project

Description: To manufacture rotary machines and navigation radar, etc.

Total Investment: 300 million RMB.

Project No: B1-1001002

Project Name: IC Design Service Industrial Park

Description: To establish an industrial park featuring IC design, R&D, and related services.

Total Investment: To be negotiated

Project No: B1-1001003

Project Name: KOSTAT Semiconductor Components

Description: To establish a production center in the north of China.

Total Investment: To be negotiated

Project No: B1-1001004

Project Name: Electronics and Electronic Components

Description: To establish an industrial base for electronics and electronic components.

Total Investment: 10 million US dollars

Project No: B1-1001005

Project Name: Automobile Electronics Processing



Description: To provide support for automobile and railway electronics.

Total Investment: 10 million US dollars

Project No: B1-1001006

Project Name: Telecommunication Material and Spares

Description: The company proposing this project is located in the Jiangshan Light-Industry Zone. It produces various microwave towers, telecommunication materials and spares, and provides lifting and installation of various equipment. It is listed by the Ministry of Information Industry as a designated company. It has a land totaling 60,200 m<sup>2</sup> with 11,000 m<sup>2</sup> of constructed area. The company plans to invite investors through the leasing of its plant or in a form of joint venture.

Jiangshan Light-Industry Zone is situated between the three major opened-up cities - Qingdao, Yantai and Weihai. It is also at the center of the cluster of cities and manufacture base in Shandong Peninsular which are currently under construction. It is 45 km from Qingdao Liuting International Airport, 90 km from the Port of Qingdao, 120 km from the Port of Yantai, 170 km from the Port of Weihai, 120 km from the Port of Rizhao, 3 km from an exit on the Qingdao-Longkou Expressway, and 5 km from Qingdao-Rongcheng Light-Railway. It is connected through the Yantai-Qingdao Highway to the other expressway networks in Shandong Province.

Total investment: RMB 50 million

## Petrochemical and Chemical Industries

Project No: B2-1001001

Project Name: Fine Chemicals, Oleo Chemicals, Special Chemicals, etc.

Total Investment: 620 million RMB

Project No: B2-1001002

Project Name: Liquid Bitumen Extraction Plant

Description: To build a liquid bitumen extraction plant with an annual output of 150,000 tons.

Total Investment: 500 million RMB

Project No: B2-1001003

Project Name: High-intensity and High-modulus Polyethylene

Total Investment: 400 million RMB

Project No: B2-1001004

Project Name: Fine Chemical Additives

Description: To build a coking plant with an annual output of 150,000 tons.

Total Investment: 25 million Euros

Project No: B2-1001005

Project Name: High-grade Paint Production

Description: To build a production line for high-grade paint.

Total Investment: To be negotiated

Project No: B2-1001006

Project Name: Paraffin Production

Description: Paraffin production.

Total Investment: To be negotiated

Project No: B2-1001007

Project Name: Xinhe Chemical Industrial Area Project

Description: To build a wastewater treatment plant with a treatment capacity of 30,000 m<sup>3</sup> of wastewater, a daily supply of 30,000 m<sup>3</sup> of water, and an annual production of 200,000t of solid sodium silicate.

Total Investment: 310 million RMB

Project No: B2-1001008

Project Name: Carbon Black Production

Description: To build a carbon black production line.

Total Investment: 50 million US dollars

Project No: B2-1001009

Project Name: Development of High-tech Silica Gel and Silica Sol Products

Description: The company proposing this project is internationally reputable for its R & D and production of silica gel, silica sol and series of non-organic silicate products. It has an annual capacity of 50,000 tons of silica gel and silica sol products, and 400,000 tons of silicate products. Its annual revenues stand at RMB 400 million from domestic production and UDS 30 million from exports. The company is seeking joint venture partners to participate in its improvement and the joint development silica gel and silica sol products with high technology.

**Project No:** B2-1001010

**Project Name:** New Conveyor Belt Production and Technology Innovation

**Description:** The company proposing this project is a large scale enterprise for the production of conveyor belts, rubber tubes and V-belt production in China. It is the largest company specializing in the design and production of conveyor belts. It has invested and developed the High-Intensity Conveyor Belt Production Base of China and Technology Center in accordance with the State Plan. The company is looking for reputable conveyor belt manufacturers at home and abroad to invest in the form of a joint venture, cooperation, or to cooperate with strong enterprises in shared capital. It plans to build a plant with capacity for 15 million m<sup>2</sup> of conveyor belts and carry out technology innovations on 10 million m<sup>2</sup> of conveyor belts in conjunction with relocation of its existing plant. It plans to acquire 300 mu (20 ha.) of land to build a 67,362 m<sup>2</sup> plant with 35,800 m<sup>2</sup> for main and auxiliary conveyor belt production workshops, 20,830 m<sup>2</sup> for main and auxiliary rubber-refining workshops, and 10,732 m<sup>2</sup> for general engineering facilities such as a substation and power station.

**Total investment:** RMB 400 million

**Project No:** B2-1001011

**Project Name:** Relocation and Upgrading of a Synthetic Resin Company

**Description:** The company proposing this project is one of the 100 strongest enterprises in the synthetic resin sector in China. It is a “designated enterprise for section material and engineering plastic doors and windows” by the China Construction Metal Structure Association, “designated enterprise for plastic pipe production” by the Ministry of Water Resources, national “designated agricultural plastic film production enterprise” and one of the top 30 enterprises in chemical construction material production in Shandong Province.

Its produces five series of products including plastic section material and engineering plastic windows and doors, HIPS/PEPS compound sheets, agricultural films, plastic pipes, and color sheets. All products pass ISO 9001: 2000 quality verifications. The company seeks foreign partners for joint venture and technology cooperation for its relocation program to carry out innovations on wide-width greenhouse film, compound sheets, section materials and color plates for home appliances, and DMMA new material for home appliances and communication industries. The company wishes to expand its scale, upgrade its products, and strengthen competitiveness. It is the aim of the owner to build the company into the largest base for home appliance accessories in Qingdao, and the largest agricultural film production base in Shandong Province.

**Total investment:** RMB 200 million

**Project No:** B2-1001012

**Project Name:** Relocation of a Plastics Company

**Description:** This company has a new plastic coating project which provides coating services for appliance encasements to companies such as Haier. The company is seeking partners for cooperation in the forms of joint venture, cooperation or sale of property rights. It plans to expand its production scale for injection molding on the basis of existing equipment, and increase quality, efficiency and technology. Ten sets of injection molding machines with storage and accessory equipment will be acquired to produce cases for home appliances such as TVs.

**Total investment:** RMB 100 million

**Project No:** B2-1001013

**Project Name:** Invitation for Investments in Projects in Dongjiakou Industry Zone,

Jiaonan City

**Description:** Qingdao Dongjiakou Deepwater Port and Port Industry Zone are located on the coast to the south of Poli Town in Jiaonan City, one of the main transportation channels for energy resources and materials for the areas along the Yellow River and inland provinces. Dongjiakou Port will mainly develop capabilities in the transportation of general cargo, staple bulk dry cargo, liquid chemicals and containers which mainly serve the port industry. Taking the port industry as a base, it will develop its service scope in the port area step-by-step, become a large scale and comprehensive deepwater port area to the south of the Port of Qingdao, and a transit hub and trade center for staple bulk cargo. Modern comprehensive industries such metallurgy, petrochemical, equipment and logistics will be developed in the port industrial zone.

Dongjiakou Deepwater Port and Port Industry Zone have advantageous locations and convenient transportation. Tongsan Expressway, 204 State Way, and Qingdao Seaside Boulevard pass through these sites. The Qingdao-Lianyungang Railway is planned to start construction in October 2009 and be completed in 2011. Construction of a branch of the railway in the port area will occur simultaneously. Dongjiakou Deepwater Port is 37 nautical miles from Qianwan Port in Qingdao, 30 nautical miles from Shijiu Port in Rizhao, 40 nautical miles from Lanshan Port in Rizhao, and 75 km from Qingdao International Airport. It will be only 1 hour's drive to downtown Qingdao after the completion of the underwater tunnel.

Dongjiakou Deepwater Port and Port Industry Zone have a total planned area of 125 km<sup>2</sup> of which 60 km<sup>2</sup> is planned as port area. There will be a total of 112 berths with an annual handling capacity of 370 million tons. It can berth ships with a maximum displacement of 400,000 tons. The port industry area will cover 65 km<sup>2</sup> of which 5 km<sup>2</sup> currently have facilities and can accommodate projects immediately.

The industrial area will take advantage of nearby oil and liquid chemical industries to build a large scale petrochemical base to develop ethylene and its derivatives.

Total investment: To be negotiated.

Project No: B2-1001014

Project Name: Invitation for Investment in a Rubber and Plastics Project

Description: This company mainly produces high-pressure steel-wired rubber tubes with an annual capacity of 1 million meters and output value of RMB 30 million. It has a staff for R & D and a production line with complete equipment. It also has competent, internationally oriented technical and marketing staff. It plans to invite investments in the form of joint venture or through restructuring of the company.

The company is located in Jiangshan Industrial Zone between three major opened-up cities - Qingda, Yantai and Weihai - and at the center of the cluster of cities and manufacture base in Shandong Peninsular which are currently under construction. It is 45 km from Qingdao Liuting International Airport, 90 km from the Port of Qingdao, 120 km from the Port of Yantai, 170 km from the Port of Weihai, 120 km from the Port of Rizhao, 3 km from an exit on the Qingdao-Longkou Expressway, and 5 km from Qingdao-Rongcheng Light-Railway. It is connected by the Yantai-Qingdao Highway to the expressway network in Shandong Province.

Total investment: RMB 16 million

Project No: B2-1001015

Project Name: Invitation for Investment in a Tire Accessory Project in Jiangshan Light-Industry Zone

Description: The owner of this project is a company dealing in tires in Jiangshan

Ligh-Industry Zone. The company will invest a total of USD 535 million in the five phases of its tire project. The first phase has a total investment of USD 98.97 million and registered capital of USD 33.65 million. The target is to produce semi-steel radial tires and other rubber products, with 70% for export. It covers a land of 789 mu (52 ha.) with 283,958 m<sup>2</sup> of constructed area. It was put on trial production on 3rd December 2007, and its daily capacity is 6,000 tires. In April 2008, it invested USD 97.08 million in the second phase which was completed and put into production in September 2009 with an annual capacity of 5.25 million radial tires. The company is seeking investors for related accessory projects.

**Total investment:** To be negotiated.

**Project No:** B2-1001016

**Project Name:** Invitation for Investment in a Plastics Project in Jiangshan Light-Industry Zone

**Description:** The owner of this project is a plastics company located in Jiangshan Light-Industry Zone. It covers an area of 11,500 m<sup>2</sup> with a constructed area of 5,695 m<sup>2</sup>. It is seeking foreign investment.

**Total investment:** To be negotiated.

**Project No:** B2-1001017

**Project Name:** Invitation for Investment in the Ecological Chemistry Science and Technology Industry in Xinghe Industrial Zone, Pingdu City

**Description:** Qingdao Pindu Xinhe Industrial Zone is located in Xinhe Town, Pingdu City, at the juncture of Qingdao, Weifang and Yantai City. It is also at the center of the round-Bohai Bay Economic Circle and the Processing and Manufacturing Base in



Shandong Peninsular. It borders the economic belt focusing on the coastal chemical industries of Weifang, Dongying and Binzhou to the west, and the Laizhou Bay salt production area (the major salt base of China) to the north. The location is favorable for the integration and cooperation of chemical industries.

The industrial zone is blessed with convenient transportation. It is 40 minutes' drive to Qingdao International Airport, 150 km from the Port of Qingdao, 40 km from Laizhou Harbour, and 50 km from Weifang Railway Station. Rongwu Expressway and Qingxin Expressway cross each other here with exits in the zone. Provincial highways No. 264 and No. 320 pass this area. Dalailong Railway connecting Dezhou and Yantai goes through the area from west to east and has a station in Huibu, 5 km away. The planned Jiaoping Railway also passes this area.

The zone has a planned area of 15 km<sup>2</sup>, of which 5 km<sup>2</sup> is the first phase and 10 km<sup>2</sup> is reserved for development in the second phase. The land is an undeveloped beach wasteland with very few residents. It is suitable for development by the chemical industry. It has an underground bittern reserve of 30 million tons, and there are abundant non-organic chemical materials such as salt and limestone in the surrounding areas. It is planned to introduce salt chemicals, silicon chemicals, organic fluorine, plastics and accessory preparations, as well as fine chemical industries here.

**Total investment:** To be negotiated

## Automobile and Railway Industries

**Project No:** B3-1001001

**Project Name:** Rail Transport Industrial Park

**Description:** To build a rail transport industrial park

Total Investment: To be negotiated

Project No: B3-1001002

Project Name: High-speed Railway Monitoring Equipment

Total Investment: To be negotiated

Project No: B3-1001003

Project Name: Auto Parts Production

Description: To manufacture molds, car axles, brake systems and car air-conditioners.

Total Investment: To be negotiated

Project No: B3-1001004

Project Name: New-type Steel Wheel Production Park

Total Investment: 400 million RMB

Project No: B3-1001005

Project Name: Hybrid Car Fuel-electrical Control System

Total Investment: 100 million RMB

Project No: B3-1001006

Project Name: Special Vehicle Production Park

Total Investment: 1,000 million RMB

Project No: B3-1001007

Project Name: Special-purpose Vehicle Production

Description: To manufacture special-purpose vehicles and container trucks.

Total Investment: 20 million US dollars

Project No: B3-1001008

Project Name: Diesel Engine E-controlled Injection System Production

Description: To manufacture electrically-controlled injection systems for diesel engines.

Total Investment: 150 million Euros

Project No: B3-1001009

Project Name: Racing Car Production

Description: The first phase has a yearly production of 50 racing cars; the second phase has a yearly production of 200 racing cars.

Total Investment: 200 million RMB

Project No: B3-1001010

Project Name: Auto Parts Production Base

Description: To build an automobile and auto parts production base.

Total Investment: 10 million US dollars

Project No: B3-1001011

Project Name: Electric Bicycle Plant

Total Investment: To be negotiated

Project No: B3-1001012

Project Name: Car Engine Parts Plant

Description: To manufacture auto parts.

Total Investment: 10 million US dollars

Project No: B3-1001013

Project Name: Development of an Automobile and Spare Parts Industrial Park in Jiaozhou Bay Industrial New Zone

Description: Jiaozhou Bay Industrial New Zone is located at the south end of Shandong Peninsular, and along the north-west coast of Jiaozhou Bay. It borders on Qingdao Economic and Technology Development Zone to the south, and Qingdao Hi-tech Industry Development Zone to the east. It is blessed with an advantageous location and transportation network. It is 24 km from Qingdao Liuting International Airport, 35 km from the Port of Qingdao, 15 km from Qianwan Harbor in Qingdao, and 10 km from the juncture of Jiaoji Railway, Jiaohuang Railway and Jiaoxin Railway. Jiaohuang Railway goes through this zone and branch lines can be constructed according to requirements. Tongshan Expressway is 3.5 km from the zone to the west, and 3 km from Qinglan Expressway to the south. The round-Jiaozhou Bay Expressway goes around this zone. After the completion of the cross-bay bridge, the distance between Qingdao proper and this zone will be shortened to 23 km.

This new zone has a planned area of 75 km<sup>2</sup>, with 33.6 km<sup>2</sup> to be developed in the first phase. Infrastructure including roads, water supply, power, heat and gas, communications, sewage, drainage, digital TV as well as the grading of the site are strictly in accordance with applicable standards. It is planned to build a manufacturing base for modern equipment focusing on automobiles and spare parts as well as ship components. A large-scale power supply facility and new coastal city featuring scientific research facilities, tourism and high-end residences will also be developed here. The first phase involves development of a land area of 1,500 mu (100 ha.) as an automobile and spare parts industrial park.

Investments are invited for this project.

Total investment: Approximately RMB 3 billion

Project No: B3-1001014

Project Name: Automobile Bearing Plant Expansion and Reform

Description: The Company proposing this project mainly produces four series of products including automobile air conditioner electromagnetic clutch bearings, automobile engine water pump shaft bearings, automobile engine tensioner bearings and units, automobile gearbox clutch bearings and units as accessories for the OEM plants in China. Its products are also exported to the USA, Italy, European Union countries and Southeast Asian countries. It has world advanced manufacturing equipment and testing apparatus from Germany, Italy and the UK. It is a hi-tech enterprise and its automobile air conditioner electromagnetic clutch bearings are at the advanced level domestically. This product is the first import-substitute in China and has enjoyed the largest domestic market share for six consecutive years. The company is planning on setting up an automobile bearing automatic lathing and super-fine grinding processing line, automatic assembling line, heat-treatment production line, and requires laboratory equipment to upgrade its products. It wishes to expand capacity from 6 million sets to 10 million sets per annum and realize revenues of RMB 150 million. These products are accessories for reputable international companies such as Valeo, Delphi Corp and Nippondenso.

Total investment: RMB 50 million

Project No: B3-1001015

Project Name: Manufacturing Automobile Transmission Shafts

Description: The owner of this project is a group company in Jimo City with production

and development capacities in machining, casting, forging, punching, riveting, welding, heat-treatment, and injection molding. Its mainstream products are automobile transmission shafts of various specifications, driver's seats for luxury cars as well as all kinds of cast and forged parts and components. These are sold in over 20 of provinces and cities in China, the USA, Japan, R.O.K and Hong Kong. It is planned to set up a plant through joint venture or cooperation to produce automobile transmission shafts. It is estimated that the project will realize annual revenues of USD 70 million and profits of USD 18 million upon completion, and the investment will be recovered in 3 years.

This project is located in Qingdao Jimo Automobile & Component Production Base which is situated in the "golden area" at the juncture of Qingdao-Yantai Highway and Wuwei Highway. It has a total planned area of 33.69 km<sup>2</sup>, with 8.53 km<sup>2</sup> of central district and 3.78 km<sup>2</sup> of starting district. Facilities such as power, water, gas, heat supply, roads, sewage, and communications are available.

**Total investment:** USD 55 million

**Project No:** B3-1001016

**Project Name:** Manufacturing High-grade Moulds for Automobiles

**Description:** The owner of this project is a company in Jimo City specializing in casting iron parts. It has fixed assets of RMB 16 million, an 8,000 m<sup>2</sup> plant and competent technical staff. It casts parts for large scale machinery enterprises and provides lost foam cast products to many automobile mould enterprises in China. Its products are exported to some countries such as the R.O.K., USA and Canada. It is planned to set up a plant through joint venture or cooperation to produce high-grade moulds for automobiles. It is estimated that the project will realize an annual revenues of USD 80 million and profits of USD 20 million upon completion. The investment will be recovered in 3 years.

The project is located in Qingdao Jimo Automobile & Component Production Base which is situated in the “golden area” at the juncture of Qingdao-Yantai Highway and Wuwei Highway. It has a total planned area of 33.69 km<sup>2</sup>, with 8.53 km<sup>2</sup> of central district and 3.78 km<sup>2</sup> of starting district. Facilities such as power, water, gas, heat supply, roads, sewage, and communications are available.

Total investment: USD 60 million

## Shipbuilding & Marine Engineering

Project No: B4-1001001

Project Name: Shipbuilding & Marine Engineering, and Offshore Wind Power

Total Investment: To be negotiated

Project No: B4-1001002

Project Name: Deep-sea Exploration Device Production

Description: To build a branch factory in Qingdao to produce deep-sea exploration equipment.

Total Investment: To be negotiated

Project No: B4-1001003

Project Name: Marine Engine Production

Description: To manufacture large marine engines.

Total Investment: To be negotiated

Project No: B4-1001004

Project Name: Marine Environment Experiment & Industrial Park

Description: To build a marine environment experimental station, and to manufacture blades, ballast water systems, seawater desalination equipment, etc.

Total Investment: 600 million RMB

Project No: B4-1001005

Project Name: Russian Helicopter Assembling and Technical Service Center

Description: Including the assembling of Russia-made “KAMOVANSANT” series helicopters; helicopter inspection, maintenance and export; sales and distribution of helicopter components.

Total Investment: To be negotiated

Project No: B4-1001006

Project Name: Production of Ship Parts

Total Investment: 10 million US dollars

Project No: B4-1001007

Project Name: Yacht Production

Description: To produce sailboats, yachts and related parts and equipment.

Total Investment: 100 million RMB

Project No: B4-1001008

Project Name: Sailboat Production

Description: To produce sailboats.

Total Investment: To be negotiated



**Project No:** B4-1001009

**Project Name:** Manufacturing Spare Parts for the Main Engines of Ships

**Description:** The owner of this project is a group company in Jimo City covering a total area of 50,000 m<sup>2</sup> with 26,000 m<sup>2</sup> of constructed area. It has fixed assets of USD 15 million and USD 7 million in working capital. Its mainstream products are machinery for producing electrical apparatuses and plastic products as well as spare parts for ships. It is planned to set up a plant through joint venture or cooperation to produce spare parts for the main engines of ships. It is estimated that the project will have annual revenues of USD 90 million and profits of USD 17 million upon completion, and the investment will be recovered in 3 years.

The project is located in the Jimo Ship Industry Base, also known as the “Ship Industry District of Shandong Province” and the “New & Key Industry District of Qingdao” in Jimo’s Tianheng Provincial Tourism Zone. Jimo has a total of 183 km of coastline to its east with 2,570 km<sup>2</sup> of sea water including many bays. Aoshan Bay, with an area of 225 km<sup>2</sup> and a coast line of 60 km, is the second largest bay in Qingdao. Nǚdao Port, a National Class II opened-up port, is also located here. These features provide unique conditions for the development of port industry. The Base has a planned land area of 21.5 km<sup>2</sup> of which the ship-building base will cover 6 km<sup>2</sup>, the R & D base and living area will occupy 3.5 km<sup>2</sup>, and an industrial park for accessory products will cover 12 km<sup>2</sup>.

According to the plan, the container dock and general dock of Aoshan Port will cover a coastline area of 18.5 km of which 13.8 km will be a port operations area. Logistics and auxiliary production sectors will occupy a land of 39.3 km<sup>2</sup>. This plan can basically meet the long-term container shipment requirements for the Port of Qingdao.

**Total investment:** USD 50 million

**Project No:** B4-1001010

**Project Name:** Manufacture of Components for Ship Engines

**Description:** The owner of this project is a company in Jimo City specialized in hardware, ship and locomotive spare parts. It is in urgent need of foreign investment for a new production line for engine spares and components and to expand its production scope. It is estimated that the project will have annual revenues of USD 60 million and profits of USD 20 million. The investment will be recovered in 3 years.

The project is located in Jimo Ship Industry Base, also known as the “Ship Industry District of Shandong Province” and the “New & Key Industry District of Qingdao” in Jimo’s Tianheng Provincial Tourism Zone. Jimo has a total of 183 km of coastline to its east with 2,570 km<sup>2</sup> sea water including many bays. Aoshan Bay, with an area of 225 km<sup>2</sup> and a coastline of 60 km, is the second largest bay in Qingdao. Nǚdao Port, a National Class II opened-up port, is also located here. These features provide unique conditions for the development of port industry. The Base has a planned land area of 21.5 km<sup>2</sup> of which the ship-building base will cover 6 km<sup>2</sup>, the R & D base and living area will occupy 3.5 km<sup>2</sup>, and an industrial park for accessory products will use 12 km<sup>2</sup>. According to the plan, the container dock and general dock of Aoshan Port will cover a coastline of 18.5 km of which 13.8 km will be a port operations area. Logistics and auxiliary production sectors will occupy a land of 39.3 km<sup>2</sup>. This plan can basically meet the long-term container shipment requirements for the Port of Qingdao.

**Total investment:** USD 50 million

## Textile and Clothing Industry

Project No: B5-1001001

Project Name: High-grade Textile and Clothing

Description: To produce high-grade textiles and clothing.

Total Investment: 200 million RMB

Project No: B5-1001002

Project Name: Knitting and Clothing

Description: To produce high-grade knitting, clothing and ornaments.

Total Investment: 10 million US dollars

Project No: B5-1001003

Project Name: Textile Industry Project

Total Investment: 200 million RMB

Project No: B5-1001004

Project Name: Cotton Mill

Description: To build a cotton mill with an annual capacity for 30,000 spindles.

Total Investment: 200 million US dollars

Project No: B5-1001005

Project Name: A Textile Company is Seeking Foreign Cooperation

Description: This project is proposed by a textile company producing pure cotton and polyester/cotton yarns, pure cotton and polyester/cotton fabrics of various width, garment fabrics and bedclothes with an annual capacity of 6,000 tons of yarn and 23 million meters of fabric. It has 59,000 spindles, 600 ends of OE yarn, and 239 sets of looms. It covers an

area of 257 mu (17 ha.). It has established a city-level technology center with strong technical staff and the capabilities for independent research and development of new, high-grade products. The company wishes to use its assets, including the existing 59,000 spindles, 156 sets of 75” shuttle looms and 83 sets of projectile looms, to seek partners.  
Total investment: Negotiable

**Project No:** B5-1001006

**Project Name:** Foreign Cooperation for a Textile Company

**Description:** The proponent of this project has 192 sets of air-jet looms and 82,000 spindles. It mainly produces pure cotton, polyester and viscose grey yarn, fiber-dyed yarn, grey fabrics and yarn-dyed fabrics. It has developed TENCEL、 Modal, bamboo yarn, intense-twisted yarn, elastic fabric, electricity-conductive silk (antistatic) products in recent years. It has an annual capacity of 9,000 tons of yarn and 12 million meters of fabric. It is seeking joint venture partners to build a two-storey plant with a total floor area of 45,000 m<sup>2</sup> to accommodate an additional 20,000 compact spinning spindles. The existing 82,000 spindles are to be relocated. Upon completion, the company will have a total production scale of 80,000 spindles.

Total investment: RMB 160 million

**Project No:** B5-1001007

**Project Name:** Embroidery Products for Export

**Description:** The proponent of this project is a key enterprise in the embroidery sector with drawwork and ordinary embroideries as mainstream products. The company is willing to take advantage of its relocation to quicken its technology innovation, upgrade

its products, and further increase the added value and technical intensity of its products through joint venture and technical cooperation. It will further improve its embroidery and warp-knitted products to create a processing base for these products in northern China with an annual capacity of 300,000 --- 500,000 meters of embroidered and knitted fabrics.  
Total investment: RMB 78 million

Project No: B5-1001008

Project Name: Technology Innovations of Fabrics for High-grade Garments and Bedclothes

Description: This company has 156 sets of newly imported 190 cm air-jet looms which are producing fabrics for Tel Tencel and Modal apparels, bedclothes, and differential fiber fabrics. Annual capacity totals 14 million meters. With its existing 30,000 m<sup>2</sup> plant and 192 sets of air-jet looms, the company is interested in seeking partners to introduce 252 sets of air-jet looms and form a joint venture with a production scale of 600 sets of air-jet looms.

Total investment: RMB 120 million

## Food and Beverage Industry

Project No: B6-1001001

Project Name: New-type Pig Slaughtering Plant

Description: To build a modern slaughtering facility with an annual production capacity for 1.1 million pigs.

Total Investment: 150 million RMB

Project No: B6-1001002

Project Name: Fruit and Vegetable Beverage Processing

Description: With an annual capacity of 30,000 tons of fruit and vegetable juices.

Total Investment: 200 million RMB

Project No: B6-1001003

Project Name: Meat Chicken Processing

Description: With an annual production of 30,000 tons of cooked chicken products.

Total Investment: 20 million US dollars

Project No: B6-1001004

Project Name: Food Industry Investment Project

Description: Deep-processing of farm products and byproducts.

Total Investment: 10 million US dollars

Project No: B6-1001005

Project Name: Meat Processing

Description: To build a large-scale meat processing line.

Total Investment: 20 million US dollars

Project No: B6-1001006

Project Name: Food Processing

Description: To build a production line capable of producing 2,000 tons of cooked food per year.

Total Investment: 40 million RMB

Project No: B6-1001007

Project Name: Peanut Processing

Description: To process peanut products.

Total Investment: 50 million RMB

Project No: B6-1001008

Project Name: 2,000 Tons of Groundnut Jam

Description: the proponent of the project is willing to offer land use rights, plant and infrastructure as investment in a joint venture with a foreign partner who can also rent or purchase the offered property for sole operation. Upon completion, the project will have an annual capacity of 2,000 tons of groundnut jam with annual sales revenues of RMB 32 million, profits of RMB 4.8 million and taxes totaling RMB 1.6 million. This project can create 120 jobs and increase the income of farmers by RMB 3.5 million directly and indirectly.

Total investment: USD 2 million

Project No: B6-1001009

Project Name: 6,000 Tons of Fresh Vegetable Processing

Description: This project aims at setting up a vegetable growing base and developing a vegetable processing operation. The owner is willing to offer land rights, plant and infrastructure as investment in a joint venture with a foreign partner who can also rent or purchase the offered property for sole operation. Upon completion, the project will have an annual processing capacity of 6,000 tons of vegetables, annual sales revenues of RMB 24 million, profits of RMB 2.64 million and taxes totaling RMB 1.1 million. This project can create 100 jobs and increase the income of farmers by RMB 3 million.

Total investment: USD 1 million

Project No: B6-1001010

Project Name: 40,000 Tons of Wheat Flour Milling

Description: This project aims at adopting advanced technology and formula to process fine flour and provide packages of different volumes according to market demand. The owner is willing to offer land rights, plant and infrastructure as investment in a joint venture with a foreign partner who can also rent or purchase the offered property for sole operation. Upon completion, the project will have an annual capacity of processing 40,000 tons of wheat flour with sales revenues of RMB 60 million, profits of RMB 6.60 million and taxes of RMB 3 million. It can create 200 jobs and increase the income of farmers by RMB 4.8 million.

Total investment: USD 25 million

Project No: B6-1001011

Project Name: 10,000 tons of Vegetable Preserving and Processing

Description: This project is based on the concept of healthy, green, organic and natural food. It aims at establishing a modern production concept with a base and company formula for processing vegetables. The owner is willing to offer 70 mu (4.67 ha.) of land as shares in a joint venture with a foreign partner who can also rent or purchase the offered property for sole operation. Upon completion, the project will have an annual capacity of processing 10,000 tons of vegetable with sales revenues of RMB 40 million and profits of RMB 5 million. It can create 200 jobs.

Total investment: USD 2 million



**Project No:** B6-1001012

**Project Name:** Vegetable Oil Plant Relocation and Innovation

**Description:** This company is a state-owned large scale grain and oil processing enterprise with a history of over 100 years. Its main product is rich-flavor groundnut oil. It is the unit that drafted the state standard for rich-flavor groundnut oil. It has advanced equipment with an annual capacity of 80,000 tons of groundnut peas. Apart from having prevailing market share in Qingdao, it has established a sales network all over China including offices in Jinan, Shijiazhuang, Guangzhou and Qinhuangdao, and a branch company in Nanning, the capital of Guanxi Zhuang Autonomous Region. It is planning to acquire 80,000 m<sup>2</sup> of land to construct a 25,000 m<sup>2</sup> of plant, store, offices and related facilities for a joint venture with foreign investors to expand production scale and enhance new product research and development.

**Total investment:** RMB 100 million

**Project No:** B6-1001013

**Project Name:** Food Processing in Jiangshan Light-Industry Zone, Laixi City

**Description:** Qingdao Jiangshan Light-Industry Zone is situated between three major opened-up cities - Qingdao, Yantai and Weihai - and at the center of the cluster of cities and manufacture base in Shandong Peninsular which are currently under construction. It is 45 km from Qingdao Liuting International Airport, 90 km from the Port of Qingdao, 120 km from the Port of Yantai, 170 km from the Port of Weihai, 120 km from the Port of Rizhao, 3 km from the Qingdao-Longkou Expressway exit, and 5 km from Qingdao-Rongcheng Light-Railway. It is connected through Yantai-Qingdao Highway to the expressway network in Shandong Province.

The projects in this zone are mainly for food processing. Invitation for foreign investment

is underway.

Total investment: Negotiable

## Machinery and Steel Industries

Project No: B7-1001001

Project Name: Pump Production

Description: To build a production facility to make pumps for nuclear power stations, thermal power plants, use in the petrochemical industry, seawater desalination, shipyards, common industries, and civil buildings.

Total Investment: 500 million RMB

Project No: B7-1001002

Project Name: “Special Transformer Electrical Co” and Seabed Cable Industrial Park

Description: To establish a cable industrial park, including a research and development center, production of 750kv ultra-high-voltage cross-linking cables, 110kv-220kv seabed cables, a terminal and related buildings.

Total Investment: 1,000 million RMB

Project No: B7-1001003

Project Name: Press Forging Production Center

Description: To build press forging facilities.

Total Investment: To be negotiated

Project No: B7-1001004

Project Name: Plastic Machinery

Description: To produce plastic production equipment and plastic products.

Total Investment: To be negotiated

Project No: B7-1001005

Project Name: Mechanical Industry Investment Project

Description: To construct a mechanical industry park.

Total Investment: 10 million US dollars

Project No: B7-1001006

Project Name: Rubber Industry Equipment Manufacturing

Description: To manufacture advanced tire production equipment.

Total Investment: 20 million US dollars

Project No: B7-1001007

Project Name: Steel Pipe Processing

Description: Steel pipe processing and production.

Total Investment: 150 million RMB

Project No: B7-1001008

Project Name: 100,000 Tons of Cast Parts

Description: This project to expand production scale takes up an area of 50 mu (3.33 ha.). It takes advantage of location, transportation and labor to expand market share. The owner of the project offers land use rights and plant as shares in the project. The foreign investor

may also rent or purchase the property for sole operation, or set up another project on the land offered.

Total Investment: USD 5 million

Project No: B7-1001009

Project Name: Time Product, High-Precision Machinery Processing and Hi-tech Products Development

Description: The proponent of this project developed hi-tech products such as the Y128 quartz watch chip, automatic mechanical watch chip, sapphire flying-wheel mechanical watch, U-disc watch, photo-driven watch, radio wave clock and watch. Annual capacity is 10 million quartz watches and 400,000 sets of spares for various kinds of automatic mechanical watches. It has hi-precision processing equipment and an experienced team of management and technical staff. It is seeking investment in a form of joint venture to produce precision electromechanical products, high-grade clocks, photo-driven watches and radio wave time products.

Total investment: RMB 500 million

Project No: B7-1001010

Project Name: Innovation and Upgrading of Casting Machinery

Description: The main products of the company are scores of casting machinery in three series, including cleaning (hardening), sand-processing and molding with dusting removing apparatus and abrasion-resistant material as expansion products. It developed some 50 kinds of new products and special equipment for sheet material, section material and wire material as well as surface treatment of building materials and shot blasting. High and medium level equipment, IT and automatic control equipment required by large

and medium size domestic enterprises are the orientation for further market development. The company is looking for partners to cooperate in the form of joint venture or co-ownership by shares to innovate and upgrade products.

**Total investment:** RMB 80—150 million

**Project No:** B7-1001011

**Project Name:** Cooperation on a Power-Station Valve Project

**Description:** The company proposing this project covers an area of 225,000 m<sup>2</sup> with a constructed area of 92,427.6 m<sup>2</sup>. It has 447 sets of various machinery; including a 10 ton arc furnace (1 set), a 2 ton intermediate frequency furnace (1 set), and processing centers (2 sets). There are complete flaw-detecting apparatus such as a cobalt 60 detector, X-ray detector and supersonic detector, etc. The annual capacity stands at 3,000 tons of valves and 7,000 tons of cast-steel parts. Its products are accessories for heat engine power stations such as high and medium pressure valves, stop-valves, one-way valves, adjusting valves, safety valves, fast-stop valves, drainage valves, stop-valves for testing pressure, and various special valves as well as temperature and pressure reducing apparatus. It also develops and deals in other types of valves such as petrochemical valves, ship valves, and cast-steel parts of various materials. Its valve products can be used on 600MW、1,000MW super-critical and ultra-super-critical heat engine generators. The company is looking for an investor to develop a new company on another site in the form of joint venture or co-ownership by shares. The new company will produce high and medium pressure power station valves, petrochemical and ship valves as well as cast-steel parts.

**Total investment:** RMB 230 million

**Project No:** B7-1001012

**Project Name:** 110Kv-500Kv Cross-Link Ultra-High Voltage Cable

**Description:** The proponent of this project is an enterprise specializing in cable and wire production with complete equipment, competent technical staff and advanced quality control system. The parameters of all the products satisfy the requirements of the International Electro-technical Commission (IEC) and state standards. Its products include: 35 kv cross-link PVC insulated and armored cables (control cables), wires and cables for electric equipment and apparatus, naked aluminum twisted wire and steel-core aluminum wire, 35 kv and below insulated aerial wire, and various anti-flame cables and wires in six series, over 30 types and 1,500 specifications. It can also produce special products required by customers. The company is seeking funds through shares or bank credit to develop 110 kv --- 500 kv super-high voltage cross-link cables.

**Total investment:** RMB 230 million

**Project No:** B7-1001013

**Project Name:** Metallurgical Industry and Equipment Manufacturing Project in Dongjiakou Industrial Zone, Jiaonan City

**Description:** Qingdao Dongjiakou Deepwater Port and Port Industry Zone are located on the coast to the south of Poli Town in Jiaonan City. This is one of the transportation channels for energy resources and materials for areas along the Yellow River and inland provinces. Dongjiakou Port will mainly develop capabilities for the transportation of general cargo, staple bulk dry cargo, liquid chemicals and containers which mainly serve the port industry. Using the port industry as a base, it will develop its service scope in the port area step by step, become a large scale and comprehensive deepwater port area to the south of the Port of Qingdao, and a transit hub and trade center for staple bulk cargo.

Modern comprehensive industries such metallurgy, petrochemical, equipment and logistics

will be developed in the port industrial zone.

Dongjiakou Deepwater Port and Port Industry Zone have advantageous locations and convenient transportation. Tongsan Expressway, No. 204 State Way, and Qingdao Seaside Boulevard pass through this site. The Qingdao-Lianyungang Railway is planned to start construction in October 1009 and will be completed in 2011. The planning, construction and completion of a branch of the railway within the port area will proceed simultaneously. Dongjiakou Deepwater Port is 37 nautical miles away from Qianwan Port in Qingdao, 30 nautical miles from Shijiu Port in Rizhao, 40 nautical miles from Lanshan Port in Rizhao, and 75 km from Qingdao International Airport. It will only be one hour's drive to downtown Qingdao after the completion of the underwater tunnel.

Dongjiakou Deepwater Port and Port Industry Zone have a total planned area of 125 km<sup>2</sup> of which 60 km<sup>2</sup> is planned as port area. There will be a total of 112 berths with an annual handling capacity of 370 million tons. It can berth ships with a maximum displacement of 400,000 tons. The port industry area will cover a land of 65 km<sup>2</sup>, of which 5 km<sup>2</sup> is the first phase development area and has facilities to accommodate projects now.

The industry area will take advantages of logistics in the port to develop the following industries: smelting of metal materials such as iron steel, and aluminum oxide; production and processing of non-ferrous metal compound materials and new alloys; large scale shipbuilding and servicing project; development of equipment for marine resources; seawater desalting equipment; petrochemical equipment; engineering machinery and components; containers; precision cast parts for heavy trucks and automobiles; pressure containers; pipes, new compound pipes and wire; large scale transformers; and steel-related processing mainly involving sheet steel.

**Total investment:** Negotiable

**Project No:** B7-1001014

**Project Name:** Steel Structure Project in Jiangshan Light-Industry Zone

**Description:** This company has a total investment of RMB 150 million, and registered capital of RMB 2.8 million. It covers a land area of 188 mu (12.53 ha.) with a constructed area of 40,000 m<sup>2</sup>. Its main business is the manufacturing and installation of steel structure plants and auxiliary buildings. The first phase of the project has already been put into operation. Investors from abroad are invited to participate in the second phase which comprises a 19,530 m<sup>2</sup> plant.

The company is in Jiangshan Light-Industry Zone which is situated between three major opened-up cities - Qingdao, Yantai and Weihai - and the center of the cluster of cities and manufacture base in Shandong Peninsular which are currently under construction. It is 45 km from Qingdao Liuting International Airport, 90 km from the Port of Qingdao, 120 km from the Port of Yantai, 170 km from the Port of Weihai, 120 km from the Port of Rizhao, 3 km from the Qingdao-Longkou Expressway exit, and 5 km from Qingdao-Rongcheng Light-Railway. It is connected through Yantai-Qingdao Highway to the expressway network in Shandong Province.

**Total investment:** RMB 150 million

**Project No:** B7-1001015

**Project Name:** Machinery Manufacturing Project in Jiangshan Light-Industry Zone

**Description:** Jiangshan Ligh-Industry Zone has favorable conditions for machinery manufacturing. It is planned to introduce yacht building and other machinery manufacturing projects such as engines, automobile spare parts and crane components.

**Total investment:** Negotiable



Project No: B7-1001016

Project Name: Liquanzhuang Industrial Park Project

Description: Liquanzhuang Town is at the southern end of Laixi City, also known as the “center of city cluster in Shandong Peninsula.” It has a superb location and convenient transportation. With No. 204 State Highway and Qingshi Highway passing through, it is the transportation hub from Qingdao to Yantai, Weihai, Weifang, Longkou and the three provinces in Northeast China. Liquanzhuang Industrial Park has a land area of 31.7 km<sup>2</sup> for its long-term plan. 8.67 km<sup>2</sup> has already been constructed. The management of the park has been utilizing the highest standards in the planning and construction of area thus far. Financing has come from various channels and in various forms. Large sums of money have been invested in the construction of infrastructure such as paved roads, green belts, beautification projects, water supply, power, gas and heat, communications, drainage, sewage and digital TV. All of these have been completed.

There are already some machinery processing and manufacturing enterprises engaged in precision casting, precision machinery, motor works, and automobile radiators in operation in the park. These enterprises are producing commercial plane engine spare parts, automobile radiators and spares, ship components, engine components, and industrial iron equipment. The park can provide perfect services for machinery processing and manufacturing industries. Investments are welcome for projects in related sectors.

Total investment: Negotiable

## New Energy Resources Industry

Project No: B8-1001001

Project Name: International Solar Energy Center Production and R&D Base

Total Investment: To be negotiated

Project No: B8-1001002

Project Name: Wind Power Generation Equipment

Total Investment: To be negotiated

Project No: B8-1001003

Project Name: New Energy & New Materials

Description: To build a new energy and new materials production base.

Total Investment: 100 million RMB

Project No: B8-1001004

Project Name: 3.0+ Megawatt Wind-driven Generator Manufacturing Project

Description: The introduction of a project for manufacturing blower motors and related spare parts as accessories to the manufacturing of wind-driven generators is urgently needed to build a wind power industry park. An enterprise producing motors for the production of wind power cylinder towers, foundation and vanes is required in the park. The target of the project is to generate an annual revenues of RMB 1 billion and taxes of RMB 20 million.

Total investment: Negotiable

Project No: B8-1001005

Project Name: 12MW Bio-Material Heat-Engine Power Project

Description: This company covers an area of 200 mu (13.33 ha.). The project involves a

1×75t/h vibration grate straw boiler +12MW extraction condensing turbine generator with an annual capacity of 5720 kwh of power, 69.7 million kilojoule of heat, and consumption of 114,500 tons of corn straws, wheat, groundnuts, as well as tree branches.

Total investment: RMB 128 million

## New Materials Industry

Project No: B9-1001001

Project Name: LED Chips

Description: To manufacture high-brightness LED, including a variety of LED chips and a planned monthly capacity for 30,000 pieces of 2” wafers.

Total Investment: 400 million RMB

Project No: B9-1001002

Project Name: Semiconductor Lighting and Display Industrial Park

Description: Semiconductor industrial chain (epitaxy, chip, packaging and applications), R&D and testing platforms, modern logistics, product trading platform.

Total Investment: To be negotiated

Project No: B9-1001003

Project Name: Consolidated Land for New Materials in Qingdao Hi-tech Zone

Description: The consolidated land for new materials in Qingdao Hi-tech Zone is located

in the center of Qingdao Round-Jiaozhou-Harbor Economic Belt. It has a total planned area of 14.68 km<sup>2</sup>. So far, there are over 40 enterprises in the zone involved in new energy resources, machinery, electronics, biomedical and new materials from the USA, UK, France, R.O.K, Hong Kong and Taiwan. A state-level new materials industrial base is taking shape. A total of USD 700 million in foreign funds and RMB 4.6 billion in domestic capital have been invested here.

The consolidated land enjoys convenient land, marine and air transportation. The land has been graded. Infrastructure such as paved roads, water, power, gas and heat supply, communications, drainage, sewage and digital TV are available. All the land within the consolidated area is designated for industry use, and conforms to the overall state plan for land use. A Consolidated Land Use Permit has already been obtained for the 22,000 mu (1467 ha.) of reserve land.

The consolidated land has Industrial property totaling 2,230 mu (149 ha.) which conforms to the state's land use plan. There are four plants for lease with a total area of 61,700 m<sup>2</sup>. Of this, 51,000 m<sup>2</sup> are standard plants. There are also plants with special facilities (i.e., height of eaves 10.8 m or 7.8 m) totaling 10,700 m<sup>2</sup>.

Investments are welcome for new materials and related industries, IT, biomedicine, new energy and energy-conservation, advanced equipment manufacturing, marine science and technology, national defense technology, high-speed train and automobile manufacturing.

**Total investment:** Negotiable

## Biomedicine Industry

**Project No:** B10-1001001

**Project Name:** Pharmaceutical Industry Project

Description: To build a pharmaceutical industrial base.

Total Investment: 10 million US dollars

Project No: B10-1001002

Project Name: Bio-medicine Research Project

Total Investment: 80 million RMB

Project No: B10-1001003

Project Name: Relocation of a Pharmaceutical Company

Description: The proponent of this project mainly produces three series of medicines; chemical medicines, large volume injections, and solid preparations. It has 118 recipes approved for production by the State Administration for Pharmaceutical Supervision. The company is a national-level key pharmaceutical enterprise, a major pharmaceutical enterprise in Shandong Province, a chemical preparation pilot base in Qingdao, one of the first group of hi-tech enterprises as well as the earliest and largest chemical medicine manufacturer in Qingdao. It is willing to take advantage of company relocation to invite foreign partners to help replace equipment, boost production capacity, upgrade technology, reduce costs and strengthen market competitiveness.

Total investment: RMB 290 million

## Energy Conservation and Environment Protection Industries

Project No: B11-1001001

Project Name: Waste Drying Equipment

Total Investment: To be negotiated

Project No: B11-1001002

Project Name: LED Lighting

Description: To produce LED lighting product series.

Total Investment: To be negotiated

Project No: B11-1001003

Project Name: Heavy-industry Seawater Desalination Equipment

Total Investment: To be negotiated

Project No: B11-1001004

Project Name: Nickel Extraction

Description: Nickel extraction.

Total Investment: To be negotiated

Project No: B11-1001005

Project Name: Environmental Technology

Description: To produce organic chemical fertilizers.

Total Investment: 60 million RMB

Project No: B11-1001006

Project Name: Recycling of Mineral Oil Wastes in Qingdao Circular Economic Zone

Description: Qingdao Circular Economic Zone is situated between three major opened-up cities - Qingdao, Yantai and Weihai - and at the center of the cluster of cities and

manufacture base in Shandong Peninsular which are currently under construction. It has convenient transportation. It is 45 km from Qingdao Liuting International Airport, 90 km from the Port of Qingdao, 120 km from the Port of Yantai, 170 km from the Port of Weihai, and 120 km from the Port of Rizhao. It is connected through Yantai-Qingdao Highway to the expressway network in Shandong Province. Qingdao Circular Economic Zone was planned and established under the 3R principle and based on Qingdao New Horizon Artery Industry Park which was built in 2003. According to the plan, it covers a total area of 220 ha. and includes four functional districts; research, experimental, service and production, and a reserved district.

There are complete infrastructure such as roads, communications, power, green belts, water supply and sewage in the zone. There are also facilities such as offices, solid waste information exchange center of Shandong Province, a dangerous waste disposal center, ordinary industry solid waste burial site, effluent treatment plant, etc. Steam can be provided by boilers burning wastes.

It is planned to establish a mineral oil recycling project here through joint venture. An annual capacity of 3,000 tons will be the target for the first phase, and 10,000 tons for the second phase. Upon completion of the project, 1,000 tons of light oil and 1,000 tons of heavy oil will be recycled.

**Total investment:** RMB 15 million

**Project No:** B11-1001007

**Project Name:** Sewage Treatment Project in Nǚdao Industry Zone, Jimo City

**Description:** Qingdao Jimo Nǚdao Industrial Zone has a total land area of 18.4 km<sup>2</sup>. This includes 4 km<sup>2</sup> for ship-building industries, 2.4 km<sup>2</sup> for R & D and living area, and a 12 km<sup>2</sup> industry park. It is 18.5 km from Aoshan Container Harbor and general dock, and is

the designated expansion area for Qingdao Port to further increase its scale and capacity. The zone is located on Tianheng Peninsula of Jimo City, 60 km (45 minutes' drive) from Qingdao Proper with the Binhai Highway passing through. Upon completion of the cross-sea bridge on the Qingdao—Yantai Highway, it will only be a one and one half hours' drive to Yantai and Weihai Proper. There are 22 km of usable coastline with an average depth of 6 meters. The depth of water near the coast ranges from 10 meters to 14 meters, deep enough for berthing ships with 300,000 tons of displacement. The international navigation line is just 9 km from the harbor, and the distance to Qingdao is 45 nautical miles. Daily water supply capacity stands at 30,000 cubic meters. There is a substation with a 110 kv transformer. At full tide, Nūdao Harbor can allow ships of 5,000 tons and below to pass in and out. This meets the basic requirements for a Class I harbor operation.

The total capacity of the sewage plant is planned for 30,000 m<sup>3</sup>/d. The first phase of the project will include 10,000 m<sup>3</sup>/d and 3 km of drainage pipeline. Construction of the first phase is planned for 2010. The total capacity of the water recycling project will be 30,000 m<sup>3</sup>/d, of which 10,000 m<sup>3</sup>/d will be constructed in the first phase.

**Total investment:** RMB 130 million, and the operation period of the project is 20 years.

**Project No:** B11-1001008

**Project Name:** Technical Center for the Recycling of Urban Solid Waste

**Description:** This project is situated in Qingdao Laixi Jiangshan Industrial Zone. It aims at researching and studying technologies for the recycling of solid waste, including innocuous treatment technologies, solid waste recycling technologies, technologies for the reconditioning of contaminated soils, and the development of new energy resources. These technologies will serve as the incubators for solid waste recycling in the zone and will



support the concepts of recycling solid waste and developing a circular economy.

Qingdao Laixi Jiangshan Industrial Zone is situated between three major opened-up cities - Qingdao, Yantai and Weihai - and the center of the cluster of cities and manufacture base in Shandong Peninsular which are currently under construction. It is 45 km from Qingdao Liuting International Airport, 90 km from the Port of Qingdao, 120 km from the Port of Yantai, 170 km from the Port of Weihai, and 120 km from the Port of Rizhao. It is connected through Yantai-Qingdao Highway to the expressway network in Shandong Province. Qingdao Circular Economic Zone was planned and established under the 3R principle and based on Qingdao New Horizon Artery Industry Park built in 2003. According to the plan, it covers a total area of 220 ha. and includes four functional districts; research, experimental, service and production, and a reserved district. There are complete infrastructure such as roads, communications, power, green belts, water supply and sewage in the zone. There are also facilities such as offices, solid waste information exchange center of Shandong Province, dangerous waste disposal center, ordinary industrial solid waste burial site, effluent treatment plant, etc. Steam can be provided by boilers burning waste.

Total investment: RMB 110 million

## Other Industries

**Project No:** B12-1001001

**Project Name:** Sanitation Industry Production and Export Base

**Description:** To build production facilities for a wide range of sanitation products.

**Total Investment:** To be negotiated

Project No: B12-1001002

Project Name: High-grade Ornaments Processing

Description: To build processing facilities for high-grade glass ornaments.

Total Investment: 10 million US dollars

Project No: B12-1001003

Project Name: Leather Processing

Description: To manufacture leather products used in cars.

Total Investment: To be negotiated

Project No: B12-1001004

Project Name: Packing Company

Description: The company is located in Liquanzhuang Town Industrial Park. It covers an area of 70 mu (4.67 ha.) and includes a concrete and brick plant building and complete facilities. The company is looking for partners through assignment or leasing of the plant building, cooperation or joint venture.

Liquanzhuang Town is at the southern end of Laixi City. It is also known as the “center of city cluster in Shandong Peninsula.” It has a superb location and convenient transportation. It is a transportation hub from Qingdao to Yantai, Weihai, Weifang, Longkou and the three provinces in Northeast China with No.204 State Highway and Qingshi Highway passing through. Liquanzhuang Industrial Park includes a land area of 31.7 km<sup>2</sup> in its long-term plan. 8.67 km<sup>2</sup> have already been developed. The management of the park has utilized the highest standards in its planning and development efforts. Financing has been received from various sources and in various forms. Large sums of money have been invested in the construction of infrastructure such as paved roads, green belts, beautification projects,

water supply, power, gas and heat, communications, drainage, sewage and digital TV.

These have all been completed.

Total investment: Negotiable

Project No: B12-1001005

Project Name: Food Processing Company

Description: The company is located in Liquanzhuang Town Industrial Park. It covers an area of 9.024 mu (0.6 ha.) and includes a concrete and brick plant building. The company has a title deed, property certificates, and complete facilities. It is looking for partners through assignment or leasing of the plant building, cooperation or joint venture.

Total investment: Negotiable

Project No: B12-1001006

Project Name: Toy Plant

Description: The project company is located in Liquanzhuang Town Industrial Park and covers an area of 24.42 mu (1.63 ha.) including a concrete and brick plant building. The company has a title deed, property certificates, and complete facilities. It is looking for partners through assignment or leasing of the plant building, cooperation or joint venture.

Total investment: Negotiable

Project No: B12-1001007

Project Name: Food Processing Company

Description: The project company is located in Liquanzhuang Town Industrial Park and covers an area of 60 mu (4 ha.) including a concrete and brick plant building. The company has a title deed, property certificates, and complete facilities. It is looking for

partners through assignment or leasing of the plant building, cooperation or joint venture.

Total investment: Negotiable

Project No: B12-1001008

Project Name: Thermal-power Plant in the Science & Technology Base in Xinghe Industrial Zone, Pingdu City

Description: Qingdao Pindu Xinhe Industrial Zone is located in Xinhe Town, Pingdu City, at the center of the Round-Bohai Bay Economic Circle and the Processing and Manufacturing Base on Shandong Peninsular. It borders the economic belt of coastal chemical industries of Weifang, Dongying and Binzhou to the west, and Laizhou Bay salt production area (the major salt base of China) to the north. This location is favorable for the integration and cooperation of chemical industries.

The zone has a planned area of 15 km<sup>2</sup>, of which 5 km<sup>2</sup> is the initial development area. The remaining 10 km<sup>2</sup> is reserved for the development in the second phase. The land is an undeveloped beach with very few residents and suitable for chemical industry development. It has an underground bittern reserve of 30 million tons, and there are abundant non-organic chemical materials such as salt and limestone in the surrounding areas. Industrial development here has been adhering to the concepts of circular economy, sustainable development and ecological civilization. It has focused on salt chemicals, fine chemistry, new chemical materials, and new polymer material products based on the chemical sales industry.

It is planned to cooperate with foreign investors to set up a thermal-power project for this ecological, chemical, scientific and technological industrial base. In the first phase, 4 sets of 220t/h boilers are to be installed with 3 sets of 20 MW back pressure extraction turbine generators. Another 2 sets of 220 t/h boilers and 2 sets of 20 MW back pressure extraction

turbine generators will be installed in the second phase.

Total investment: To be negotiated