Measures for the Administration of License for the Export of Goods

Chapter I General Provisions

Article 1 The present Measures are formulated in accordance with the Foreign Trade Law of the People’s Republic of China and the Regulation of the People’s Republic of China on the Administration of Import and Export of Goods for the purpose of rationally allocating the resources, regulating the order of export business, creating a fair and transparent trade environment, performing international conventions and treaties promised by our country, and maintaining the economic interests of the state and national security.

Article 2 The state applies a uniform system of license for the export of goods. The state shall apply export license administration to the export goods under restriction.

Article 3 The Ministry of Commerce shall be the department of centralized administration of export license of the whole country, and shall be responsible for formulating the rules and regulations on the administration of export license, supervising and inspecting the implementation of the measures for the administration of export license and punishing the rule-breaking acts.

The Ministry of Commerce shall, together with the General Administration of Customs, formulate, adjust, and promulgate the annual Catalogue for Goods Subject to the Administration of Export License. The Ministry of Commerce shall be responsible for formulating, adjusting and promulgating the annual Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License.

The Catalogue for Goods Subject to the Administration of Export License and the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License shall be promulgated by the Ministry of Commerce by public notice.

Article 4 The Ministry of Commerce shall authorize the Bureau of Quota License (hereinafter referred to as the License Bureau) to be in uniform charge and direct the work for the issuance of export licenses by the license issuing agencies of the whole country. The License Bureau shall be responsible to the Ministry of Commerce.

Article 5 The License Bureau and the local accredited representatives’ offices under the Ministry of Commerce (hereinafter referred to as each accredited representatives’ office) and the commerce offices or bureaus and the commissions, offices or bureaus of foreign trade and economic
cooperation of all the provinces, autonomous regions, municipalities directly under the Central Government, cities directly under state planning, and other provincial capital cities authorized by the Ministry of Commerce shall be the export license issuing agencies, and shall, under the uniform administration of the License Bureau, be responsible for the work of issuance of licenses within their respective authorized scopes.

Article 6 The export license as mentioned in the present Measures shall include export quota license and export license. For all the goods subject to the administration of export quota license and export license, a foreign trade operator (hereinafter referred to as an operator) shall apply for export license as required to the designated license issuing agency before export. The customs house shall accept the declaration and release on the basis of the export license.

Article 7 No export license may be sold, transferred, altered, forged or changed.

Chapter II Documents To Be Submitted When Applying for Export License

Article 8 An operator shall carefully fill in one application form (the original) for export license according to the facts when applying for export license, and annex a seal to it. In case the application is filed online, he shall carefully fill in the online electronic application form according to the facts and send it to the corresponding license issuing agency.

Article 9 When applying for an export license, an operator shall submit the relevant quota of export goods or other relevant documents of approval to the license issuing agency.

Article 10 When applying for export license, an operator shall submit to the license issuing agency the Form of Archival Filing and Registration of Foreign Trade Operators annexed with the special seal of archival filing and registration of a foreign trade operator or the Qualification Certificate of the Import and Export Enterprises of the People’s Republic of China or the certificate of approval for foreign-funded enterprises (photocopy).

Chapter III Basis for Issuance of Export License

Article 11 Each license issuing agency shall issue export licenses in light of the following provisions on the basis of the scope in the Catalogue for Goods Subject to the Administration of Export License and the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License as formulated by the Ministry of Commerce:

1. For the export commodities subject to quota license administration, the export license shall be issued on the basis of the documents on quotas distributed by the Ministry of Commerce or the
commerce offices or bureaus, commissions, offices and bureaus of foreign trade and economic cooperation of all the provinces, autonomous regions, municipalities directly under the Central Government, cities directly under state planning and other provincial capital cities authorized by the Ministry of Commerce (hereinafter referred to as the local competent departments of commerce) and the export contract of the operator (photocopy of the original);

2. For the export of commodities applying quota bidding, the export license shall be issued on the basis of the name list of the bid-winning operators and the quantities of bid-winning promulgated by the Ministry of Commerce, the Certificate for the Application for Export License of Commodities Applying Quota Bidding or the Certificate for the Transfer and Acceptance of Commodities Applying Quota Bidding, and the export contracts (photocopy of the original) of the bid-winning operators.

3. For the exports of chemicals liable to producing drugs, the export license shall be issued on the basis of the Reply of the Ministry of Commerce on Export of Chemicals Liable To Producing Drugs and the export contracts (photocopy of the original) of the export operators.

4. For the export of computers, the export license shall be issued on the basis of the Examination Form of Export Computer Technologies approved by the Ministry of Commerce and the export contracts (photocopy of the original) of the export operators.

5. For the export of chemicals under supervision and control, the export license shall be issued on the basis of the documents of approval of the Office of State Leading Group for the Performance of the Convention on Prohibition of Chemical Weapons and the export contracts (photocopy of the original) of the operators.

6. For the export of ozonosphere-exhausting materials, the export license shall be issued on the basis of the documents of approval distributed by the Office of Import and Export Administration of Ozonosphere-exhausting Materials of the state and the export contracts (photocopy of the original) of the operators. And

7. For other export commodities subject to the export license administration, the export license shall be issued on the basis of the documents of approval of the Ministry of Commerce and the export contract (photocopy of the original) of the operators.

Article 12 For the goods under processing trade that are subject to export license administration, a license issuing agency shall issue the export license in light of the Catalogue for Goods Subject
to the Administration of Export License and the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License formulated by the Ministry of Commerce and on the basis of the Certificate of Approval for the Business of Processing Trade issued by the department of examination and approval for processing trade authorized by the Ministry of Commerce and the documents of approval for export (Commodities subject to the administration of export quotas without using the quantity of quotas shall be based on the documents of approval of the Ministry of Commerce) as prescribed in Article 11 of the present Measures, the customs declaration of import in processing trade and the export contract (photocopy of the original) of operators.

For the export of chemicals under supervision and control, chemicals liable to producing drugs, ozonosphere-exhausting materials and other goods governed by international conventions by way of processing trade, the export license shall be issued according to Article 11 of the present Measures.

Article 13 When a foreign-funded enterprise exports goods subject to export license administration, it shall be handled in light of the following provisions:

1. If a foreign-funded enterprise is to export the goods subject to export quota administration, a license issuing agency shall issue the license on the basis of the quantity of export quota for foreign-funded enterprises granted by the Ministry of Commerce; if it is to export the goods subject to export quota bidding administration, the relevant documents of approval as prescribed in Article 11 (2) shall also be attached; And

2. In case the circumstances of Article 11 (3) to (7) and Article 12 are involved, it shall be handled in light of the provisions of the corresponding articles.

Article 14 In case any solely-owned enterprise, joint venture enterprise or contractual joint venture enterprise established overseas and in Hong Kong and Macao by the enterprises of our country needs the supply of domestic goods subject to export license administration, a license issuing agency shall issue the export license in light of Article 11 of the present Measures on the basis of the documents of approval of the Ministry of Commerce and the certificate of approval for overseas enterprises of the Ministry of Commerce or the certificate of approval for processing and assembling enterprises with overseas materials of the Ministry of Commerce.

Article 15 Where any enterprise which has the qualification for managing foreign economic and
technology cooperation upon the approval of the Ministry of Commerce, exports equipment (including a whole set of equipment), materials, construction appliances and life materials for self-use of its personnel, which fall within the scope of goods subject to the export license administration, for the purpose of performing such projects as overseas contracting engineering, labor service cooperation, or design and consultation, etc., the export license shall be issued in accordance with Article 11 of the present Measures.

Article 16 For the commodities subject to export license administration for self-use needing to be transported out of China in the export of complete sets of equipment, the export license shall be issued according to Article 11 of the present Measures.

Article 17 For the commodities subject to export license administration for repayment of foreign loans or under compensation trade projects, a license issuing agency shall issue the export license according to the Catalogue for Goods Subject to the Administration of Export License and the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License on the basis of the export quotas granted by the Ministry of Commerce for repayment of foreign loans or that of the compensation trade. Any legal person, other organization or individual that fails to go through archival filing and registration and undertakes the business of repayment of foreign loans or compensation trade shall do export business by entrusting an operator as an agent, and the operator shall apply for the export license.

Article 18 When applying for export licenses, an operator shall declare faithfully in light of the present Measures, and may not falsify, or cheat to obtain the export license by means of false contract or fake documents.

Chapter IV Issuance of Export License

Article 19 Each license issuing agency shall issue the export license for the relevant export goods strictly in accordance with the requirements in the annual Catalogue for Goods Subject to the Administration of Export License and the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License within 3 workdays from the date of receiving the application conforming to the requirements, no license may be issued in violation of the provisions. An operator shall, when exporting goods in the Catalogue for Goods Subject to the Administration of Export License, apply for export license to the license issuing agency as designated by the Catalogue for Graded License Issuance of Goods Subject to the Administration
of Export License.

Article 20 The License Bureau, all the accredited representatives’ offices and local license issuing agencies shall issue export licenses strictly in accordance with the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License as promulgated by the Ministry of Commerce. In case online application for export license is implemented, the handling shall be made in light of the relevant procedures and provisions.

1. The scope of licenses to be issued by the License Bureau:
   (1) The export licenses within the scope of authorization of the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License shall be issued in light of the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License as prescribed by the Ministry of Commerce. And
   (2) The export licenses of enterprises under the Central Government in Beijing.

2. The scope of licenses to be issued by each accredited representatives’ office:
   (1) Issuing the export licenses to the operators within the contact area, the enterprises under the Central Government within the contact area, and the subsidiaries of the enterprises under the Central Government in Beijing whose quotas are controlled by the local regions on the basis of the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License as prescribed by the Ministry of Commerce;
   (2) Issuing the export license for quota bidding goods of any operator within the contact area on the basis of the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License as prescribed by the Ministry of Commerce; and
   (3) Issuing the export licenses for other goods as prescribed by the Ministry of Commerce.

3. The scope of licenses to be issued by each local license issuing agency:
   (1) Issuing export licenses to local operators according to the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License as prescribed by the Ministry of Commerce; and
   (2) Issuing the export license for other goods as prescribed by the Ministry of Commerce.

4. Goods whose licenses are issued by the designated license issuing agencies:
   For all the goods whose licenses are issued by the license issuing agencies as designated by the Catalogue for Graded License Issuance of Goods Subject to the Administration of Export License,
an operator shall apply export license to the designated license issuing agency without exceptions.

Article 21 No license issuing agency may issue any export license without quota, exceeding quota, exceeding power or the scope of license issuance. No staff member of any license issuing agency may neglect his duty, seek private gains or misuse authority during performance of duty, and may not seek for the property of other people by taking advantages of conveniences of his post or take the property of other people illegally for seeking interests for others.

Article 22 The administration of export license shall apply the system of "one license for one customs house", "one batch, one license" and "non-one batch, one license". The "one license for one customs house" shall mean that an export license may only be declared at one customs house; and the "one batch, one license" shall mean that an export license may be used for customs declaration for once within the period of validity.

The system of "non-one batch, one license" shall be implemented under the following circumstances, and the "non-one batch, one license" shall be indicated in the note column when issuing the export license:

1. Goods under export license administration of foreign-funded enterprises;
2. Goods under export license administration in compensation trade; and
3. Other goods under export license administration applying the system of "non-one batch, one license" as prescribed by the Catalogue for Goods Subject to the Administration of Export License.

The "non-one batch, one license" shall mean that an export license may be used for customs declaration for many times within the period of validity, but shall not exceed twelve times at most, and the customs house shall indicate in the "endorsement of customs examination and release" column the amount of outbound cargo batch by batch.

Chapter V Handling of Exceptions

Article 23 The overloaded goods shall be large goods in bulk. The amount of overload shall be handled according to the international trade customs, that is, the amount of overload of large goods in bulk exported after customs declaration shall not exceed 5% of the amount of export as listed in the export license. In the case of large goods in bulk which do not apply the system of "one batch, one license", the amount shall be deducted after checking according to the actual export amount when each batch of the goods is exported, and the amount of overload shall be
computed on the basis of the actual surplus export amount of the license and within 5% of the prescribed upper limit of the overload when the final batch of goods is exported.

A license issuing agency shall issue the license for the export of goods in this category strictly in light of the amount of export quotas and the amount checked by the documents of approval, verifying and deducting the amount of quota according to the actual amount of the licenses issued and shall not issue license on the basis of the amount of export quotas or the amount checked by the documents of approval plus the amount of overload allowed by international trade customs.

Article 24 Export license shall be exempted for goods subject to export license administration for project of foreign economic aid. The relevant provisions on the release certificate shall be formulated and promulgated by the Ministry of Commerce, the General Administration of Customs and the State Administration for Quality Inspection, Supervision and Quarantine.

Article 25 Provisions on exhibition articles, exhibition articles for sale and small articles for sale that are taken abroad (out of the territory) to participate in or for holding exhibitions are as follows:

1. The export licenses shall be exempted for exhibition articles not for sale under export license administration, which are taken abroad (out of the territory) to participate in or for holding exhibitions, and the customs shall supervise, examine and release these articles after examination on the basis of the documents of approval for the exhibitions by the department of examination and approval and the customs declaration on export goods. The entities participating in the exhibition shall, within 6 months after the end of the exhibition, carry back exactly the amount of the exhibition articles not for sale to be cancelled by the customs after verification. Under special circumstances, the period may be postponed upon the approval of the customs.

2. Where the exhibition articles for sale and the small articles for sale that are taken abroad (out of the territory) for participating in or holding exhibitions are subject to the export license administration, the entities participating in the exhibitions shall apply to the license issuing agencies as prescribed in the Graded License Issuance Catalogue for the export licenses without using the export quotas on the basis of the documents of approval of the department of examination and approval for foreign economic and trade exhibitions and the exhibition participation certificates of the entity organizing enterprises to take part in foreign economic and trade exhibitions, And
3. For the chemicals under supervision and control, chemicals liable to producing drugs, ozonosphere-exhausting materials and other goods governed by international conventions, the export licenses shall be handled as normal export, and the provisions of items (1) and (2) of this Article shall not be applied.

Article 26 Provisions on the samples of export goods and samples of goods under export license administration that need to be provided for cultural exchange and technology exchange are as follows:

1. For the samples of goods subject to the export license administration or samples for experiment use which are shipped abroad (out of the territory) by an operator, if the value of each batch of goods are RMB 30,000 Yuan or less, the export license shall be exempted, the customs shall check and release the goods on the basis of the customs declaration of the export samples filled in by the operator; if the value exceeds RMB 30,000 Yuan, the goods shall be regarded as being exported normally, and the operator may apply for export license as required. The words "samples of goods" shall be indicated in the note column of the export license. And

2. For the chemicals under supervision and control, chemicals liable to producing drugs, ozonosphere-exhausting materials and other goods governed by international conventions, the export licenses shall be handled as normal export, and the provisions of item (1) of this Article shall not be applied.

Article 27 For the donations provided by the Chinese government to foreign countries according to the agreement or temporary decision between the governments of the two countries, or the materials donated by the Chinese government or organization to the government or organization of the opposite country on the basis of friendship, among which there are goods subject to the export license administration, the export license shall be issued on the basis of the relevant agreements or decisions without using export quotas.

For other donations involving export license administration, the export license shall be issued according to Article 11 of the present Measures.

Chapter VI Period of Validity of Export License

Article 28 The period of validity of export quota shall be before or at December 31st of the current year, unless it is specified differently. An operator shall apply for an export license to the license issuing agency within the period of validity of the quota.
Article 29 Each license issuing agency shall issue export licenses of the next year according to the export quotas granted by the Ministry of Commerce or all local competent department of commerce from December 10 of the current year, the period of validity shall start from January 1 of the next year.

Article 30 The longest period of validity of an export license shall not exceed 6 months and the deadline for the period of validity shall not exceed December 31 of the current year. Where any goods under quota license administration are exported by way of processing trade, the period of validity of the export license shall be determined according to the time limit for the export as checked by the Certificate of Approval for the Business of Processing Trade, but shall not exceed December 31 of the current year. If the time limit for export determined according to the Certificate of Approval for the Business of Processing Trade exceeds December 31 of the current year, an operator shall apply for issuing a new export license by replacing the original one for the new year to the issuing agency within the period of validity of the original export license. The license issuing agency shall take back the original license and write it off in the license issuing system, and reissue the export license for the new year within the time limit for export as determined according to the Certificate of Approval for the Business of Processing Trade after deducting the amount having been used, and indicate in the note column the number of the original certificate.

The Ministry of Commerce may adjust the period of validity and application time of the export licenses of certain goods according to the specific circumstances.

An export license shall be used within the period of validity, and shall be invalidated automatically if it exceeds the time limit, and the customs shall not release the goods.

Article 31 In case an export license fails to be used within the period of validity due to some reason, an operator shall apply for extension to the original license issuing agency within the period of validity of the export license. The license issuing agency shall take back the original license, and reissue an export license after writing off the original license in the license issuing computer management system, and indicate in the note column the extension use and the number of the original license.

In case an export license is not fully used within the period of validity due to some reason, an operator shall apply for extension for the unused part to the original license issuing agency within
the period of validity of the export license. The license issuing agency shall take back the original license and cancel the original license in the license issuing system after verification, and reissue an export license after deducting the amount that has been used, and indicate in the note column the extension use and the number of the original license.

Where an extension for any export license is handled by using the export quotas of the current year, the longest extension period shall not exceed December 31 of the current year.

In case an application for extension fails to be filed within the period of validity of an export license, the export license shall be invalidated automatically after the expiration of the time limit. The license issuing agency shall not handle formalities for extension of the license any longer. And the amount of goods under the export license shall be regarded as being given up by the quota holder automatically.

Article 32 After an export license is issued, no entity or individual may unlawfully alter the face contents of the license. Where there is necessity to alter the face contents of the license, an operator shall return the export license to the original license issuing agency within the period of validity of the export license, and reapply for an export license.

Article 33 In case an export license having been received is lost, an operator shall report in written forms to the customs house at the export port as indicated in the face of the license and the relevant license issuing agency at once, and publish a "Loss Notice" in national economic newspapers and periodicals. A license issuing agency may write off the license after verifying that the license really has not passed through the customs on the basis of the Loss Notice and issue a new license.

Article 34 In case such entities as the customs, industry and commerce, public security, disciplinary inspection or court need to make inquiry about or investigation into any export license to any license issuing agency, it shall show the relevant certificate according to law, and then the license issuing agency may accept the inquiry.

Article 35 Where any license issuing agency is adjusted, the original license issuing agency shall not issue the export license for the goods subject to the export license administration any longer from the date of adjustment, and shall report the application conditions of the operator before the adjustment to the adjusted license issuing agency. The license applied for and received by the
operator before the adjustment shall be effective continuously within the period of validity. If the license is not used or not fully used within the period of validity, an operator shall go through formalities for extension to the adjusted license issuing agency as required.

Chapter VII Inspection and Punishment

Article 36 The Ministry of Commerce shall authorize the License Bureau to make regular inspections on each license issuing agency. The contents of inspection shall be the implementation of the present Measures by the license issuing agency, and the inspection shall focus on whether there are issues of issuing license by exceeding quotas, without quotas or exceeding power or levels in violation of regulations and other issues in violation of the present Measures. The ways of inspection shall apply the method of combining regular or irregular self-inspection by a license issuing agency with the spot check of the License Bureau.

The License Bureau shall report the inspection conditions to the Ministry of Commerce.

Article 37 Each license issuing agency shall transmit in time the license issuing data in light of the provisions of the Ministry of Commerce on online checking of licenses to ensure the smooth declaration of the operators and the checking of the customs. It shall carefully check up the checking data fed back by the customs, and inspect in time the use of the licenses and find out the existing problems. The License Bureau shall report the checking data fed back by the customs being verified to the Ministry of Commerce periodically.

Article 38 In case any license issuing agency issues licenses by exceeding quotas, without quotas or exceeding power or levels in violation of Article 21 of the present Measures, the Ministry of Commerce shall give it warnings, suspend or cancel its right to issue licenses and other punishment according to the circumstances.

Article 39 Any operator who forges, alters or sells and buys export licenses shall be subject to criminal liabilities in accordance with the provisions of the Criminal Law on the crime of illegal management, or the crimes of forging, altering, selling and buying the documents, certificates or seals of the state organs. If it is not serious enough to be subject to criminal liabilities, he/it shall be punished in accordance with the relevant provisions of the customs law and the relevant laws and regulations.

In case any one obtains any export license by cheating or other illegal means, the Ministry of Commerce shall capture its/his export license.
The Ministry of Commerce may prohibit any violator from undertaking the relevant foreign trade business activities within one to three years from the date when the decision on the administrative punishment in the preceding two paragraphs takes effect or from the date when the judgment on criminal punishment takes effect. Within the period of prohibition, the customs shall not handle formalities for customs declaration and release for the operator according to the prohibition decision made by the Ministry of Commerce, and the department of foreign exchange control or foreign exchange designated banks shall not handle the relevant formalities for settlement and sale of foreign exchange.

Article 40 Any license issued by exceeding quotas, without quotas or exceeding power or levels shall be invalidated. For the export licenses involved in Articles 37 and 38, the Ministry of Commerce shall revoke them once discovering the facts after investigation. For the issues concerning the aforesaid licenses discovered by the customs during actual supervision or case handling, the license issuing agency shall give a clear reply.

Article 41 In case any entity that organizes or participates in any exhibition violates the relevant provisions of paragraph one of Article 25, and fails to carry back the exact amount of exhibition articles not for sale subject to the export license administration for the customs to cancel them after verification, the customs shall notify the Ministry of Commerce. The Ministry of Commerce and the department of examination and approval for foreign economic and trade exhibitions shall give warnings to the entity that organizes or participates in the exhibition, suspend the examination and approval for its overseas (out-of-territory) exhibition articles for one to two years according to the circumstances.

Article 42 In case any staff member of any license issuing agency violates Article 21 of the present Measures and constitutes a crime, he shall be subject to criminal liabilities according to the relevant provisions of the Criminal Law of the People’s Republic of China. In case any staff member of any license issuing agency violates the present Measures, which is not serious enough to constitute a crime, he shall be transferred from his work post, and be subject to administrative punishment according to Article 55 or 56 of the Civil Servant Law of the People’s Republic of China.

Chapter VIII Supplementary Provisions

Article 43 The relevant existing provisions shall be followed for the goods entering the bonded
warehouses, bonded zones and export processing zones in other districts within the customs districts of China. And the existing provisions shall be followed for the export of goods in the export supervision warehouses, bonded zones and export processing zones.

Article 44 The relevant existing provisions shall still be followed for the export license administration under border trade.

Article 45 The present Measures shall not be applicable to the goods governed by the Export License for Sensitive Items and Technology.

Article 46 The power to interpret the present Measures shall remain with the Ministry of Commerce.

货物出口许可证管理办法

第一章 总 则

第一条 为了合理配置资源，规范出口经营秩序，营造公平透明的贸易环境，履行我国加入的国际公约和条约，维护国家经济利益和安全，根据《中华人民共和国对外贸易法》和《中华人民共和国货物进出口管理条例》，制定本办法。

第二条 国家实行统一的货物出口许可证制度。国家对限制出口的货物实行出口许可证管理。

第三条 商务部是全国出口许可证的归口管理部门，负责制定出口许可证管理办法及规章制度，监督、检查出口许可证管理办法的执行情况，处罚违规行为。

商务部会同海关总署制定、调整和发布年度《出口许可证管理货物目录》。商务部负责制定、调整和发布年度《出口许可证管理货物分级发证目录》。

《出口许可证管理货物目录》和《出口许可证管理分级发证目录》由商务部以公告形式发布。

第四条 商务部授权配额许可证事务局（以下简称许可证局）统一管理、指导全国各签证机构的出口许可证签发工作。许可证局对商务部负责。

第五条 许可证局及商务部驻各地特派员办事处（以下简称特派员）和各省、自治区、直辖市、计划单列市以及商务部授权的其他省会城市商务厅（局）、外经贸委（厅、局）（以下简称各地方签证机构）为出口许可证签证机构，在许可证局统一管理下，负责授权范围内的签证工作。

第六条 本办法所称出口许可证包括出口配额许可证和出口许可证。凡实行出口配额许可证管理和出口许可证管理的货物，对外贸易经营者（以下简称经营者）应当在出口前按规定向指定的签证机构申领出口许可证，海关凭出口许可证接受申报和验放。

第七条 出口许可证不得买卖、转让、涂改、伪造和变造。
第二章 申领出口许可证应当提交的文件

第八条 经营者申领出口许可证时，应当认真如实填写出口许可证申请表（正本）1份，并加盖印章。实行网上申领的，应当认真如实地在线填写电子申请表并传送给相应的发证机构。

第九条 经营者申领出口许可证时，应当向发证机构提交有关出口货物配额或者其他有关批准文件。

第十条 经营者申领出口许可证时，应当向发证机构提交加盖对外贸易经营者备案登记专用章的《对外贸易经营者备案登记表》或者《中华人民共和国进出口企业资格证书》或者外商投资企业批准证书（复印件）。

第三章 出口许可证签发依据

第十一条 各发证机构按照商务部制定的《出口许可证管理货物目录》和《出口许可证管理分级发证目录》范围，依据下列规定签发出口许可证：
（一）实行配额许可证管理的出口货物，凭商务部或者各省、自治区、直辖市、计划单列市以及商务部授权的其他省会城市商务厅（局）、外经贸委（厅、局）（以下简称各地商务主管部门）下达配额的文件和经营者的出口合同（正本复印件）签发出口许可证。
（二）实行配额招标的出口货物，凭商务部发布的中标经营者名单、中标数量、《申领配额招标货物出口许可证申请书》或者《配额招标货物转受让证明书》以及中标经营者的出口合同（正本复印件）签发出口许可证。
（三）易制毒化学品的出口，凭《商务部易制毒化学品出口批文单》和经营者的出口合同（正本复印件）签发出口许可证。
（四）计算机的出口，凭商务部批准的《出口计算机技术审查表》和经营者的出口合同（正本复印件）签发出口许可证。
（五）监控化学品的出口，凭国家履行禁止化学武器公约工作领导小组办公室批准文件和经营者的出口合同（正本复印件）签发出口许可证。
（六）消耗臭氧层物质的出口，凭国家消耗臭氧层物质进出口管理办公室下发的批准文件和经营者的出口合同（正本复印件）签发出口许可证。
（七）其他实行出口许可证管理的出口货物，凭商务部批准文件及经营者的出口合同（正本复印件）签发出口许可证。

第十二条 加工贸易项下属于出口许可证管理的货物，发证机构按照商务部制定的《出口许可证管理货物目录》和《出口许可证管理分级发证目录》，凭商务部授权的加工贸易审批机关签发的《加工贸易业务批准证》及本办法第十一一条规定的出口批准文件（属于出口配
额管理但不使用配额数量的商品（凭商务部分批）；海关加工贸易进口报关单和经营者的出口合同（正本复印件）签发出口许可证。

以加工贸易方式出口监控化学品、易制毒化学品、消耗臭氧层物质以及其他国际公约管辖的货物，按照本办法第十一条签发出口许可证。

第十二条 外商投资企业出口属于出口许可证管理的货物，应当按以下规定办理：
（一）外商投资企业出口属于出口配额管理的货物，发证机构凭商务部下达的外商投资企业出口配额数量签发许可证；出口配额招标管理的货物，应当附带第十四条第（二）款规定的有关批准文件；
（二）涉及第十一条（三）到（七）款及第十二条之情形的，按照相应条款规定办理。

第十四条 国内企业在国外及香港、澳门投资设立的独资、合资和合作企业，需国内供应属于出口许可证管理的货物，发证机构凭商务部批准文件和商务部境外企业批准证书或者商务部境外材料加工装配企业批准证书，按照本办法第十一条签发出口许可证。

第十五条 经商务部分批具有对外经济技术合作经营资格的企业为履行国（境）外承包工程、劳务合作、设计咨询等项目合同出口的设备（含成套设备）、材料、施工机械及人员自用的生活物资属于出口许可证管理的货物，按照本办法第十一条签发出口许可证。

第十六条 出口成套设备需运出境外项目自用属于出口许可证管理的货物，按照本办法第十一条签发出口许可证。

第十七条 偿还国外贷款或者补偿贸易项下属于出口许可证管理的货物，发证机构按商务部制定的《出口许可证管理货物目录》和《出口许可证管理分类发证目录》发证。商务部下达的偿还国外贷款或者补偿贸易的出口配额签发出口许可证。未办理备案登记的法人、其他组织或者个人从事偿还国外贷款或者补偿贸易业务时，应当委托经营者代理出口，并由该经营者办理出口许可证。

第十八条 经营者申领出口许可证时，应当按本办法如实申报，不得弄虚作假，严禁以假合同、假文件等手段骗取出口许可证。

第四章 出口许可证的签发

第十九条 各发证机构应当严格按照年度《出口许可证管理货物目录》和《出口许可证
管理分级发证目录》的要求，自收到符合规定的申请之日起 3 个工作日内签发相关出口货物的出口许可证，不得违反规定发证。经营者出口《出口许可证管理货物目录》中的货物，应当到《出口许可证管理分级发证目录》指定的发证机构申领出口许可证。

第二十条 许可证局、各特办和各地方发证机构应当严格按照商务部发布的《出口许可证管理分级发证目录》签发出口许可证。实行网上申领出口许可证的，按照有关程序和规定办理。
（一）许可证局发证范围：
1. 按照商务部规定的《出口许可证管理分级发证目录》，签发《出口许可证管理分级发证目录》授权范围内的出口许可证。2. 在京的中央管理企业的出口许可证。
（二）各特办发证范围：
1. 按照商务部规定的《出口许可证管理分级发证目录》，签发联系地区内经营者、联系地区内中央管理企业及配额由地方管理的在京中央管理企业子公司的出口许可证；
2. 按商务规定的《出口许可证管理分级发证目录》，签发联系地区内经营者配额招标货物出口许可证；
3. 签发商务部规定的其他货物的出口许可证。
（三）各地方发证机构发证范围：
1. 按商务规定的《出口许可证管理分级发证目录》签发本地经营者出口许可证；
2. 签发商务部规定的其他货物的出口许可证。
（四）指定发证机构发证的货物：
凡属于《出口许可证管理分级发证目录》中指定发证机构发证的货物，经营者一律到指定的发证机构办理出口许可证。

第二十一条 各发证机构不得无配额、超配额、越权或者超发证范围签发出口许可证。发证机构的工作人员在履行职责过程中，不得玩忽职守、徇私舞弊或者滥用职权，不得利用职务上的便利索取他人财物，或者非法收受他人财物为他人谋取利益。

第二十二条 出口许可证管理实行“一证一关”制、“一批一证”制和“非一批一证”制。“一证一关”指出口许可证只能在一个海关报关；“一批一证”指出口许可证在有效期内一次报关使用。
下列情况实行“非一批一证”制，签发出口许可证时应在备注栏内注明“非一批一证”：
（一）外商投资企业出口许可证管理的货物；
（二）补偿贸易项下出口许可证管理的货物；
（三）其它在《出口许可证管理货物目录》中规定实行“非一批一证”的出口许可证管理货物。
“非一批一证”指出口许可证在有效期内可以多次报关使用，但最多不超过 12 次，由海关在“海关验放签注栏”内逐一签注出运数。

第五章例外情况的处理
第二十三条 满装货物应当为大宗、散装货物。溢装数量按照国际贸易惯例办理，即报关出口的金额、散装货物的溢装数量不得超过出口许可证所列出口数量的5%。不实行“一批一证”制的大宗、散装货物，每批货物出口时，按其实际出口数量进行核扣，最后一批货物出口时，其溢装数量按该许可证实际剩余数量并在规定的溢装上限5%内计算。

发证机构在签发此类出口货物许可证时，应严格按照出口配额数量及批准文件确定的数量签署，并按许可证实际签发核数核配额数量。不在出口配额数量或者批准文件确定的数量基础上加上按国际贸易惯例允许的溢装数量签发许可证。

第二十四条 对外援助项目出口实行出口许可证管理的货物免领出口许可证。有关验放凭证的规定，由商务部、海关总署和国家质检总局另行制定和发布。

第二十五条 赴国（境）外参加或者举办展览会运出境外展品、展样品、小卖品的规定：
（一）赴国（境）外参加或者举办展览会所带属于出口许可证管理的非卖展品，免税出口许可证。海关凭出国（境）经济贸易展览会审批部门批准的文件和出口货物报关单监管验放，参展单位应当在展览会结束后6个月内，将非卖展品如数运回，由海关核销。在特殊情况下，经海关同意，可以延期。
（二）赴国（境）外参加或者举办展览会带出的展样品、小卖品，属于出口许可证管理的，参展单位凭出国（境）经济贸易展览会审批部门的批准文件及出国（境）经济贸易展览会组展单位提供的参展证明，向《分类发证目录》规定的发证机构申领出口许可证，不占用出口配额。
（三）监控化学品、易制毒化学品、消耗臭氧层物质以及其他国际公约管辖的货物，按正常出口办理，不适用本条第（一）、（二）项规定。

第二十六条 出口货物样品和文化交流或者技术交流需对外提供属于出口许可证管理货物的货样的规定：
（一）经营者运出国（境）外属于出口许可证管理货物的货样或者实际用样品，每批货物价值在人民币3万元（含3万元）以下者，免税出口许可证。海关凭经营者填写的出口货样报关单验放；超过3万元者，视作正常出口，经营者按规定申领出口许可证。出口许可证备注栏内应当注明“货样”字样。
（二）监控化学品、易制毒化学品、消耗臭氧层物质以及其他国际公约管辖的货物对外提供货样，按正常出口办理，不适用本条第（一）项规定。

第二十七条 中国政府根据两国政府间的协议或者临时决定，对外提供捐赠品或者中国政府、组织基于友好关系向对方国家政府、组织赠送的物资，涉及出口许可证管理的货物，凭有关协议或者决定签发出口许可证，不占用出口配额。
其他捐赠，涉及出口许可证管理的，按本办法第十一条签发出口许可证。
第六章 出口许可证的有效期

第二十八条 出口配额的有效期为当年 12 月 31 日前（含 12 月 31 日），另有规定者除外，经营者应当在配额有效期内向发证机构申领出口许可证。

第二十九条 各发证机构可自当年 12 月 10 日起，根据商务部或者其他地方商务主管部门下发的下一年度出口配额签发下一年度的出口许可证，有效期自下一年度 1 月 1 日起。

第三十条 出口许可证的有效期最长不得超过 6 个月，且有效期截止时间不得超过当年 12 月 31 日。

以加工贸易方式出口属于配额许可证管理的货物，其出口许可证有效期按《加工贸易业务批准证》中条文期限核发，但不得超过当年 12 月 31 日。如《加工贸易业务批准证》的出口期限超过当年 12 月 31 日，经营者应在原出口许可证有效期内向发证机构提出换发新一年出口许可证。发证机构收回原证，在发证系统中对原证进行核销，扣除已使用数量后，按《加工贸易业务批准证》所定的出口期限重新签发新一年度出口许可证，并在备注栏中注明原证证号。

商务部可视具体情况，调整某些货物出口许可证的有效期和申领时间。

出口许可证应当在有效期内使用，逾期自行失效，海关不予放行。

第三十一条 出口许可证因故在有效期内未使用，经营者应当在出口许可证有效期内向原发证机构提出延期申请，发证机构收回原证，在发证计算机管理系统中注销原证后，重新签发出口许可证，并在备注栏中注明延期使用和原证证号。

出口许可证因故在有效期内未使用完，经营者应当在出口许可证有效期内向原发证机构提出未使用部分的延期申请，发证机构收回原证，在发证系统中对原证进行核销，扣除已使用的数量后，重新签发出口许可证，并在备注栏中注明延期使用和原证证号。

使用当年出口配额领取的出口许可证办理延期，其延期最长不得超过当年 12 月 31 日。未在出口许可证有效期内提出延期申请，出口许可证逾期自行失效，发证机构不再办理延证手续，该出口许可证货物数量视为配额持有者自动放弃。

第三十二条 出口许可证签发后，任何单位和个人不得擅自更改证面内容；如需要对证面内容进行更改，经营者应当在出口许可证有效期内将出口许可证退回原发证机构，重新申领出口许可证。

第三十三条 已领取的出口许可证如遗失，经营者应当立即向许可证证面注明的出口口岸地海关及相关发证机构书面报告，并在全国性经济类报刊中登载“遗失声明”，发证机构凭遗失声明，并经核实该证确未通关后，可注销该证，并核发新证。
第三十四条 海关、工商、公安、纪检、法院等单位需要向发证机构查询或者调查出口许可证的，应当依法出示有关证件，发证机关方可接受查询。

第三十五条 出口许可证管理货物在发证机构调整时，自调整之日起，原发证机构不得再签发该货物的出口许可证，并将经营者在调整前的申领情况报告调整后的发证机构。经营者在调整前申领的许可证在有效期内继续有效。有效期内未使用或者未完全使用的许可证按相关规定到调整后的发证机构办理延期手续。

第七章检查和处罚

第三十六条 商务部授权许可证局对各发证机构进行定期检查。检查的内容为发证机构执行本办法的情况，重点是检查是否有超配额、无配额或者越权越级违规发证以及其他违反本办法的问题。检查的方式，实行各发证机构定期或者不定期自查与许可证局抽查相结合的办法。

许可证局应当将检查的情况向商务部报告。

第三十七条 各发证机构应当按照商务部许可证联网核查的规定及时传送发证数据，以保证经营者顺利报关和海关核查；对海关反馈的核查数据应当认真核对，及时检查许可证的使用情况并找出存在的问题。许可证局应当定期将核对后的海关反馈核查数据报商务部。

第三十八条 对违反本办法第二十一条，超配额，无配额和越权越级发证的发证机构，商务部将视情节轻重给予其警告、暂停或者取消发证权等处分。

第三十九条 对伪造、变造或者买卖出口许可证的经营者，依照刑法关于非法经营罪或者伪造、变造、买卖国家机关公文、证件、印章罪的规定，依法追究刑事责任；尚不够刑事责任的，依照海关法等有关法律、法规的规定给予处罚。

对以欺骗或者其他不正当手段获取出口许可证的，商务部依法收缴其出口许可证。

商务部可以禁止违法行为人自前两款规定的行政处罚决定生效之日起一年以上三年以下的期间内从事有关的对外贸易经营活动。在禁止期限内，海关根据商务部依法作出的禁止决定，对所有经营者的所有出口货物不予办理报关验放手续，外汇管理部门或者外汇指定银行不予办理有关结汇、售汇手续。

第四十条 超配额、无配额和越权越级发放的许可证无效。对第三十七条、第三十八条所涉出口许可证，一经查实，商务部予以吊销处理。对海关在实际监管或者案件处理过程中发现的涉及上述许可证的问题，发证部门应当给予明确回复。
第四十一条 对违反第二十五条第（一）款有关规定，未将属于出口许可证管理的非卖展品如数运回由海关核销的，由海关通知商务部，商务部和出国（境）经济贸易展览会审批部门视情节轻重给予该组展单位和参展单位警告、暂停审批其出国（境）展览项目一至两年等处分。

第四十二条 对发证机构工作人员违反本办法第二十一条构成犯罪的，依照《中华人民共和国刑法》有关规定追究其刑事责任。对发证机构工作人员违反本办法尚不构成犯罪的，应当调离工作岗位，并根据《中华人民共和国公务员法》第五十五条、第五十六条规定给予行政处分。

第八章 附 则

第四十三条 中国关境内其他地区货物进入保税仓库、保税区和出口加工区的，按照现行有关规定执行。出口监管仓库、保税区、出口加工区的货物出口到境外，按现行规定执行。

第四十四条 边境贸易项下出口许可证管理仍按照现行有关规定执行。

第四十五条 《敏感商品和技术出口许可证》管辖货物不适用本办法。

第四十六条 本办法由商务部负责解释。

第四十七条 本办法自 2008 年 7 月 1 日起施行。原《货物出口许可证管理办法》（商务部令 2004 年第 28 号）同时废止。
Ministry of Foreign Trade and Economic Cooperation (Order No.12 of 2001)

In accordance with the Law of the People's Republic of China on Foreign Trade and the Regulations of the People's Republic of China on the Administration of Goods Import and Export, the Measures for the Administration of Export Commodities Quotas has been approved after discussion at the 9th ministerial meeting of the Ministry of Foreign Trade and Economic Cooperation of 2001 and is hereby promulgated, and shall come into force on Jan. 1, 2002.

Shi Guangsheng, Minister

Dec. 20, 2001

Measures for the Administration of Export Commodities Quotas
Chapter 1 General Provisions
Article 1 In order to standardize the administration of export commodities quotas, to guarantee that the administration of export commodities quotas consist with the principles of efficiency, justness, openness and transparency and to safeguard the normal exports of commodities subject to quota administration, these Measures have been formulated according to the relevant provisions of the Law of the People's Republic of China on Foreign Trade (hereinafter referred to as the Foreign Trade Law) and the Regulations of the People's Republic of China on the Administration of Goods Import and Export (hereinafter referred to as the Regulations on Goods Import and Export).

Article 2 The Ministry of Foreign Trade and Economic Cooperation (hereinafter referred to as the MOFTEC) shall be responsible for the administration of export commodities quotas of the whole country. The commissions (departments, bureaus) of foreign trade and economic cooperation of the provinces, autonomous regions, municipalities directly under the Central Government and cities under State Planning (hereinafter referred to as the local administrative authorities of foreign trade and economic cooperation) shall, based on the authorization of the MOFTEC, be responsible for the administration of export commodities quotas within their respective area.

Article 3 According to the provisions of Article 35 and Article 36 of the Regulations on Goods Import and Export, the MOFTEC applies export quota administration with respect to the commodities restricted from export by the State.

Article 4 These Measures shall be inapplicable to the following commodities subject to export quota administration:

1) Export commodities subject to quota bidding or paid use administration;

2) Export commodities subject to passive quota administration according to the provisions of multilateral or lateral agreements;
3) Commodities listed in the appendixes of these Measures.

Article 5 These Measures shall be applicable to the exports of the commodities subject to quota administration in various trade forms.

Article 6 The valid term of export commodities quotas shall expire on December 31 of their current year.

Chapter 2 The list of export commodities subject to quota administration

Article 7 The list of export commodities subject to quota administration shall be formulated, adjusted and promulgated by the MOFTEC.

Article 8 The list of export commodities subject to quota administration shall be promulgated at least 21 days before the implementation; and in case of emergency, shall be promulgated not later than the day of implementation.

Chapter 3 Total Amount of Export Quotas

Article 9 The total amount of export commodities quotas shall be determined and promulgated by the MOFTEC.

Article 10 When determining the total amount of export commodities quotas, the MOFTEC shall take the following factors into consideration:

1) Needs of guaranteeing the safety of national economy;

2) Needs of protecting the limited domestic resources;

3) Development planning, objectives and policies of the State on the relevant industries;

4) Demands of the international and domestic markets, and the production and sales status.

Article 11 The MOFTEC shall promulgate the total amount of export quotas of the next year before October 31 of each year.

Article 12 The MOFTEC may adjust the total amount of export commodities quota according to the actual needs, but the relevant adjustments shall be finished and promulgated no later than September 30 of that current year.

Chapter 4 Application for Export Quotas

Article 13 The export enterprises that have the license or qualification for import and export management and have no violation of laws and rules in economic activities in the last 3 years may apply for the export commodities quotas.

Article 14 The enterprises under local administration shall file the applications for quotas to the local administrative authorities of foreign trade and economic cooperation; the local administrative authorities of foreign trade and economic cooperation shall, after examining and gathering the applications of the enterprises of their respective area, report to the MOFTEC according to the requirements of the MOFTEC. The enterprises under central administration shall directly apply to the MOFTEC for the export commodities quotas.

Article 15 The export enterprises shall file the quota applications in formal written
form, and shall submit the relevant documents and materials according to the requirements.

Article 16 The MOFTEC shall accept the applications for the export commodities quotas of the next year presented by the local administrative authorities of foreign trade and economic cooperation and the enterprises under central administration, and shall not accept the applications filed at other time.

Chapter 5 Distribution, Adjustment and Management of Export Quotas

Article 17 The MOFTEC shall distribute the export commodities quotas to the local administrative authorities of foreign trade and economic cooperation and the enterprises under central administration; and the local administrative authorities of foreign trade and economic cooperation and the enterprises under central administration shall, within the amount of quotas of their respective area and according to these Measures and the relevant provisions of the State on the administration of goods export, distribute the quotas to the enterprises of their respective area that have filed applications.

Article 18 The MOFTEC shall distribute the export quotas of the next year to the local administrative authorities of foreign trade and economic cooperation and the enterprises under central administration before December 15 of each year; and the administrative authorities of foreign trade and economic cooperation shall distribute the quotas handed down by the MOFTEC to the applying enterprises of their respective area.

If there exist precarious factors in the international market, the MOFTEC may distribute the export quotas of the next year in two times. In the first distribution, no less than 70% of the total amount of quotas shall be distributed before December 15 of each year; and the rest part shall be distributed no later than June 30 of the current year.

Article 19 When distributing the quotas, the MOFTEC and the local administrative authorities of foreign trade and economic cooperation shall take into full consideration the export performance of that commodity, the utilization rate of quotas, the business management capacity, the production scale and the resources status, etc. of the applying enterprise or area in the last 3 years.

Article 20 Under any of the following circumstances, the MOFTEC may increase or reduce the quotas that have already been distributed to the local administrative authorities of foreign trade and economic cooperation or the enterprises under central administration:

1) Major changes take place in the international market;

2) Major changes of domestic resources take place;

3) The quota use paces between the areas or the enterprises under central administration are obviously unbalanced.

Article 21 The local administrative authorities of foreign trade and economic
cooperation shall, in line with the principle of increase of utilization rate of quotas, inspect the enforcement of export commodities quotas of their respective area regularly, and shall take back the distributed quotas and redistribute them with respect to those of which the utilization rate fail to meet the prescribed requirements.

Article 22 The local enterprises shall return the annual quotas that they fail to use to the local administrative authorities of foreign trade and economic cooperation in time, and the local administrative authorities of foreign trade and economic cooperation may redistribute the quotas within their respective area or hand them in to the MOFTEC in the current year.

The enterprises under central administration shall directly return the annual quotas they fail to use to the MOFTEC before October 31 of the current year.

Article 23 If the local administrative authorities of foreign trade and economic cooperation or the enterprises under central administration fail to return the quotas according to the provisions of Article 22 of these Measures, and fail to implement all the quotas of their respective enterprise or area before the end of the current year, the MOFTEC may deduct their corresponding quotas in the next year.

Article 24 The MOFTEC and the local administrative authorities of foreign trade and economic cooperation shall notify the relevant export license issuing bodies about the quota distribution and the adjustment results at the same time; the distribution results and the adjustment plans of the local administrative authorities of foreign trade and economic cooperation shall be reported to the MOFTEC for record in 30 days from the day on which the decision is promulgated.

Article 25 The export enterprises shall, based on the quota certifications issued by the MOFTEC or the local administrative authorities of foreign trade and economic cooperation, apply to the license issuing bodies authorized by the MOFTEC for the export quota licenses, and go through the procedures for examination and release at the customs based on the export quota licenses.

Chapter 6 Legal Responsibilities

Article 26 Where any export operator exports export commodities subject to quota administration beyond the scope approved or licensed or without approval by the means of falsely reporting the commodity name or reporting less export amount, etc., he shall be punished according to the provisions of Article 65 of the Regulations on Goods Import and Export, and the MOFTEC may cancel the export commodities quotas he has already obtained.

Article 27 Where anyone forges, alters or trades the export commodities quota certificates, documents of approval or export quota licenses, he shall be punished according to the provisions of Article 66 of the Regulations on Goods Import and Export, and the MOFTEC may cancel the export commodities quotas he has already obtained.

Article 28 Where any export operator obtains the export commodities quotas, documents of approval or export quota licenses through deception or other improper ways, he shall be punished according to the provisions of Article 67 of the
Regulations on Goods Import and Export, and the MOFTEC may cancel the export commodities quotas he has already obtained.

Article 29 Where the local administrative authorities of foreign trade and economic cooperation distribute the quotas in violation of the provisions of these Measures or the provisions of the State on the administration of state-run trade or designated management, they shall be punished according to the relevant provisions of the Administrative Penalties Law, and the MOFTEC may notify them to make corrections and give them warnings.

Article 30 Where anyone has objections against the decisions on quota distribution or decisions on penalties made by the MOFTEC, he may either apply for administrative review according to the Administrative Review Law, or bring a lawsuit before the people's court.

Chapter 7 Supplementary Provisions

Article 31 The export commodities quotas of foreign-funded enterprises shall be handled according to the relevant provisions.

Article 32 The power to interpret these Measures shall remain with the MOFTEC

Article 33 These Measures shall come into force on January 1, 2002. The Provisional Measures of the Ministry of Foreign Trade and Economic Cooperation for Reporting, Distributing and Enforcing Export Commodities Quotas promulgated by the MOFTEC on October 6, 1998, and the Detailed Rules for the Implementation of Provisional Measures for Reporting, Distributing and Enforcing Export Commodities Quotas promulgated by the MOFTEC on January 2, 1999 shall be repealed simultaneously.


中华人民共和国对外贸易经济合作部 2001 年第 12 号令 《出口商品配额管理办法》

根据《中华人民共和国对外贸易法》和《中华人民共和国货物进出口管理条例》，《出口商品配额管理办法》已经外经贸部 2001 年第 9 次部长办公会议讨论通过，现予发布，自 2002 年 1 月 1 日起施行。

部长 石广生
二 00 一年十二月二十日

出口商品配额管理办法

第一章 总 则
第一条 为规范出口商品配额管理，保证出口商品配额管理工作符合效益、公正、公开和透明的原则，维护配额管理商品的正常出口，根据《中华人民共和国对外贸易法》（以下简称《对外贸易法》）和《中华人民共和国货物进出口管理条例》（以下简称《货物进出口条例》）的有关规定，制定本办法。

第二条 对外贸易经济合作部（以下简称外经贸部）负责全国出口商品配额管理工作。各省、自治区、直辖市及计划单列市外经贸委（厅、局）（以下简称地方外经贸主管部门）根据外经贸部的授权，负责本地区出口商品配额管理工作。

第三条 根据《货物进出口条例》第三十五条、第三十六条的规定，外经贸部对部分国家限制出口的商品实行出口配额管理。

第四条 下列出口配额管理商品不适用本办法：
（一）实行配额招标或有偿使用管理的出口商品；
（二）根据多、双边协议的规定，实行被动配额管理的出口商品；
（三）本办法附件中所列商品。

第五条 本办法适用于各种贸易方式下配额管理商品的出口。

第六条 出口商品配额有效期截止到当年 12 月 31 日。

第二章 出口配额商品目录

第七条 实行配额管理的出口商品目录，由外经贸部制定、调整并公布。

第八条 实行配额管理的出口商品目录，应当至少在实施前 21 天公布；在紧急情况下，应当不迟于实施之日公布。

第三章 出口配额总量

第九条 出口商品配额总量，由外经贸部确定并公布。

第十条 外经贸部确定出口商品配额总量时，应当考虑以下因素：
（一）保障国家经济安全的需要；
（二）保护国内有限资源的需要；
（三）国家对有关产业的发展规划、目标和政策；
（四）国际、国内市场的需求及产销状况。

第十一条 外经贸部应当于每年 10 月 31 日前公布下一年度出口配额总量。

第十二条 外经贸部可以根据实际需要对本年度出口商品配额总量作出调整，但有关调整应当不晚于当年 9 月 30 日完成并公布。
第四章 出口配额的申请

第十三条 依法享有进出口经营许可或资格，并且近三年内在经济活动中无违法、违规行为的出口企业可以申请出口商品配额。

第十四条 地方管理企业向地方外经贸主管部门提出配额申请；地方外经贸主管部门对本地区企业的申请审核、汇总后，按外经贸部的要求，上报外经贸部。中央管理企业直接向外经贸部申请出口商品配额。

第十五条 出口企业应当以正式书面方式提出配额申请，并按要求提交相关文件和资料。

第十六条 外经贸部于每年 11 月 1 日至 11 月 15 日受理各地方外经贸主管部门和中央管理企业提出的下一年度出口商品配额的申请；其他时间申请的，不予受理。

第五章 出口配额的分配、调整和管理

第十七条 外经贸部将出口商品配额分配给各地方外经贸主管部门和中央管理企业；各地方外经贸主管部门在外经贸部分配给本地区的配额数量内，按本办法及国家关于货物出口经营管理的有关规定，及时将配额分配给本地区提出申请的出口企业。

第十八条 外经贸部应当于每年 12 月 15 日前将下一年度的出口配额分配给各地方外经贸主管部门和中央管理企业；各地方外经贸主管部门应当及时将外经贸部下达的配额分配给本地区的申请企业。

当国际市场存在不稳定因素时，外经贸部可将下一年度出口配额分两次分配。第一次分配应当于每年 12 月 15 日前将下一年度不少于总量 70%的配额下达分配；剩余部分将不晚于当年 6 月 30 日下达。

第十九条 外经贸部和各地方外经贸主管部门进行配额分配时，应当充分考虑到申请企业或地区最近三年内该项商品的出口业绩、配额使用率、经营能力、生产规模、资源状况等。

第二十条 如发生下列情况时，外经贸部可以对已分配给各地方外经贸主管部门或中央管理企业的配额进行增加或减少的调整：
（一）国际市场发生重大变化；
（二）国内资源状况发生重大变化；
（三）各地区或中央管理企业配额使用进度明显不均衡。

第二十一条 各地方外经贸主管部门应当本着提高配额使用率的原则，定期对本地区出口商品配额执行情况进行核查，对配额使用率达不到规定要求的，应当及时收回已分配的配额并重新分配。
第二十二条 地方企业应当及时将其无法使用的年度配额交还地方外经贸主管部门，地方外经贸主管部门可将其在本地区内重新分配或于当年 10 月 31 日前上交外经贸部。

中央管理企业应当于当年 10 月 31 日前将无法使用的年度配额直接交还外经贸部。

第二十三条 地方外经贸主管部门或中央管理企业未按本办法第二十二条规定交还配额，并且未能在当年年底前将本企业或本地区配额全部执行完的，外经贸部可以在下一年度扣减其相应的配额。

第二十四条 外经贸部和各地方外经贸主管部门应当将配额分配及调整结果同时通知有关出口许可证发证机构；各地方外经贸主管部门的分配结果及调整方案应当于该决定公布之日起 30 天内上报外经贸部备案。

第二十五条 出口企业凭外经贸部或地方外经贸主管部门发放的配额证明文件，按照有关出口许可证管理规定，向外经贸部授权的许可证发证机构申领出口配额许可证，凭出口配额许可证向海关办理报关验放手续。

第六章 法律责任

第二十六条 出口经营者以伪报商品名称、少报出口数量等方式超出批准、许可的范围或未经批准而出行配额管理的出口商品的，依照《货物进出口条例》第六十五条规定处罚，外经贸部并可以取消其已获得的出口商品配额。

第二十七条 伪造、变造或者买卖出口商品配额证明、批准文件或出口配额许可证的，依照《货物进出口条例》第六十六条规定处罚，外经贸部并可以取消其已获得的出口商品配额。

第二十八条 出口经营者以欺骗或者其他不正当手段获取出口商品配额、批准文件或者出口配额许可证的，依照《货物进出口条例》第六十七条规定处罚，外经贸部并可以取消其已获得的出口商品配额。

第二十九条 各地方外经贸主管部门的配额分配违反本办法规定的，依照《国家关于实行国营贸易管理或指定经营管理规定的，依照《行政复议法》的有关处罚，外经贸部可以通知其纠正并给予警告。

第三十条 对外经贸部作出的配额分配决定或处罚决定有异议的，可以依照《行政复议法》提起行政复议，也可以依法向人民法院提起诉讼。

第七章 附则

第三十一条 外商投资企业的出口商品配额按有关规定办理。
第三十二条 本办法由外经贸部负责解释。

第三十三条 本办法自 2002 年 1 月 1 日起施行。1998 年 10 月 6 日外经贸部发布的《对外国经济合作部关于出口商品配额编报下达和组织实施的暂行办法》、1999 年 1 月 2 日外经贸部发布的《关于出口商品配额编报、下达和组织实施暂行办法的实施细则》同时废止。
Performance Evaluation Report

Reference Number: PPE: PRC 2009-60
Project Number: 28388
Loan Number: 1715
December 2009

People's Republic of China: Shanxi Environment Improvement Project

Independent Evaluation Department

Asian Development Bank
## CURRENCY EQUIVALENTS

Currency Unit – yuan (CNY)

<table>
<thead>
<tr>
<th></th>
<th>At Appraisal (November 1999)</th>
<th>At Completion (March 2006)</th>
<th>At Independent Evaluation (July 2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNY1.00 =</td>
<td>$0.121</td>
<td>$0.124</td>
<td>$0.144</td>
</tr>
<tr>
<td>$1.00 =</td>
<td>CNY 8.278</td>
<td>CNY8.039</td>
<td>CNY6.950</td>
</tr>
</tbody>
</table>

### ABBREVIATIONS

- **ADB** – Asian Development Bank
- **ADTA** – advisory technical assistance
- **CBM/CMM** – Coal-bed-methane/coal-mine-methane
- **CHP** – combined heat power
- **CO₂** – carbon dioxide
- **DDHC** – Datong District Heating Company
- **DDHP** – Datong District Heating Project
- **EA** – executing agency
- **EARD** – East Asia Department
- **EIRR** – economic internal rate of return
- **EPB** – Environmental Protection Bureau
- **ET** – emissions permit trading
- **FIRR** – financial internal rate of return
- **HES** – Heat exchange station
- **ICB** – international competitive bidding
- **JGC** – Jiaoqu Gas Company
- **LPG** – liquefied petroleum gas
- **NEMC** – national environmental monitoring center
- **NO₂** – nitrogen dioxide
- **NOₓ** – nitrogen oxide
- **PCB** – price control bureau
- **PCR** – project completion report
- **PDP** – pollution discharge permit
- **PGC** – Pingding Gas Company
- **PCR** – project completion report
- **PMO** – project management office
- **PPER** – project performance evaluation report
- **PPTA** – project preparatory technical assistance
- **PRC** – People’s Republic of China
- **RESC** – regional environmental supervision center
- **RRP** – report and recommendation of the President
- **SO₂** – sulfur dioxide
- **SPG** – Shanxi provincial government
- **SSCCL** – Shanxi Shenzhou Coking Company Limited
- **SOE** – state-owned enterprise
- **TA** – technical assistance
- **TCGC** – Taiyuan Coal Gasification Company
- **TCGEP** – Trans-Century Green Engineering Program
- **TCGG** – Taiyuan Coal Gasification Group
- **TPL** – total pollution loading
- **TSP** – total suspended particulates
WACC – weighted average cost of capital
WTP – willingness to pay
YCGC – Yangquan City Gas Company
YCMG – Yangquan Coal Mining Group

WEIGHTS AND MEASURES

GJ – gigajoule
km – kilometer
m² – square meter
m³ – cubic meter
MW – megawatt
mcm – million cubic meters
PM₁₀ – particulate matter of less than 10 microns diameter
tph – ton per hour

NOTES

In this report, “$” refers to US dollars.

Key Words
adb, asian development bank, china, energy efficiency, coal bed methane, pollution prevention, coal gasification, district heating, prc, emissions, ghg, shanxi, SO₂ emissions trading, technical assistance

Director
H. Hettige, Independent Evaluation Division 2 (IED2), Independent Evaluation Department (IED)

Team leader
K. Thukral, Evaluation Specialist, IED2, IED

Team members
R. Lumain, Senior Evaluation Officer, IED2, IED
R. Perez, Senior Operations Evaluation Assistant, IED2, IED

Independent Evaluation Department, PE-731

In preparing any evaluation report, or by making any designation of or reference to a particular territory or geographic area in this document, the Independent Evaluation Department does not intend to make any judgments as to the legal or other status of any territory or area.
**CONTENTS**

| BASIC DATA                                      | i   |
| EXECUTIVE SUMMARY                              | iii |
| I. INTRODUCTION                                 | 1   |
| A. Project Description and Expected Results     | 1   |
| B. Evaluation Purpose and Process               | 1   |
| C. Project Completion Report                    | 2   |
| II. DESIGN AND IMPLEMENTATION                  | 2   |
| A. Formulation                                 | 2   |
| B. Rationale                                   | 3   |
| C. Cost, Financing, and Executing Arrangements  | 4   |
| D. Design                                      | 5   |
| E. Implementation Schedule                      | 6   |
| F. Procurement and Construction                 | 6   |
| G. Outputs                                     | 7   |
| H. Loan Covenants                              | 8   |
| I. Policy Setting and Framework                 | 9   |
| III. PERFORMANCE ASSESSMENT                    | 9   |
| A. Overall Assessment                           | 9   |
| B. Relevance                                   | 10  |
| C. Effectiveness                               | 11  |
| D. Efficiency                                  | 12  |
| E. Sustainability                              | 14  |
| F. Technical Assistance                        | 16  |
| IV. OTHER ASSESSMENTS                           | 16  |
| A. Impact                                      | 16  |
| B. ADB Performance                             | 19  |
| C. Borrower and Executing Agency performance    | 20  |
| V. ISSUES, LESSONS, AND FOLLOW-UP ACTIONS       | 21  |
| A. Issues                                      | 21  |
| B. Lessons                                     | 21  |
| C. Follow-Up Actions                           | 22  |

In accordance with the guidelines formally adopted by the Independent Evaluation Department (IED) to avoid conflict of interest in its independent evaluations, the Director General of IED did not review this report and delegated approval of this evaluation to the Director of Independent Evaluation Division 2. Yu Yang Gong, Li Dongming, and Elizabeth Lat were the consultants. To the knowledge of the management of IED, there were no conflicts of interest of the persons preparing, reviewing, or approving this report.
APPENDIXES
1. Project Framework 23
2. Project Cost and Financing Source 26
3. Implementation Agencies and Subproject Details 27
4. Policy Framework for Environmental Protection 41
5. Training Provided 47
6. Economic and Financial reevaluation of Subprojects 48
7. Pricing of Energy and Utility Services 57
8. SO₂ Emissions Permit Trading 62
9. Indoor Air Quality 64
10. Social Impacts 65
BASIC DATA
Loan 1715-PRC: Shanxi Environment Improvement Project

Project Preparation/Institution Building

<table>
<thead>
<tr>
<th>No.</th>
<th>TA Name</th>
<th>Type</th>
<th>Person-months</th>
<th>Amount ($ million)</th>
<th>Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2901</td>
<td>Shanxi Environment Improvement (JSF)</td>
<td>PPTA</td>
<td>NA</td>
<td>0.59</td>
<td>21 Oct 1997</td>
</tr>
<tr>
<td>3325</td>
<td>Shanxi Air Quality Improvement (JSF)</td>
<td>ADTA</td>
<td>47</td>
<td>0.70</td>
<td>07 Dec 1999</td>
</tr>
</tbody>
</table>

Key Project Data ($ million)

<table>
<thead>
<tr>
<th></th>
<th>As Per ADB Loan Documents</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Cost</td>
<td>183</td>
<td>182.04</td>
</tr>
<tr>
<td>Foreign Exchange Cost</td>
<td>102</td>
<td>99.04</td>
</tr>
<tr>
<td>ADB Loan Amount/Utilization</td>
<td>102</td>
<td>99.04</td>
</tr>
<tr>
<td>ADB Loan Amount/Cancellation</td>
<td>2.96</td>
<td></td>
</tr>
</tbody>
</table>

Key Dates

<table>
<thead>
<tr>
<th></th>
<th>Expected</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact-Finding Mission</td>
<td>15–28 Apr 1999</td>
<td></td>
</tr>
<tr>
<td>Appraisal Mission</td>
<td>5–19 Jul 1999</td>
<td></td>
</tr>
<tr>
<td>Loan Negotiations</td>
<td>2–4 Nov 1999</td>
<td></td>
</tr>
<tr>
<td>Board Approval</td>
<td>7 Dec 1999</td>
<td></td>
</tr>
<tr>
<td>Loan Agreement</td>
<td>27 Nov 2000</td>
<td></td>
</tr>
<tr>
<td>Loan Effectivity</td>
<td>27 Nov 2000</td>
<td>25 May 2001</td>
</tr>
<tr>
<td>First Disbursement</td>
<td>15 Nov 2001</td>
<td></td>
</tr>
<tr>
<td>Project Completion</td>
<td>31 Dec 2003</td>
<td>Jan 2006</td>
</tr>
<tr>
<td>Loan Closing</td>
<td>30 Jun 2004</td>
<td>2 Dec 2005</td>
</tr>
<tr>
<td>Month (effectiveness to completion)</td>
<td>37</td>
<td>56</td>
</tr>
</tbody>
</table>

Internal Rates of Return (%)

<table>
<thead>
<tr>
<th></th>
<th>Appraisal PCR PPER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Internal Rates of Return</td>
<td>TAI DAT YAN TAI DAT YAN TAI DAT YAN</td>
</tr>
<tr>
<td>- Without local environment benefits</td>
<td>23.9 14.1 26.6</td>
</tr>
<tr>
<td>- With local environmental benefits</td>
<td>19.6 28.3 18.8</td>
</tr>
<tr>
<td>Financial Internal Rates of Return</td>
<td>14.5 19.0 16.1</td>
</tr>
<tr>
<td>- Before tax</td>
<td>13.8 10.7 9.1 12.8 5.1 4.1</td>
</tr>
<tr>
<td>- After tax</td>
<td>9.2 8.7 10.3 10.5 8.1 6.9 9.9 3.5 3.1</td>
</tr>
</tbody>
</table>

Borrower
People's Republic of China

Executing Agency
Shanxi Provincial Government

Mission Data

<table>
<thead>
<tr>
<th></th>
<th>No. of Missions</th>
<th>No. of Person-Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact-Finding</td>
<td>1</td>
<td>65</td>
</tr>
<tr>
<td>Appraisal</td>
<td>1</td>
<td>84</td>
</tr>
<tr>
<td>Project Administration</td>
<td>7</td>
<td>78</td>
</tr>
<tr>
<td>- Inception</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>- Review</td>
<td>6</td>
<td>70</td>
</tr>
<tr>
<td>Project Completion</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td>Independent Evaluation</td>
<td>1</td>
<td>15</td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, ADTA = advisory technical assistance, DAT = Datong subproject, JSF = Japan Special Fund, NA = not available, PCR = project completion report, PPER = project performance evaluation report, PPTA = project preparatory technical assistance, TA = technical assistance, TAI = Taiyuan subproject, YAN = Yangquan subproject.
EXECUTIVE SUMMARY

Background

The Asian Development Bank's (ADB) Shanxi Environment Improvement Project was selected for evaluation by the Independent Evaluation Department 3 years after completion to provide lessons and recommendation to future projects of this nature. It was also expected to provide input to an evaluation knowledge brief on greenhouse gas implications of ADB's energy sector operations. The project has supported three distinctive clean energy subprojects that resulted in coal savings and reduced emissions of pollutants and greenhouse gases in three of the most polluted cities in the People’s Republic of China (PRC). The project also supported capacity building in the executing and implementing agencies. An advisory technical assistance (ADTA) was designed to help set up and begin operating a sulfur-dioxide (SO₂) emissions permit trading system in Taiyuan City.

The subprojects aim to reduce the causes of environmental pollution through fuel-switching and more efficient use of energy. Two subprojects replace coal for residential, commercial, and industrial consumers: a coking facility generates coal gas for sale in Taiyuan; a coal-bed-methane/coal-mine-methane (CBM/CMM) capture, storage, transmission, and distribution system in the city of Yangquan makes CBM/CMM gas available to local buyers. In Datong city, the third subproject is making more efficient use of coal for residential and commercial space heating.

The project cost at appraisal was $183 million. ADB approved a loan of $102 million to cover the entire foreign exchange costs. At appraisal, the balance capital requirements of $81 million were to be funded by $23 million in commercial bank borrowings and $58 million in internal resources. Actual commercial bank borrowings were only $6.7 million because the Taiyuan Coal Gasification Company (TCGC) was able to access funds raised from the capital market. Through this subproject, ADB was thus also able to support the government’s policy of encouraging state-owned enterprises to corporatize and become more commercially oriented.

Performance Assessment

Relevance. The project is highly relevant. The project design is consistent with the PRC’s environmental protection policies and regulations and the socioeconomic development plans in the 10th and 11th Five-Year Plan periods (2001–2005 and 2006–2010). It conforms to ADB’s operational strategy in the late 1990s, which sought to expand the energy resource base, diversify from coal use, and reduce environmental damage from the region’s rapid economic growth. The project components and the ADTA were designed to meet the environmental improvement objectives of the PRC and ADB. The subprojects were selected from the investment opportunities available at the time and matched the objectives of the Shanxi provincial government's 9th Five-Year Plan and the PRC Government's Trans-Century Green Engineering Program.

The companies involved in the subprojects had championed them for the PRC’s energy and environmental investment pipeline and have demonstrated their ownership in several ways. The ADB-supported coking plant in Taiyuan began commercial operations several months ahead of schedule. The implementing agency in the Datong heating subproject continued expanding and improving operational efficiency of the city’s heat distribution network after the subproject was completed. In Yangquan, the gas supply companies have been extending their
gas supply networks; and the CBM/CMM capture and storage facilities were designed to support additional gas capture with increasing coal production expected in the coming years.

**Effectiveness.** The project is rated effective in achieving the objectives, outputs, and outcomes. The Taiyuan and Yangquan subprojects achieved the overall intended outputs at appraisal. The Datong subproject has exceeded them. Based on the best available estimates, the outcomes in coal savings and emission reductions have been to a large extent achieved. However, the coal reduction level per unit of gas sales achieved is 32% lower than the appraisal targets for the Yangquan subproject. In Datong, the subproject customers occupy 30% more floor space than was estimated at appraisal, made possible by not having to set up two peak-load boilers but off-taking heat from a combined-heat-and-power (CHP) plant set up by a power company. When this additional service area is taken into account, the coal savings and emission reductions are in keeping with appraisal estimates.

The attempt to introduce emissions permit trading in Taiyuan through the ADTA in 2001 was not implemented as envisaged. At best, it was useful in sensitizing stakeholders, including the Taiyuan EPB, other Taiyuan city government bureaus, and large emitters in the area, to the need for completing crucial groundwork before reintroducing SO$_2$ ET. After the satisfactory completion of the ADTA, and the conduct of pilot trading, the SO$_2$ emissions permit trading did not take off. Among the many possible reasons, several are considered important and have led to some concerted action towards putting in place the following prerequisites for a successful, sustainable relaunching of SO$_2$ ET: (i) the reduction of total SO$_2$ emissions to a level so that year-to-year reduction targets at the enterprise level are gradual, (ii) the creation of a credible SO$_2$ emission monitoring system, and (iii) an increase in the pollution levy so that it acts as a deterrent to polluters.

**Efficiency.** The project is rated efficient rather than highly efficient. This rating takes into account economic and environmental benefits, capacity utilization, and implementation delays. Including environmental benefits, the reevaluated economic internal rate of return (EIRR) of all three subprojects exceeds 12%. In the case of the Taiyuan subproject, it is higher than 12% even without quantifying the environmental benefits even though coal gas prices have not changed. This is mainly because TCGC, as market leader, can influence the prices of the subproject's main product, coke, and of such chemical by-products as coal tar and benzene. These prices are not controlled by the government.

Without environmental benefits, the EIRRs of the Datong and Yangquan subprojects are below 12%, reflecting the fact that output prices, such as district heating service tariffs and CBM/CMM gas sales prices, have not increased since the subprojects came onstream. Nonetheless, the Datong subproject’s reevaluated EIRR (without environmental benefits) is above 11% and it provides significant local environmental benefits. When a value based on available data is put on these environmental benefits, the reevaluated EIRR rises to almost 19%. The EIRR for the Yangquan subproject exceeds 12% if willingness to pay is considered rather than the prevailing CBM/CMM gas prices. The subproject companies report that consumers’ willingness to pay for the CBM/CMM gas services is higher than the prevailing price and that customers would accept a proposed tariff increase of 30%.

The project began to deliver its full overall benefits to users later than originally planned. The Taiyuan subproject began commercial operations only 9 months behind the original schedule, whereas the Datong and Yangquan subprojects were delayed by 24 and 27 months respectively. Technical design changes necessitated time-consuming approval processes, including those required from ADB.
Sustainability. The project's three subprojects are likely to be sustainable from pricing, financial, market, institutional, and natural resource availability perspectives. The financial reevaluation shows that only the Taiyuan subproject has a financial internal rate of return (FIRR) above the weighted average cost of capital (WACC), although the rate did fall marginally after completion. The FIRRrs for the Datong and Yangquan subprojects are below the WACC but the companies concerned have continued to be financially viable because of budgetary support from city governments and government “price coordination”, whereby city and provincial price control bureaus take the concerns of the stakeholders into account before approving price revisions. Despite the low FIRR, the Datong District Heating Company has continued to close inefficient, mostly old and small coal-fired boilers even beyond the end of ADB subproject support. All three gas supply companies in Yangquan have been expanding their networks and connecting new consumers even after the subproject ended. Nevertheless, the subproject companies in all three cities have made or are now making attempts to win approval for price increases.

The subproject companies have sought to build customer satisfaction and improve service quality so that clean energy products and services are available to customers. This has substantially improved their accounts receivable situation. They have maintained capacity utilization at high levels and improved operational efficiencies. The subproject companies possess strong technical and engineering skills. This made it possible to achieve the project’s institutional strengthening objectives at less than 25% of the cost estimated at appraisal. The subproject companies have continued capacity building measures since project completion. They have established well-structured systems to enhance skills in managerial, technical, financial, information technology, and other disciplines.

The unchanged regulated prices of the clean energy products and services provided by the three subproject companies since the subprojects came on stream indicates the opportunity for continued policy dialog at the central and provincial levels. Among others, the objective of such policy dialog is to encourage the use of appropriate pricing signals to consumers for sustenance of environmental improvement subprojects and the need to ensure financial viability of the subproject companies (to attract investment in such subprojects). The sustenance and expansion of the concerned enterprises can also be enhanced through capacity building at the provincial level for pricing of environmentally friendly utilities (such as those offered through the three subprojects).

ADB, Borrower, and Executing Agency Performance. The EA successfully coordinated the execution of three distinct types of subprojects in three different cities. However, environmental benefits, including indoor air quality improvement have not been monitored and the prices of outputs and services of the subprojects have not been adjusted when necessary, although covenanted in the project agreement. It is recognized that neither is within the reasonable control of the EA. As such, the overall performance of the Borrower and the executing agency (EA) is rated partly satisfactory. ADB’s performance is rated satisfactory.

Other Assessments

The project’s institutional, environmental, and socioeconomic impacts are significant. The project management office set up by the Shanxi provincial government to facilitate project implementation has continued since project completion to provide project management services to a large number of other projects, including some supported by ADB. The subproject companies have shown through activities since project completion that the ADB support
strengthened their ability to execute their mandates with improved technologies, systems, skills, and managerial capabilities. The Taiyuan subproject has set the stage for other coking units in Shanxi province to modernize and set up more efficient and environmentally friendly coking facilities. The Datong District Heating Company and the three gas supply companies in Yangquan continue to build on the work and capacity building achieved under the project.

**Environmental and Social Impacts.** The project has helped bring about an improvement in ambient air quality in the three cities in recent years. In Yangquan, SO\textsubscript{2} concentration levels met Class II ambient air quality standards for more than 300 days for the first time in 2007. Taiyuan and Datong achieved these levels the next year. To quantify the project's contribution to these improvements precisely is difficult because other measures have also been put into place, including the shutdown of heavy industrial polluters. Nonetheless, the Datong environment protection bureau acknowledges that the ADB-supported subproject is one of the principal reasons for that city’s improved ambient air quality. The selection criteria for the subprojects had included the potential to improve indoor air quality. However, no substantive data or information on indoor air improvement is available from either the city environment protection bureaus or the subproject companies. No pending resettlement issues are reported. The Taiyuan and Yangquan subprojects led to increased employment opportunities during construction and operation. In Datong, the implementing agency reported that no jobs were lost.

**Issues, Lessons, and Follow-Up Actions**

The project has raised three important issues. First, prices of subproject outputs and services need to be adjusted, at least when per-capita incomes are rising rapidly. Second, the environmental benefits expected from the subprojects on an overall basis, per unit of output or service, and the implications for indoor air quality improvements all need to be estimated more closely. Third, project planning must address prerequisite conditions before reintroducing SO\textsubscript{2} emission permit trading on a sustained basis.

The main lessons from the project are (i) that economically attractive ways to increase coal use efficiency and to substitute coal by gases are available from coal operations like mining and coking; (ii) that, while setting prices in a controlled or regulated market is difficult, the long-term viability of the service provider needs to be considered for items that are desirable alternatives; (iii) that environmental benefits from subprojects that are designed to substitute coal use or utilize coal more efficiently are better assessed through monitoring and measurements that cover the entire range of coal quality, stock of coal using equipment and stock of substitute fuel using equipment; and (iv) that the design of market-based instruments is seldom easy and that continued sensitization of the concerned stakeholders is useful.

On the basis of these findings and lessons, the proposed follow-up actions and recommendations are as follows:
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Follow-Up Actions</th>
<th>Responsibility</th>
<th>Time Frame</th>
</tr>
</thead>
</table>
| 1.    | **Sustainability.** Continue policy dialogue with responsible authorities in follow-on engagements to revise prices of clean products and services, such as coal gas, CBM/CMM, and centralized district heating, by focusing on:  
  - Highlighting the financial and other consequences of a non-remunerative tariff regime to for provincial and city price control bureaus.  
  - Surveys that help assess willingness to pay for various customer categories, with findings provided to the price control bureaus. | EARD | 2010 |
| 2.    | **Monitoring.** Actively facilitate an improved assessment of environmental benefits of investments in clean energy subprojects by the subproject companies and other enterprises. | EARD | 2010 |

CBM/CMM = coal-bed-methane/coal-mine-methane, EA = executing agency, EARD = East Asia Department, ET = emissions permit trading, PRC = People’s Republic of China, PSOD = Private Sector Operations Department, SO₂ = sulfur dioxide.
I. INTRODUCTION

A. Project Description and Expected Results

1. The Shanxi Environment Improvement Project, approved in December 1999, included Asian Development Bank (ADB) support for three clean energy subprojects. Subproject 1, a coal gasification plant in Taiyuan city, supplied coal gas to industrial, commercial, and residential consumers and public welfare buildings to replace high-pollution coal use. Subproject 2 involved an energy-efficient centralized district heating system in Datong city that provides heat to residential and commercial users during the 5.5-month local heating season. Subproject 3, a coal-bed-methane/coal-mine-methane (CBM/CMM) capture, storage, transmission, and distribution system in Yangquan city, supplied CBM/CMM gas to industrial, commercial, and residential energy consumers to substitute for coal. The project included a capacity-building component for the project management office (PMO), considered to be the executing agency (EA), as well as the three implementing agencies in the three cities.

2. The project’s long-term impact was to enhance the sustainable development of these three major Shanxi cities by improving the quality of their environments (Appendix 1). The immediate intended outcomes were (i) greater use of cleaner forms of energy by industrial, commercial, and residential users; (ii) improved air quality in the cities and reduced atmospheric emissions of sulfur dioxide ($SO_2$), nitrogen dioxide ($NO_2$), and total suspended particulates (TSP) or particulate matter of less than 10 microns in diameter ($PM_{10}$). This impact and these outcomes were to be achieved by focusing project activities on reversing a trend of declining air quality in the cities that was attributed largely to increasing coal use for power generation and industrial, commercial, and residential applications.

3. The project also included advisory technical assistance (ADTA) for setting up and operating a $SO_2$ emissions permit trading (ET) system in Taiyuan city. This market-based instrument was meant to encourage pollution reduction at minimal cost.

B. Evaluation Purpose and Process

4. The three subprojects support clean energy technologies and options. Two were aimed at replacing coal as a fuel and the third was intended to reduce coal use through energy efficiency and conservation. Although the stated project outcomes relate to air pollutant emissions that affect local air quality — $SO_2$, $NO_2$, and $PM_{10}$ — the report and recommendation of the President (RRP) recognized that the subprojects would also reduce emissions of greenhouse gases. The findings and lessons learned from this evaluation provide useful insights for the design of similar projects in other developing member countries and on the coal use savings that can be achieved through these three types of subprojects. The inputs for this report were also used for an evaluation study that focused on greenhouse gas implications of ADB’s operations. The findings from the ADTA to reduce $SO_2$ emissions in Taiyuan city through the introduction of the $SO_2$ ET system have also been useful for the design of further interventions to introduce $SO_2$ ET in the People’s Republic of China (PRC).

---

1. ADB. 1999. Report and Recommendation of the President on a Proposed Loan and Technical Assistance Grant to the People’s Republic of China for the Shanxi Environment Improvement Project. Manila (Loan 1715, for $102 million, approved on 7 December).
2. Unless otherwise specified, commercial energy consumers include public welfare building energy users.
5. A desk review of the RRP, the project completion report (PCR)\(^5\) and other documentation available at ADB headquarters was followed by an evaluation mission to consult with and gain information from the EA, the implementing agencies, and other relevant government ministries, offices, and bureaus in Beijing and Shanxi province. The draft project performance evaluation report was shared with the East Asia Department, the governments of the PRC and Shanxi province, the executing agency, and the implementing agencies for feedback and comment.

C. Project Completion Report

6. The PCR found that the project was successful. The strong commitment of the project proponents was a key factor. Responsiveness to needs and opportunities to make technical design changes to improve the intended project outcomes played a role. So did implementing agencies' ability to properly administer the bidding process and to select and manage international and national consultants. The PCR recommended that ADB keep track of developments related to the implementation of SO\(_2\) ET. Given that the technical assistance on heating tariff reforms\(^6\) contains recommendations relevant to the district heating subproject in Datong, the PCR also recommended that ADB should continue consultations with the PRC government on this matter.

7. The PCR highlighted the fact that the heating and gas tariffs had not been increased to achieve full-cost recovery. It proposed continuous follow-up with the Shanxi Provincial Government (SPG) on needed tariff increases of CBM/CMM gas supplied by the Yangquan subproject but made no similar recommendation regarding coal gas and district heating tariff increases needed in Taiyuan and Datong. The PCR also should have emphasized the fact that no effort were being made to assess the environmental benefits that might be directly attributed to the subprojects or to adequately monitor improvements in indoor air quality.\(^7\)

II. DESIGN AND IMPLEMENTATION

A. Formulation

8. In 1997, the government of PRC requested ADB assistance to improve the environment in Taiyuan and other major cities in Shanxi province. In response to this request, ADB provided project preparatory technical assistance (PPTA) to (i) explore the need for policy and institutional reforms required to reduce air pollution, and (ii) examine the feasibility of investment programs as the basis for a project that ADB could support.\(^8\)

9. The PPTA assessed (i) the environmental problems in Shanxi province\(^9\) and province-wide environmental plans; (ii) the existing institutional structure in the governments of the PRC and Shanxi province; and (iii) policies and regulations, including national laws and their application in Shanxi province, and provincial regulations and environmental monitoring in Shanxi. The PPTA

---


\(^7\) In spite of the fact that indoor air pollution reduction was a key subproject selection criterion at appraisal (RRP, para. 60).

\(^8\) ADB. 1997. *Technical Assistance to the People's Republic of China for Shanxi Environment Improvement (financed from the Japan Special Fund)*. Manila (TA 2901, for $590,000, approved on 21 October).

\(^9\) Problems included air quality in Shanxi's major cities was much below national and international ambient air quality standards, water resources were seriously polluted, serious noise and solid waste pollution, uncontrolled soil pollution that lead to serious land deterioration, and land subsidence and water leakage caused by coal mining.
found that to improve environmental conditions the stakeholders must focus on (i) improving the regulatory framework, (ii) enhancing institutional capacity to implement environmental protection measures and manage environmental problems, and (iii) investing in pollution prevention.

10. **Improving Regulatory Framework.** Environmental laws and regulations formulated by the national government are adopted by the provincial governments. ADB’s technical assistance support has contributed towards this process. The environmental laws and regulations formulated at the national level and adopted by SPG include (i) specific measures, such as closure of highly polluting enterprises; (ii) environmental standards, on ambient air quality, for example; (iii) environment improvement targets, including those for SO₂ emissions; (iv) specific guidelines on such matters as environment impact assessments; and (v) administrative and institutional arrangements. When formulating a law or regulation, the Government of the PRC could seek ADB’s technical assistance on related social, economic, financial, technical, institutional, and/or environmental aspects. In pursuit of this objective, the project included an ADTA to provide guidance and insights for the introduction of a market-based mechanism for SO₂ emission reduction.

11. **Enhancing Institutional Capacity.** The capacity-building component of the loan supported the SPG’s aim to put suitable administrative structures and institutional arrangements in place that would help (i) implement policies and regulations pertaining to economic growth and environmental protection and (ii) achieve national, provincial, and local plans and targets for environmental management. The SPG’s project management skills were enhanced through staff for the newly established project management office (PMO). The technical, operational, and managerial skills base of the implementing agencies was also upgraded. Through the ADTA, the Taiyuan Environmental Protection Bureau’s (EPB) appreciation and understanding of the issues related to a successful implementation of a SO₂ ET also improved.

12. **Investing in Pollution Prevention.** ADB support for a small number of subprojects required to meet the environmental improvement targets accounted for a major share of the loan. Over 40 candidate subprojects included in SPG’s 9th Five-Year Plan (FYP) and the national government’s Trans-Century Green Engineering Program (TCGEP) were reviewed. A shortlist was prepared of projects that were (i) based in urban areas to serve as prototypes for the rest of the province; (ii) air pollution reduction projects, rather than water or soil pollution prevention undertakings; (iii) comprehensive projects rather than point source projects; and (iv) projects with implications for indoor air quality improvement. The three subprojects finally selected also met other criteria, which required (i) that the concerned institution have sufficient technical capability to implement the subproject, (ii) that the technical design conform with proven technologies available at the time, and (iii) that the economic evaluation and financial analysis show that the projects were economically efficient and financially viable.

### B. Rationale

13. Several factors contributed to the project’s rationale. The PRC was heavily dependent on high-polluting coal, which in the late 1990s met about 80% of its energy demand. Shanxi province,

---


11. The provincial plans and targets may be same or more aggressive than national plans and targets; likewise, local and city-level plans and targets may be same or more aggressive than national plans and targets.

12. A comprehensive master plan of environmental projects prepared by the national government.
a major coal producer, was similarly dependent. The strong emphasis on achieving economic growth in the country since the early 1980s had not come with adequate attention to deteriorating environmental conditions. Many state-owned enterprises (SOEs) deployed antiquated, inefficient energy technologies. The PRC suffered from weak environmental management capabilities that were evident in many ways, including inadequate emission and air quality monitoring.

14. In Shanxi province, the problem was compounded by the large number of highly polluting, energy intensive mineral-based and chemical industries as well as several small and large coal-fired power plants. Coal combustion in small boilers for commercial and residential use contributed significantly to air pollution. TSP concentrations exceeded levels permitted under Class II standards in 14 of the 15 cities reviewed by Shanxi provincial EPB in the late 1990s, and exceeded levels permitted under Class III standards in seven cities. SO₂ levels exceeded Class II permitted levels in nine of these cities. Taiyuan, Datong, and Yangquan were among the most seriously polluted cities in the country.

15. Although residential coal use accounted for a small share of overall coal consumption and pollutant emissions in the province, it was the major contributor to indoor air pollution and the associated health problems. The two strategies given priority at the time to reduce indoor air pollution in Shanxi were the development of (i) district heating systems to replace coal combustion for residential heating; and (ii) gas supply networks to replace coal combustion for residential cooking and some of the heating in residential, commercial, and public buildings.

C. Cost, Financing, and Executing Arrangements

16. At appraisal, the project was estimated to cost $183 million (including contingencies, interest and other loan charges during construction), comprising $102 million (56%) in foreign exchange costs and $81 million equivalent (44%) in local currency costs. The actual project cost was $182 million, which was in line with the appraisal estimates. Foreign exchange costs of $99 million were about 3% lower than envisaged at appraisal, while local currency costs of $83 million were 2% higher. Loan savings from some components were reallocated to other components to expand their scope and improve their efficiency.

17. The PMO was responsible for monitoring and guiding the implementing agencies as well as coordinating with ADB, various government agencies, and other entities. It was set up initially under the provincial EPB but was later shifted to the Shanxi Provincial Development Reform Commission to strengthen its outreach. The efficacy of the PMO’s role was also high because it reported directly to the deputy governor of Shanxi Province, who also chaired a high-level project steering committee.

18. The Taiyuan Coal Gasification Company (TCGC) was the implementing agency for the subproject in Taiyuan, the second phase of the Taiyuan Coal Gasification Plant (TCGP). The actual foreign currency costs of TCGP, at $61.51 million, were lower than the $69.39 million appraisal estimates by more than 11%, largely due to lower than expected prices from international competitive bidding and foreign exchange rate gains. Good contract management

---

13 Class II air quality standards are set for residential, general industrial, and agricultural areas. Class III standards are for specified industrial areas. Permitted annual average TSP levels are 200 and 300 micrograms/cubic meter for Class II and Class III standards, respectively. Permitted annual average SO₂ concentrations are 60 and 100 micrograms/cubic meter for Class II and Class III standards, respectively.

14 For natural gas, coal gas, and CBM/CMM gas (whichever is available).
and information and data management practices also facilitated timely and coordinated execution of the subproject.\(^{15}\)

19. Datong District Heating Company (DDHC) was the implementing agency for the Datong District Heating Project (DDHP). The increase in overall costs, including foreign currency costs for DDHP—from the equivalent of $38.11 million at appraisal to the equivalent of $40.29 million actually incurred—was due to a change in the technical design of the subproject that connected more customers to the centralized district heating system.

20. The Shanxi Yangquan Gas Company was created to handle implementing agency responsibilities for the Yangquan subproject and it coordinated the implementation of four components.\(^{16}\) Upon completion, the components were handed over to the respective companies—the Yangquan Coal Mining Group (YCMG), the Yangquan City Gas Company (YCGC), the Pingding Gas Company (PGC), and the Jiaoqu Gas Company (JGC). The total costs increased from $22.60 million at appraisal to $25.21 million, with an increase of foreign currency costs of less than $500,000 and a local cost increase of over $2 million. Minor changes in scope resulted in higher costs for civil works, which increased local costs for the Yangquan subproject.

21. The financing plan at appraisal comprised an ADB loan for $102.0 million (56%), equity contributions from the provincial and municipal governments of $58.0 million (32%), and local borrowings of $23.0 million (12%). Actual funding came from ADB ($99.0 million or 54%), equity and customers' deposits ($76.3 million, or 42%), and domestic loans ($6.7 million, or 4%). Deposits collected from customers allowed lower local borrowings. A key aspect was the restructuring of TCGC's parent company, the Taiyuan Coal Gasification Group (TCGG), in 1998 to form the Shanxi Shenzhou Coking Company Limited (SSCCL) and the listing of SSCCL on the Shenzhen Stock exchange in 2000. The Shanxi Shenzhou Coking Company Limited raised equity through the public listing of its shares (40%) to address the local funding issue for the subproject. As a result, TCGC, had access to funds raised from the capital markets, which enabled it to avoid high-cost borrowing from a local bank for the subproject. Project costs and financing plans are detailed in Appendix 2.

22. The ADTA was implemented with active participation of the Taiyuan EPB, which provided coordination support for training of personnel from selected power plants and industrial enterprises, and for simulated trading and pilot trading.

D. Design

23. The overall project design did not change. Nor did the scopes and objectives of the three subprojects. The technical designs for the Datong and Yangquan subprojects were modified from the originally approved feasibility studies. The changes in the Datong subproject enabled DDHP to increase the overall heating service area to 6.59 million square meters (m\(^2\)) from 5.1 million m\(^2\) without installing two high-efficiency peak-load boilers. This was possible because another utility company planned to establish a high-efficiency 400 megawatt (MW) combined heat and power (CHP) facility, from which the DDHC was to source the requisite heat in the form of hot water. In Yangquan, the 20,000 cubic meters (m\(^3\)) CBM/CMM storage tank

\(^{15}\) Forty-three bids were managed through 5 rounds. They comprised 25 international competitive bidding (ICB) equipment packages and 18 international shopping materials packages.

\(^{16}\) The four components comprise (i) the Wukuang gas station, which collects gas from a coalmine belonging to the Yangquan Coal Mining Group; (ii) the Beijiao storage station of the YCMG's Yangquan City Gas Company; (iii) the Songjiaozhuang gas storage station in Pingding county; and (iv) control stations, regulating stations, and gas distribution pipelines of the YCGC, the Jiaoqu Gas Company, and the Pingding Gas Company.
originally planned for Jiaoqu township was replaced by a 50,000 m$^3$ tank in Pingding county. This changed the gas pipeline configuration. Appendix 3 provides further details on the three subprojects and their respective implementing agencies.

24. Although the design of the SO$_2$ ET system$^{17}$ did not change, the work done to introduce that market-based instrument for environmental improvement brought to the forefront (i) some important changes required in the monitoring of pollutant emissions, and (ii) necessary pre-

conditions such as that the pollutant emissions from all sources in a given area should be at or less than the environmental capacity$^{18}$ of that area—so that the ET system can be deployed to enable enterprises to reduce their SO$_2$ emissions gradually.

E. Implementation Schedule

25. The Loan Agreement was signed on 27 November 2000, nearly 1 year after loan approval on 7 December 1999. This was due largely to the delays in obtaining approval of the feasibility reports from the former State Development Planning Commission (now National Development and Reform Commission), which in turn resulted from concerns over local currency financing, especially for the coal gasification subproject in Taiyuan. Another 6 months elapsed before the loan became effective on 25 May 2001, mainly because this was the first ADB financed project in Shanxi province. The SPG and the implementing agencies found it difficult to understand the procedures and requirements for finalizing relending agreements and to compile the required legal documentation.

26. Once implementation began, the TCGP was completed several months ahead of the planned 4-year implementation period. The first coke battery unit was commissioned on 30 April 2004 and reached design capacity in 6 weeks. The second coke battery unit was commissioned on 26 August 2004 and reached design capacity within 2 weeks.

27. The other two subprojects suffered implementation delays, however. The principal reasons were the (i) unwillingness or inability of foreign consultants and foreign equipment suppliers and contractors to visit the PRC during parts of 2003 and 2004, owing to the severe acute respiratory syndrome (SARS) scare; and (ii) time required to obtain approvals from various bodies, including ADB, to implement changes in subproject technical designs. After technical design changes in 2003, the DDHP subproject became fully operational only by the end of 2005. This was 2 years later than envisaged at appraisal, although a major portion was completed by the 2004–05 winter heating season. In Yangquan, the technical design changes delayed the start of commercial operations at the three gas storage stations by more than 2 years, or until May 2006.

F. Procurement and Construction

28. The project awarded 74 contract packages for materials, equipment supply, and installation, with a combined value of $93.0 million. Procurement followed ADB’s Guidelines for

---

$^{17}$ In principle, stabling an SO$_2$ ET system has a number of basic steps. SO$_2$ emission permits are allocated to various polluting enterprises. A system is put in place to track SO$_2$ emissions from each polluting enterprise. A system is also put in place to track the sale and purchase transactions of SO$_2$ emission permits. For the ET system to function smoothly, SO$_2$ emission permits must be allocated in a manner that is perceived as fair by all stakeholders. Clear, practical guidelines are also needed to facilitate verification of emissions.

$^{18}$ Environmental capacity of a city is defined as the level of SO$_2$ emissions beyond which the ambient air quality in the city will not meet the stipulated Class II ambient air quality standards. In the PRC, Class II standards are set for residential, general industrial and agricultural areas; and stipulate that the annual average SO$_2$ concentration should not exceed 60 micrograms per cubic meter.
Procurement. ADB’s loan also funded international consultants’ services as well as training. The three subprojects followed a similar overall approach. They engaged (i) local contractors for civil works and installation; (ii) equipment suppliers to supervise the installation, testing, and commissioning for equipment procured through international competitive bidding route; and (iii) international consultants, largely to work in close coordination with the implementing agency team and to guide, advise, and assist the team in the review of technical designs, preparation of bid documents, bid evaluation, and in supervision of some aspects of construction, equipment installation, testing, and commissioning.

G. Outputs

29. The project was implemented as envisaged at appraisal. It comprised three subprojects—a coking plant, district heating efficiency improvement and coal mine methane capture and use (Appendix 1).

30. The outputs of these subprojects are summarized in Table 1. The output data shows that (i) the quantity of coal gas available for end-user sale from the TCGP subproject has been close to the design value of 175 million m$^3$ in each year since 2006, (ii) the DDHP subproject has been operated at 100% capacity and provided heat for 6.59 million m$^2$ of floor area for three consecutive years; and (iii) the components of the Yangquan subproject combined to reach a 100% capacity factor in terms of increased CBM/CMM gas sales of 49.5 million m$^3$ for two consecutive years.

<table>
<thead>
<tr>
<th>Item</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiyuan subproject</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Coal feed (million tons)</td>
<td>177</td>
<td>692</td>
<td>743</td>
<td>804</td>
<td>730</td>
</tr>
<tr>
<td>- Coal gas production (million m$^3$)</td>
<td>44</td>
<td>290</td>
<td>380</td>
<td>398</td>
<td>358</td>
</tr>
<tr>
<td>- Coal gas sales (million m$^3$)</td>
<td>33</td>
<td>134</td>
<td>176</td>
<td>185</td>
<td>166</td>
</tr>
<tr>
<td>- Coke (‘000 tons)</td>
<td>232</td>
<td>530</td>
<td>564</td>
<td>599</td>
<td>542</td>
</tr>
<tr>
<td>Datong subproject</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Heat purchase from Datong Pingwang CHP (million GJ)</td>
<td>0.95</td>
<td>2.37</td>
<td>4.73</td>
<td>4.73</td>
<td>4.73</td>
</tr>
<tr>
<td>- Heat sales (million GJ)</td>
<td>0.91</td>
<td>2.28</td>
<td>4.55</td>
<td>4.55</td>
<td>4.55</td>
</tr>
<tr>
<td>- Heat sales (million m$^2$; useful floor area)</td>
<td>1.32</td>
<td>3.30</td>
<td>6.59</td>
<td>6.59</td>
<td>6.59</td>
</tr>
<tr>
<td>Yangquan subproject</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- CBM/CMM capture from Coal Mine No. 5 (million m$^3$)</td>
<td>29.6</td>
<td>40.5</td>
<td>52.5</td>
<td>52.5</td>
<td></td>
</tr>
<tr>
<td>- CBM/CMM sales (million m$^3$)</td>
<td>27.9</td>
<td>38.2</td>
<td>49.5</td>
<td>49.5</td>
<td></td>
</tr>
</tbody>
</table>

CBM/CMM = coal-bed-methane/coal-mine-methane, CHP = combined heat and power, GJ = gigajoule, m$^2$ = square meter, m$^3$ = cubic meter.
Sources: TCGC, DDHC, YCGC, PGC, and QGC.

31. The TCGP does maintain data separately for the ADB supported subproject, although only combined data for the ADB supported subproject and the first phase coking plant of TCGP is made available to TCGC for consolidation. In Datong, the data specific to the ADB supported DDHP is also maintained separately, even though the DDHC has continued to expand and improve the efficiency of its heat supply network. In Yangquan, the YCMG maintains data specifically for CBM/CMM gas captured from Coal Mine No. 5, as well as storage and delivery data, and YCGC has separate metering arrangements for gas off-take from YCMG. YCGC,

---

$^{19}$ Equipment with a contract value of $500,000 or more was procured following ICB procedures, while equipment with a value below $500,000, but not less than $50,000, was procured using international shopping procedures. For further details, refer to PCR (pages 8, 9, 40, 41).
however, cannot allocate the actual gas sales volumes through its network back to each of its supply sources.20

H. Loan Covenants

32. Most of the loan covenants have been complied with. The covenants that were not complied with at completion related to tariff adjustments and maintaining accounts receivables within acceptable limits. The status update regarding continued non- or part-compliance is as follows:

(i) Tariff adjustment (PA, Schedule, para. 13). Tariffs for coal gas supply (Taiyuan), district heating services (Datong) and CBM/CMM gas capture, storage, and supply (Yangquan) have not been raised since the ADB-supported subprojects came onstream. This has adversely impacted the financial viability and economic attractiveness of the subprojects.

(ii) Accounts receivables management (Project Agreement [PA], Schedule, para. 17). On a month-to-month basis, accounts receivables have not been maintained below the covenanted level of the equivalent of the previous 2 months' sales for any of the subprojects. However, the subproject companies have not allowed accounts receivables to accumulate unchecked either. For instance, the DDHC, which provides district heating services for 5.5 months per year (1 November to 15 April), collects all billed amounts by the start of the next heating season. DDHC also bills the well-off households21 only once each heating season after considering the cost of billing and collection as well as customers' ability to pay a 5.5 month bill at once.

33. The covenants that had been partly complied with at completion relate to the financial stability of the subproject companies.22 They involve (i) maintaining the ratio of current assets to current liabilities at 1.1 or more (PA, Section 2.18); and (ii) retaining funds from operations to provide for current operations, as well as maintaining reserves to finance at least 20% of annual capital investment requirements after 31 December 2003 (PA, Schedule, para. 19). The lack of tariff increases since project completion has continued to hamper the subproject companies' ability to meet such covenants. Nonetheless, by December 2008, the TCGC had repaid the entire loan amount and interest to ADB. The DDHC sets aside depreciation reserve and relies on budgetary allocations from the Datong city government to meet its capital investment requirements. YCGC has not been in a position to fully comply with these requirements, even though all three gas supply companies in Yangquan continue to expand their operations.

34. A covenant that is stated to have been complied at completion but is no longer complied with relates to the monitoring of environmental benefits associated with the ADB subprojects (PA, Schedule, para. 24). The SPG was to provide to ADB an annual benefit monitoring and evaluation report for 5 years after the commissioning of project facilities. This report was to have

20 YCGC has a large gas transmission and distribution pipeline system, which sources gas from a gas storage tank near Coal Mine No. 5, one of the components of the Yangquan subproject, and from four other sources. At each offtake point, YCGC has appropriate metering arrangements. The comingled gas from the five sources is then sold to its customers and supplied to PGC and QGC. It is not possible for YCGC to work out the actual sales—i.e., offtake less pipeline loss—of CBM/CMM coming from Coal Mine No. 5.

21 High income households comprise over 60% of the DDHC's customer base.

22 This refers to (i) the two implementing agencies in Taiyuan (TCGC) and Datong (DDHC) that also operate and maintain the respective subproject facilities in the two cities; and (ii) the four facility operators (YCMG, YCGC, PGC and JGC) in Yangquan that were handed the Yangquan subproject upon completion.
been based on individual subproject benefit monitoring and evaluation reports prepared by each implementing agency. No such report has been provided to ADB.\textsuperscript{23}

I. Policy Setting and Framework

35. Since the loan approval in 1999, the basic stated strategy of the Government of the PRC has been to balance economic growth with environmental protection. The government sets environmental protection policies in the country and makes the regulations. It also establishes the standards for pollutant emissions, ambient air quality, and indoor air quality, as well as the monitoring methodologies. All such regulations and measures are implemented across the country through an institutional and administrative structure that relies on a mix of (i) pollution prevention and the remedy of major pollution problems, (ii) the polluter-pays principle; and (iii) enforcement. The details are provided in Appendix 4. The provincial governments can either implement the standards and targets as set by the Government of the PRC or make them more stringent or ambitious.

36. The Government of the PRC’s national pilot program on emissions permits in 1991–1997 led the Taiyuan city government to issue Rules on Environmental Offsets for Air Pollutants in 1993. This initiative in turn led to the ADTA grant to introduce SO\textsubscript{2} ET, which provided some learning and insights for policy making.

III. PERFORMANCE ASSESSMENT

A. Overall Assessment

37. The overall performance of the project is rated as successful on the basis of Independent Evaluation Department’s four-category evaluation criteria of relevance, effectiveness, efficiency, and sustainability (Table 2). The project is highly relevant. This is evident from the project design, which is consistent with the PRC’s environmental protection policies and programs initiated in the 1990s as well as with ADB’s objectives of supporting projects that reduce coal consumption and adverse environmental effects of economic growth. The project is effective because it meets the targeted outputs in Taiyuan and Yangquan and exceeds the target in Datong; however, the actual coal savings per unit of gas supply or district heating service are significantly lower than initially estimated in Datong and Yangquan. The project is also efficient, despite the prevailing tariffs and especially if environmental benefits are considered. The project is likely to be sustainable as government price coordination coupled with budgetary support is likely to ensure that (i) capacity utilization levels remain high; and (ii) systematic and well-structured approaches continue to upgrade managerial, technical, financial, information technology, and other skills.

<table>
<thead>
<tr>
<th>Item</th>
<th>Weightage</th>
<th>Rating</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>20%</td>
<td>Highly relevant</td>
<td>3</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>30%</td>
<td>Effective</td>
<td>2</td>
</tr>
<tr>
<td>Efficiency</td>
<td>30%</td>
<td>Efficient</td>
<td>2</td>
</tr>
<tr>
<td>Sustainability</td>
<td>20%</td>
<td>Likely</td>
<td>2</td>
</tr>
<tr>
<td>Overall Rating\textsuperscript{a}</td>
<td></td>
<td>Successful</td>
<td>2.2</td>
</tr>
</tbody>
</table>

\textsuperscript{a}Highly successful $\geq$ 2.7, Successful 2.7 $>$ S $\geq$ 1.6, Partly Successful 1.6 $>$ PS $\geq$ 0.8, Unsuccessful $< 0.8$. Source: Independent Evaluation Mission.

\textsuperscript{23}The evaluation mission is given to understand that similar covenants in other project loans have not been complied with either.
B. Relevance

38. The project is highly relevant in terms of consistency of project impacts, outcomes, and outputs with the government's development strategy, ADB's strategic objectives, ADB's lending strategy, as well as adequacy of formulation and design.

39. **Consistency with PRC Priorities and Objectives.** The PRC developed several environmental protection programs during the 1990s after emissions of major pollutants peaked in 1995\(^24\) (Appendix 4). At the time, Shanxi province experienced acute environmental degradation—a direct consequence of being a major coal producing and coal consuming province\(^25\). Its capital, Taiyuan, had the worst air quality in the country in 1999 and ranked among the 10 most polluted cities in the world. Two other cities in Shanxi—Datong and Yangquan—also ranked among the most polluted cities anywhere.\(^26\) In response, the SPG included major investments for pollution prevention and control in its (provincial) 9th FYP. It specifically emphasized air quality improvement goals for Taiyuan, Datong, and Yangquan.

40. With the PRC's growing attention since 2000 to balancing economic growth with environmental protection, the project relevance was enhanced as (i) two subprojects were to substitute use of highly polluting coal in households, commercial and industrial enterprises by less polluting gases and; (ii) one subproject was to improve the efficiency of coal burning, thereby reducing the production of coal emissions.

41. **Consistency with ADB Strategic Objectives and Country Partnership Strategy.** Although the ADB's operational strategy for the PRC at the time of the project's approval incorporated broader objectives of reducing power shortages, it also included environmental protection objectives—in particular, the development of cleaner energy sources such as gas, hydropower, and clean-coal technologies.

42. The project, approved in December 1999, included ADB support for three types of subprojects that have since been pursued and replicated in the PRC. ADB has also approved further loans to support implementation of these components—a coking plant that generates coal gas for sale,\(^27\) district heating efficiency improvement,\(^28\) and coal mine methane capture and use.\(^29\) The three subprojects met the design requirements and were consistent with the project objectives and goals.

43. **Ownership of Subprojects.** The three subprojects clearly conformed to the objectives of the Shanxi Provincial 9th FYP and the TCGEP. They were selected from the pipeline of investment opportunities available at the time and screened by the project preparatory technical

---

25 Shanxi produces about one-third of the PRC's coal.
26 The levels of harmful emissions from heavy industries, as well as household stoves, boilers, and commercial furnaces that burn coal were 2 to 3 times the national standards. The release of CBM/CMM into the atmosphere, instead of using it as an energy source, compounded the problem in Yangquan.
28 Loan 7279/2422-PRC: Dolkia Asia Pte. Ltd. (Dolkia Asia) and local partners, for $200 million, approved on 2 June 2008.
assistance consultants. There was strong ownership from the SPG and the three city
governments. The SPG provided sufficient assurances at approval that consumers would
convert to the new energy sources. It proposed a mix of (i) direct compensation to end user to
buy gas using stoves and equipment and (ii) setting tariffs that encouraged fuel switch. In all
three cities, the SPG also saw that coal-using equipment was discarded and/or dismantled
through physical verification. The Taiyuan EPB worked to increase the knowledge base of its
personnel and of large emitters in Taiyuan City. It also introduced SO₂ emission permits trading
on a pilot basis.

C. Effectiveness

44. The project is rated effective in achieving the objectives, outputs, and outcomes. The
key outputs and outcomes of the three subprojects are summarized in Table 3. The Taiyuan
and Yangquan subprojects achieved the overall intended outputs at appraisal (paras. 29–31).
The Datong subproject has exceeded the intended output. Based on the best available
estimates, the outcomes in coal savings and emission reductions have also been to a large
extent achieved. However, the coal reduction level per unit of heat supply service or gas sales
achieved is significantly lower than the appraisal targets in two cities (Table 3). In Datong, this is
a result of design change. The CHP (from where heat is actually sourced) was set up by
another utility company, and the resultant capital cost savings (from not having to install peak
load boilers) made it possible to service customers occupying 30% more floor space than was
estimated at appraisal under DDHP. When this additional service area is taken into account, the
coal savings and emission reductions are in keeping with the absolute value of coal savings as
per appraisal estimates. In Yangquan, coal savings are 32% lower than anticipated at appraisal
even though the subproject is supplying the envisaged volume of CBM/CMM gas to customers.
Given that the CBM/CMM capture, storage, transmission and distribution facilities are
performing as per expectations, this discrepancy is most likely a consequence of overestimation
at appraisal or underestimation at completion, or a combination of the two. For subprojects in
Datong and Yangquan therefore, the appraisal estimates for outcomes and environmental
benefits per unit of service or product output appear to have been rather liberal.

Table 3: Subproject Outputs and Emission Savings related Outcomes at Approval,
Completion, and Independent Evaluation

<table>
<thead>
<tr>
<th>City</th>
<th>Project Stage</th>
<th>Outputs</th>
<th>Coal Savings (tons per unit output)</th>
<th>Coal Savings ('000 tons)</th>
<th>SO₂ Emission Reductions ('000 tons)</th>
<th>TSP Emission Reductions ('000 tons)</th>
<th>NO₂ Emission Reductions ('000 tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAI</td>
<td>- At approval</td>
<td>175 mcm coal gas</td>
<td>2,133</td>
<td>373.2</td>
<td>9.6</td>
<td>12.1</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>- At completion</td>
<td>156 mcm coal gas</td>
<td>2,513</td>
<td>392.0</td>
<td>10.1</td>
<td>12.8</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>- At evaluationa</td>
<td>175.7 mcm coal gas</td>
<td>2,163</td>
<td>380.0</td>
<td>9.8</td>
<td>12.4</td>
<td>1.6</td>
</tr>
<tr>
<td>DAT</td>
<td>- At approval</td>
<td>Heat for 5.1 million m²</td>
<td>63,529</td>
<td>324.0</td>
<td>4.1</td>
<td>8.2</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>- At completion</td>
<td>Heat for 6.59 million m²</td>
<td>49,317</td>
<td>325.0</td>
<td>5.2</td>
<td>6.5</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>- At evaluationb</td>
<td>Heat for 6.59 million m²</td>
<td>52,352</td>
<td>345.0</td>
<td>5.3</td>
<td>4.8</td>
<td>2.6</td>
</tr>
<tr>
<td>YAN</td>
<td>- At approval</td>
<td>94 mcm CBM/CMM gas</td>
<td>1,483</td>
<td>139.4</td>
<td>2.4</td>
<td>5.0</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>- At completion</td>
<td>94 mcm CBM/CMM gas</td>
<td>813</td>
<td>76.4</td>
<td>1.2</td>
<td>1.1</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>- At evaluationc</td>
<td>94 mcm CBM/CMM gas</td>
<td>1,005</td>
<td>94.5</td>
<td>1.5</td>
<td>1.9</td>
<td>0.5</td>
</tr>
</tbody>
</table>

CBM/CMM = coal-bed-methane/coal-mine-methane, DAT = Datong, m² = square meter, mcm = million cubic meter,
NA = not available, NO₂ = nitrogen dioxide, SO₂ = sulfur dioxide, TAI = Taiyuan, TSP = total suspended particulate,
YAN = Yangquan.

Legend:
a Average over 3 years (2006–2008).
b Average over 3 years (2006–2008) since subproject output stabilized.
c Average over 2 years (2007–2008) since subproject output stabilized.
Source: Report and recommendation of the President, project completion report, and Independent Evaluation Mission findings.
45. **Capacity Building.** The training programs supported through the ADB loan enhanced the technical, operational, and managerial capabilities of the subproject companies, as well as their environmental consciousness. PMO staff attended ADB-sponsored training programs on procurement and project management. Personnel from the subproject companies also received training overseas and within PRC on technical and management aspects (see Appendix 5 for details). During project implementation, over 50 personnel from the three implementing agencies were sent abroad for training in (i) environmental management and protection, (ii) pipeline network operation and security, (iii) network planning and strategy, and (iv) other relevant technical and management aspects. In addition, more than 700 of these agencies’ personnel received training locally on technical matters, finance and accounting, computers, and personnel administration. The ADTA for Taiyuan EPB improved its institutional capabilities for SO₂ emissions permit trading.

46. **Customer Satisfaction.** Prices of coal gas, district heating services, and CBM/CMM gas have not increased since the subprojects were completed in the three cities. Subproject companies report that this has contributed to high customer satisfaction. While it may be argued that one of the project objectives was to give customers confidence to switch to new fuels in Taiyuan and Yangquan and to a centralized and more distant system of heat supply in Datong, it is also true that the subproject companies and the government bureaus have not sent the right pricing signals to consumers that would encourage efficient and minimally wasteful energy use.

47. **Ambient Air Quality.** At the time of loan approval and loan effectiveness, the air in the cities of Taiyuan, Datong, and Yangquan met national Class II ambient air quality standards for very few days in a year—only 7 during the whole of 2001 in Yangquan City, for example (para. 72). Since then, the air quality has improved consistently with each passing year. Along with the three subprojects, other measures and initiatives (Appendix 4) have contributed to such air quality improvement. In Datong, it is acknowledged that the ADB-supported subproject is one of the principal reasons for improved ambient air quality. In Taiyuan and Yangquan however, the contribution of the ADB-supported subprojects is perceived as being somewhat lower.³⁰

D. **Efficiency**

48. Given the high capacity utilization and significant environmental benefits, the project is rated efficient. It is not considered highly efficient due to subproject implementation delays. The economic reevaluation that assesses the economic internal rate of return (EIRR) associated with the three ADB-supported subprojects is detailed in Appendix 6. The economic reevaluation results presented in Table 4 show that at prevailing tariffs, the EIRR’s are: 14.6% for the Taiyuan subproject, 11.2% for the Datong subproject, and 7.8% for the Yangquan subproject. However, given that the willingness to pay for CBM/CMM gas in Yangquan is assessed to be about 30% more than the prevailing tariff,³¹ the EIRR is considered to be 12.6%. With addition of estimated environmental benefits, the EIRRs increase to 20.7%, 18.9% and 16.2% for the Taiyuan, Datong and Yangquan subprojects respectively.

49. A direct comparison with economic analyses conducted at appraisal is possible at best only for the Taiyuan subproject. This is because technical design changes in the Datong subproject resulted in a 30% increase in output, with a 6% increase in capital costs, and the

---

³⁰ A plausible explanation is the per-capita coal savings in the urban areas of the three cities; which is about 228 kg of coal savings per capita in Datong compared to 130 and 141 kg/capita in Taiyuan and Yangquan, respectively.

³¹ Although the Independent Evaluation Mission is not aware of any formal analysis to assess the level of willingness to pay, the subproject companies in Yangquan are of the opinion that the proposed tariff increase of 30% would be acceptable to consumers, and is therefore a good indicator of the willingness to pay.
technical design changes for the Yangquan subproject, which brought no change in output, contributed to delays and cost increases by about 12%.

50. The total capital costs of the TCGP declined by 3% from appraisal estimates. This reduction came despite delays in beginning construction and high steel prices in the international markets when construction began. The ICB procedures that TCGC followed were in line with established best practices for bid management and produced lower-than-anticipated bids that reduced foreign exchange costs by more than 10%.

51. The economic reevaluation results can be compared with those from economic analyses conducted at completion and provided in the PCR. For the Taiyuan subproject, the reevaluated EIRR is marginally higher than at completion—even though coal gas prices have not changed since the subproject began commercial operations. For Datong and Yangquan subprojects, the reevaluated EIRRs are less than at completion, which reflects the fact that such output prices as district heating service tariffs and CBM/CMM gas sales prices have not increased since the subprojects came onstream.

Table 4: Economic Internal Rates of Return of Subprojects at Completion and at Independent Evaluation (%)

<table>
<thead>
<tr>
<th>Item</th>
<th>At Completion</th>
<th></th>
<th></th>
<th></th>
<th>At Independent Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TAI</td>
<td>DAT</td>
<td>YAN</td>
<td>TAI</td>
<td>DAT</td>
</tr>
<tr>
<td>Without Local Environmental Benefits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Direct economic costs and benefits</td>
<td>14.5</td>
<td>19.0</td>
<td>16.1</td>
<td>14.6</td>
<td>11.2</td>
</tr>
<tr>
<td>- Direct economic costs and proxied benefits</td>
<td>12.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With Local Environmental Benefits</td>
<td>19.6</td>
<td>28.3</td>
<td>18.8</td>
<td>20.7</td>
<td>18.9</td>
</tr>
</tbody>
</table>

DAT = Datong, TAI = Taiyuan, YAN = Yangquan.
Sources: Project completion report and Independent Evaluation Mission estimates.

52. Subproject Implementation. The three subproject companies adopted similar implementation approaches. They imported equipment selectively. As much as possible, they engaged domestic institutes for engineering design and procured equipment from indigenous sources. They engaged international consultants only for specific, well-defined tasks and had their own personnel work closely with them to enable knowledge transfer. They maximized staff learning opportunities during construction through direct interaction with equipment suppliers, contractors, and consultants. Specific details available for the TCGP are provided in Appendix 3.

53. The project experienced time overruns. The delays were about 9 months for coal gas supply in Taiyuan, 12–24 months in Datong and 9–27 months in Yangquan. In Datong, a part of the centralized district heating system completed 12 months late by end of 2004 could service customers in the 2004–2005 heating season; other customers suffered a 24-month delay. In Yangquan, the various components of the CBM/CMM gas capture and supply subproject were commissioned between late 2004 and March 2006. The effect of these delays have already been taken in to account in the EIRR estimation.

54. Capacity Utilization and Efficiency of Gas and Heat Supply Operations. The subproject companies have worked towards maintaining high capacity utilization levels and improving the operational efficiencies of their systems. The ADB- supported second phase of TCGP has averaged a little over 175 million m3 annually in 2006–2008. As of 2009, the DDHP had continuously off-taken the contracted amount of heat from the CHP to serve its customers.

The principle reasons are (i) prices of coke and other by-products are market determined; and (ii) coal (the main feedstock) is internally sourced, and is priced so as to optimize the profitability of the Group (TCGG).
for three consecutive heating seasons and has reduced system heat losses. The three gas supply companies in Yangquan also received and supplied the agreed quantity of CBM/CMM gas in 2007 and 2008. Further details are in Appendix 3.

E. Sustainability

55. The project is rated *likely to be sustainable*. Sustainability of the various subprojects has been considered from the pricing, financial, market, institutional, and natural resource perspectives. An assessment of various risks associated with continued delivery of the products and services from the three subprojects shows that, other than pricing related aspects, such risks were sufficiently well addressed by the project.

56. **Pricing and Financial Viability.** Table 5 shows the weighted average cost of capital (WACC) for the three subprojects, their financial internal rates of return (FIRR) as estimated at project completion, as well as the reevaluated FIRRs. The basis for the reevaluation is detailed in Appendix 6. The financial reevaluation shows the pre-tax FIRRs are higher than WACC for 2 subprojects, but slightly below WACC for Yangquan. The post-tax FIRRs for the Datong and Yangquan subprojects are below WACC.

Table 5: Financial Internal Rates of Return of Subprojects at Completion and at Independent Evaluation (%)

<table>
<thead>
<tr>
<th>Item</th>
<th>Taiyuan</th>
<th>Datong</th>
<th>Yangquan</th>
<th>Taiyuan</th>
<th>Datong</th>
<th>Yangquan</th>
</tr>
</thead>
<tbody>
<tr>
<td>WACC</td>
<td>4.4</td>
<td>4.3</td>
<td>4.3</td>
<td>4.4</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>FIRR before Tax</td>
<td>13.8</td>
<td>10.7</td>
<td>9.1</td>
<td>12.8</td>
<td>5.1</td>
<td>4.1</td>
</tr>
<tr>
<td>FIRR after Tax</td>
<td>10.5</td>
<td>8.1</td>
<td>6.9</td>
<td>9.9</td>
<td>3.5</td>
<td>3.1</td>
</tr>
</tbody>
</table>

FIRR = financial internal rate of return, WACC = weighted average cost of capital.

Sources: Project completion report and Independent Evaluation Mission estimates.

57. The prices and tariffs of the coal gas in Taiyuan, the centralized heating services in Datong, and the CBM/CMM gas in Yangquan are not market-driven. Controlled by the government, they have remained unchanged since the subprojects came onstream. The reevaluated FIRR for the Taiyuan subproject remains near that at completion and the implementing agency remains financially viable because it can realize market prices for its primary product, coke, and other by-products. In Datong, the implementing agency had accumulated financial losses of CNY87.5 million by 2008. The Datong city government has extended a financial subsidy of CNY61.3 million thus far and directly services DDHC’s debt to ADB. In Yangquan, where the financial viability of the three subproject gas supply companies is also adversely affected by low controlled prices, the city government has routinely budgeted a subsidy payment of CNY4.4 million per year.33

58. Yet the subproject companies in Datong and Yangquan have continued to function like financially healthy enterprises. A key is "price coordination"—i.e., the balancing of concerns of the various stakeholders—by the city and the provincial price control bureaus (PCB) before approving any price revisions. The DDHC has continued to close inefficient, mostly old and small coal-fired boilers and setting up more heat exchange stations (HES), as well as adding heat-carrying pipelines upstream of the stations, beyond the completion of the ADB supported subproject. Likewise, all three gas supply companies in Yangquan have been expanding their networks and connecting new consumers even after the Yangquan subproject ended.

---

33 The entire city government subsidy goes to YCGC each year. JGC and PGC do not receive subsidies from the Government.
Nevertheless, the subproject companies in all three cities have made or are making attempts to win approval for price increases (Table 6). It is also noteworthy that tariffs of the more widespread and established utility services—water and electricity—have been considered affordable by the respective PCBs during the same period and have increased for certain customer categories. (See Appendix 7 for further details).

Table 6: Status of Petitions to Raise Subproject Output Tariffs

<table>
<thead>
<tr>
<th>Subproject</th>
<th>Existing Tariff</th>
<th>Petition Particulars</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiyuan</td>
<td>Bulk supply tariff for coal gas sale from TCGP to TCGG’s gas supply company: CNY0.26/cubic meter (m³)</td>
<td>Submitted to Taiyuan PCB in 2008; proposed tariff increase to CNY0.35/m³</td>
<td>Approval expected from provincial PCB in 2009.</td>
</tr>
<tr>
<td>Datong</td>
<td>For all customer categories: CNY3.82 per square meters (m²) of useful area</td>
<td>Submitted to Datong PCB in 2007</td>
<td>Clearance obtained to increase tariff for commercial and public welfare customers (to CNY7.00 and 6.30 per m² of building area); Not yet implemented. Clearance to increase tariff for households awaited.</td>
</tr>
<tr>
<td>Yangquan</td>
<td>Residential: CNY0.55/m³; Public Welfare: CNY0.70/m³; Commercial: CNY0.85/m³; Industrial: CNY0.50/m³</td>
<td>Withheld petition to Yangquan PCB in 2008 owing to financial crisis; Planning to submit petition in 2009 to increase prices by about 30%</td>
<td></td>
</tr>
</tbody>
</table>

CNY = yuan, PCB = price control bureaus, TCGG = Taiyuan Coal Gasification Group, TCGP = Taiyuan Coal Gasification Plant.

Source: Implementation agencies in Taiyuan and Datong; gas supply companies in Yangquan.

59. **Customer Service Orientation and User Perspective.** The subproject companies have sought to build customer satisfaction and improve service quality so that clean energy products and services are continuously available to customers. This has substantially improved their accounts receivable situation. TCGC reports over 99% satisfaction from the end users of coal gas, which in all likelihood also results from the fact that coal gas prices have remained unchanged since 1 April 2003 when only the first phase of the TCGP was in operation. It also reflects the perceived convenience and cleanliness associated with using coal gas rather than coal for cooking and water heating. CBM/CMM gas users in Yangquan are willing to pay the gas supply companies for their services for much the same reasons. In Datong, the customer satisfaction reflects the high quality of service that allows the maintenance of an indoor temperature in the 18–20°C range without hurting the local or indoor air quality.

60. The subproject companies have instituted mechanisms for conducting annual customer satisfaction surveys and obtain feedback on quality and reliability of services as well as safety aspects. They also attend promptly to customer complaints. Further details are provided in Appendix 3.

---

34 Among the key factors that the PCBs consider in pricing is the fact that price controlled services/products of all three subprojects are clean and help meet the environmental protection objectives.

35 Available data shows that annual gross domestic product per capita increased about 17% in Taiyuan and Yangquan from 2004 to 2007 and by 14% in Datong. Sources: China Statistical Press, 2008 and 2006, Shanxi Statistical Yearbook, Taiyuan.

36 The Independent Evaluation Mission understands that prior to the implementation of DDHP, when heat began to be sourced from a distant CHP, some customers were served heat via pipeline from small, inefficient coal-fired boilers in their neighborhoods, while others had their own small indoor heat sources.
61. **Skills.** The subproject companies possess strong technical and engineering skills. This made it possible to achieve the project’s institutional strengthening objectives at less than 25% of the cost estimated at appraisal. Formal training programs during project implementation (Appendix 5) were combined with hands-on experience in project management and other construction-related activities. The subproject companies have continued capacity building measures since project completion. They have implemented well structured systems to enhance skills in managerial, technical, financial, information technology, and other disciplines. See Appendix 3 for further details.

62. **Natural Resource Availability.** Even though the subprojects are intended to replace or reduce the use of coal, all three remain dependent on the continued production and supply of coal. The Taiyuan subproject is fed by coking coal; the heat source of the Datong subproject is fed by steam grade coal; and the Yangquan subproject captures gases released during coal-mining operations. Available data shows that coal production levels in Shanxi province since 2005 have remained in the range of 500 to 630 million tons per year and may rise to 650 million tons in 2009. At these rates, the province has enough coal reserves for more than 200 years.\(^37\) It has 56% of PRC’s total proven coking coal reserves.\(^38\)

F. **Technical Assistance**

63. The attempt to introduce emissions permit trading in Taiyuan through the ADTA nearly a decade back was partly successful. It can at best be considered useful in terms of having sensitized stakeholders, including the Taiyuan EPB, other Taiyuan city government bureaus, and large emitters in the area, to the need for making necessary preparations before reintroducing SO\(_2\) ET.

64. After the satisfactory completion of the ADTA and the conduct of pilot trading, SO\(_2\) emissions permit trading did not take off. A number of reasons have been suggested for this. Experience elsewhere, including in the United States, shows that SO\(_2\) ET is useful in reducing pollution levels only gradually. However, since the time the ADTA was approved and implemented in 2001–2003, the Taiyuan EPB has had aggressive plans for reducing SO\(_2\) emissions.\(^39\) Among the other factors important for successful implementation of SO\(_2\) ET is the need to have a credible SO\(_2\) emission monitoring system in place. The prevailing pollution levy must also be increased so that it acts as a deterrent to polluters. Some concerted actions are being taken on these shortcomings. The major achievements of the ADTA are given in Appendix 8.

IV. **OTHER ASSESSMENTS**

A. **Impact**

65. The project’s institutional, environmental, and socioeconomic impacts are significant at the local, city, provincial, and national levels.

---


\(^{38}\) Source: TCGC.

\(^{39}\) The Taiyuan EPB set SO\(_2\) emission targets at 185,000 tons/year for 2005 and 100,000 tons/year for 2010 (a 46% reduction in 5 years).
1. Impact on Institutions

66. **Executing Agency.** The project management office set up by the Shanxi provincial government to facilitate implementation has continued since project completion to provide management services to a large number of other undertakings, including some supported by ADB and other international development partners. It is now facilitating the implementation of the ADB-supported Coal Mine Methane Development Project.

67. **Subproject Companies.** While the Government of the PRC had initiated a comprehensive series of environmental policies and regulations in the 1990s, and the Ministry of Environmental Protection MEP had also begun setting national level targets for pollution emission and discharge reductions, the implementation challenge had remained. The three ADB supported subprojects provided the opportunity to successfully demonstrate pollution abatement measures by improving the quality of outputs and services that have high replication potential as well as widespread economic and environmental benefits. ADB support has enabled the subproject companies to better execute their mandates even after project completion with improved technologies, systems, skills, and managerial capabilities. The details of institutional impacts of the subproject companies are given in Appendix 3.

68. **Taiyuan EPB.** Recognizing that reduction of SO\(_2\) emissions to about or below the city’s environmental capacity—after which SO\(_2\) emissions at the enterprise level need reduce only gradually—as being essential to sustained interest in SO\(_2\) emissions permit trading, the Taiyuan EPB set an aggressive target, to reduce SO\(_2\) emissions to 100,000 tons per year by 2010. This target is much more ambitious than the 155,000 tons per annum target set for 2010 by the SPG’s EPB (Appendix 8). Taiyuan is the only city in Shanxi province which has a SO\(_2\) pollution reduction target for 2010 that reflects the city’s environmental capacity.

69. The Taiyuan EPB has undergone a massive transformation in its pursuit of this target. It has succeeded in encouraging all 79 key emitting enterprises in Taiyuan to set up continuous and/or on-line pollution emissions and concentration monitoring facilities. It has established a network of eight stations in Taiyuan for monitoring ambient air quality. It has set up the computer and communication facilities and acquired the skills and expertise necessary for a central station to receive data from all monitoring stations and key emitters in real time. It conducts periodic and surprise sample checks on about 200 non-key emitters in Taiyuan City. Taiyuan EPB compiles the relevant information on a daily basis for transmittal to the Shanxi Provincial EPB. From such data compiled on a daily basis and aggregated monthly, quarterly, and yearly, Taiyuan EPB can ascertain whether emissions from enterprises comply with their pollution discharge permits.

70. The prevalent pollution levy regulation stipulates (i) a discharge fee of CNY0.62 (less than $0.10) per kg of SO\(_2\) equivalent and (ii) a penalty fee that is normally 3-4 times higher. The details for determining the discharge fee and penalty fee payments are in Appendix 4. The regulation caps the total annual payments at about CNY100,000 (less than $15,000). Given that the SO\(_2\) abatement cost is higher than the penalty rate for many enterprises, they have by and large preferred paying the pollution charges to making emission reduction investments. This may remain the case unless physical targets are set, can be monitored by the concerned EPB, and the threat of closure becomes real. For this reason, discharge fees and penalty rates have been

---

40 Facilitated key emitting enterprises to install continuous online monitoring systems, to the extent that Taiyuan EPB verifies/calibrates the system after it is installed, which makes the enterprise eligible to receive a 20% subsidy compensation from the Shanxi Finance Bureau.

41 Comprising iron and steel, coal mining, chemicals and power generation enterprises.

42 Air samples are taken every 10 seconds and automatically analyzed.
increased in some parts of the PRC, notably in the vicinity of Beijing. Similar increases in Shanxi province and other parts of the country are anticipated in the next few years.

71. Among several other issues that must be addressed if SO$_2$ emissions permit trading is reintroduced in the Taiyuan city area is the need for all enterprises to perceive the allocation of permits between various industrial sectors and companies as fair. A system to reallocate permits as enterprises expand, merge, divest, or acquire would also be necessary.

2. Environmental Impacts

72. Ambient Air Quality. The project has helped bring about a well-documented improvement in ambient air quality in the three cities in recent years (Table 7). In Yangquan, SO$_2$ concentration levels met Class II ambient air quality standards for more than 300 days for the first time in 2007. Taiyuan and Datong achieved these levels the next year. This was a major improvement from earlier years; in 2001, for instance, Class II standards were met for only 45 days in Datong and 7 days in Yangquan. To quantify the project's contribution to these improvements precisely is difficult because in the same cities other measures have also been put into place since project appraisal, including the shutdown of heavy industrial polluters (Appendix 4). Nonetheless, the Datong environment protection bureau acknowledges that the ADB-supported subproject is one of the principal reasons for that city's improved ambient air quality (para. 46).

Table 7: Number of Days/Year the Ambient Air Quality Met Class II Standards

<table>
<thead>
<tr>
<th>Year</th>
<th>Taiyuan</th>
<th>Datong</th>
<th>Yangquan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>245</td>
<td>220</td>
<td>225</td>
</tr>
<tr>
<td>2006</td>
<td>261</td>
<td>239</td>
<td>275</td>
</tr>
<tr>
<td>2007</td>
<td>269</td>
<td>293</td>
<td>319</td>
</tr>
<tr>
<td>2008</td>
<td>302</td>
<td>307</td>
<td>345</td>
</tr>
</tbody>
</table>

*Class II Standards are set for residential, general industrial, and agricultural areas; see Appendix 4 for ambient air quality standards.

Source: Taiyuan Environmental Protection Bureau (EPB), Datong EPB, and Yangquan EPB.

73. Indoor Air Quality. The selection criteria for the subprojects included the potential to improve indoor air quality and, given that all three subprojects helped reduce coal use, it may be inferred that indoor air quality for customers serviced in the three cities has also improved with resultant health benefits. However, no substantive data or information on indoor air quality improvement is available from either the city environment protection bureaus or the subproject companies. Nonetheless, an assumption of an improvement in indoor air quality is supported by the findings of studies conducted for households in the Beijing area (Appendix 9).

3. Socioeconomic Impacts

74. Resettlement. No pending resettlement issues are reported. Resettlement issues associated with the project were addressed in accordance with the PRC laws and regulations. The land acquisition and resettlement process is reported to have been completed by 2005. A consultative and participatory approach was instituted by the PMO and the concerned local

43 The Independent Evaluation Mission could not confirm that indoor air quality measurements had been carried out to establish a baseline before the subprojects had been tested and/or commissioned or that any measurements had been made after the subprojects had begun commercial operations.
government bureaus, and suitable grievance mechanisms were set up for all subprojects. Further details are in Appendix 10.\(^{44}\)

75. **Employment.** The Taiyuan and Yangquan subprojects led to increased employment opportunities. As per TCGC, about 1,000 additional jobs can be attributed to the ADB-supported subproject (i) to operate the second phase of the TCGP, whose coking capacity of 930,000 tons per year is higher than the capacity of the first phase (720,000 tons per year); and (ii) to expand and operate the coal gas distribution network to supply additional customers that consume 175 million cubic meters of coal gas annually.

76. In Yangquan, the additional gas sales that result from capture of CBM/CMM gas from Coal Mine No. 5 are estimated at about 49 million m\(^3\).\(^{45}\) YCGC, PGC, and JGC employed more than 1,300 people, including about 130 women, during the subproject implementation phase. The same gas supply companies have employed more than 1,000 people, among them 400 women, since commercial operations began. With continued increases in gas supplies since 2005, the construction and expansion of gas sales service continues in all three gas companies. As a result, YCGC has been able to redeploy personnel from its liquefied petroleum gas sales division to CBM/CMM gas sales after requisite training.

77. In Datong, the implementing agency assured that no jobs were lost. Personnel working in boiler rooms of the small, inefficient boilers were retrained to be deployed in HES or pipeline operations. The DDHC has continued with this approach over the past few years as it continues to dismantle the remaining 280 inefficient boilers in the network and lay pipelines upstream to connect them to large, efficient boilers and CHPs.

78. **Other Socioeconomic Impacts.** All households that\(^{46}\) have been connected to the gas or heat supply services from the three subprojects have benefited from the absence of tariff hikes. They would have likely continued to use coal for cooking and heating in the absence of the subprojects and been subject to swings in domestic coal prices.\(^{47}\) In Taiyuan, the urban poor were exempted when coal gas prices were raised in April 2003; they continue to pay CNY0.50/ m\(^3\); effectively receiving a 33% subsidy from the TCGG's gas supply company.

79. The city governments of Datong and Yangquan have provided budgetary support to the heat and gas supply companies, respectively. This has to a certain extent alleviated the need to raise tariffs. Unchanging gas and heat supply tariffs in times when water and electricity tariffs have risen has contributed to the high level of customer satisfaction reported in the cities. On the other hand, customers have not been getting appropriate price signals to use gas and heat supplies efficiently and avoiding waste.

**B. ADB Performance**

80. ADB’s overall performance is rated *satisfactory*. The policy dialog under the project focused on supporting the Government of PRC and SPG in the implementation of environmental

\(^{44}\) All information pertaining to acquisition of land for permanent use or temporarily for subproject implementation is based on information provided by the respective subproject companies. To the knowledge of the independent evaluation mission, no external agency monitored the land acquisition and resettlement process.\(^{45}\)

\(^{45}\) This includes: (i) 33.8 million m\(^3\) of additional YCGC sales; (ii) 14.3 million m\(^3\) of PGC sales; and (iii) 1.7 million m\(^3\) of JGC sales.

\(^{46}\) Defined by the Government of the PRC as households with income levels less than $30/person/month.

\(^{47}\) Coal prices in Shanxi province have varied widely each year. Following the closure of several small coal mines after a series of mining accidents in 2007, the prices rose to about CNY800/ton ($115/ton) in 2008 from CNY560/ton ($86/ton) in 2005.
protection measures and the strengthening of regulatory enforcement. It included the introduction of market-based instruments for improving environmental management, including the SO$_2$ ET. Prior to loan effectiveness, ADB provided guidance and advice to SPG and the implementing agencies necessary to prepare the relending documents, consistent with ADB guidelines and procedures. During the implementation phase, ADB monitored the progress through frequent consultations and briefings with the Ministry of Finance, fielded six review missions, spent adequate time reviewing physical progress and resolving issues with implementing agencies staff. ADB also promptly approved changes in the technical designs of subprojects, the reallocation of loan proceeds, and the contracts it financed as well as the necessary loan disbursements. The performance of the ADTA consultant was also rated "excellent" by the Taiyuan EPB. However, available data shows that the ADB overestimated the environmental benefits in two of the three cities, and gave insufficient attention to the monitoring of indoor air quality aspects in all three cities. As a result, suitable empirical data on the indoor air quality improvements from the three subprojects and the associated health benefits is not available today.

C. Borrower and Executing Agency Performance

81. The overall performance of the Borrower and the executing agency (the PMO) is rated partly satisfactory. Support from the governments of PRC and Shanxi province was strong—perhaps because the three subprojects were on the national government’s list of approved projects under the TCGEP and also in the SPG's pipeline. The selected subprojects met the agreed criteria. The SPG facilitated their implementation by moving the PMO from the Shanxi provincial EPB to the Shanxi Provincial Development and Reform Commission—the most influential of SPG's bureaus and commissions. Although some of the delay for loan effectiveness is ultimately attributed to the availability of counterpart local funding, the SPG and the city governments ascertained that financial closure could be reached by making commitments of up to $58 million equivalent, or 32% of the estimated cost.

82. Subproject output and service prices have not been adjusted when necessary, as agreed to by the SPG during loan processing (as per PA, Schedule, para. 13), even though the respective subproject companies made the necessary attempts to do so. As a result, the gas and heat supply enterprises are not able to recover full costs or to increase consumer awareness about the true economic costs of the products and services they now receive to substitute or reduce the use of coal. Nonetheless, the city governments of Datong and Yangquan have extended budgetary support to help the enterprises continue with their plans to expand the gas and heat supply networks. Although the environmental benefits associated with the subprojects are not being monitored by the respective city EPBs (as per PA, Schedule para. 24), the processes to implement environmental protection measures—closures of high polluting enterprises, for example, and the regular monitoring of key emitters—have been steadily streamlined. It is recognized however, that the implementation of the covenants related to price adjustments and post-completion environmental benefits monitoring were and remain beyond the reasonable control of the PMO, the executing agency.

48 In particular, the SPG's Finance Bureau and Legal Bureau.

49 Subproject selection criteria related to location (in urban areas), environmental improvement (ambient and indoor air quality improvement focus), potential for replication (in several cities), potential for demonstration (of best available technology at the time), and confidence in the concerned implementing agency having technical and managerial strength.

50 To cover operation and maintenance costs, debt service, depreciation, and to provide an adequate return on investment, this required at least 12% in nominal terms.
V. ISSUES, LESSONS, AND FOLLOW-UP ACTIONS

A. Issues

83. **Pricing of Outputs and Services.** Prices of coal gas, CBM/CMM gas, and district heating services have remained unchanged for several years—while the per-capita incomes were rapidly rising. Unchanging end-user prices meant that the output and service providers in Datong and Yangquan had to rely on budgetary support from the respective city government. It is imperative that gas and heat prices be increased for long-term sustainability of the subprojects.

84. **Estimation of Environmental Benefits.** The overall environmental benefits of the Taiyuan and Datong subprojects are more-or-less in line with appraisal estimates. In Datong, due to lower than expected environmental benefits per unit area, the projected environmental benefits are met only by taking into account the additional 30% floor area serviced. The estimated environmental benefits in Yangquan since subproject completion fall significantly short of appraisal estimates. While potential benefits appear to have been overestimated at appraisal, such overestimation may also reflect the quality of the underlying data. The benefits are estimated on the basis of simple coefficients for emissions savings per ton of coal use reduction owing to the three subprojects, as provided by the respective EPBs at project completion. The Independent Evaluation Mission was not informed of any benefits monitoring work since project completion that could have served as a basis for gradually refining the estimated environmental benefits.\(^{51}\)

85. **Prerequisites for SO\(_2\) ET.** The attempt to introduce SO\(_2\) ET in Taiyuan City has shown that several prerequisites need to be in place before an emissions permit trading system can be sustained. Actual emissions should be at or below the environmental capacity. Mechanisms to reliably monitor SO\(_2\) emissions must be created. Stakeholders must perceive emissions permits allocated to industrial sectors and individual enterprises as fair.

B. Lessons

86. **Integrated and Holistic View of Coal Industry.** Coal is considered a highly polluting fossil fuel. Where the coking industry produces significantly more coal gas than needed for processing, the coal gas can be distributed to households, commercial and industrial consumers to replace coal—which will reduce emissions of SO\(_2\) and other local pollutants. Where coal mining provides an opportunity to capture and use CBM/CMM gas global environment benefits can be derived from preventing its atmospheric release, and local environmental benefits can be achieved by using CBM/CMM gas as a fuel instead of coal.

87. **Setting Prices of Outputs and Services.** While price setting in a regulated or controlled market is often a balancing act involving multi-faceted concerns, it is important to make the long-term sustainability of the service provider, including investment in its modernization and expansion, one of the prime considerations.

---

\(^{51}\) The coal use savings and emission reductions per ton of coal saved will depend on the quality of coal, the efficiency profile of the stock of coal consuming equipment in use by households/commercial/industrial users before the subprojects came on stream, the efficiency profile of the stock of coal gas using stoves/boilers in Taiyuan after TCGP began commercial operations, the efficiency profile of the stock of CBM/CMM gas using stoves/boilers etc. in Yangquan after the subproject came on stream, and heat plus electrical efficiency of the CHP in Datong. The Independent Evaluation Mission was not informed of a systematic attempt at environmental benefits monitoring that spanned the entire range of energy using equipment and fuel quality.
Successful Implementation of Market-Based Instruments for Pollution Control. The PRC experience shows that it is difficult to design a market-based instrument and make it work, be widely accepted, and achieve the intended results. The existing pollution levy system in Shanxi was not punitive enough to encourage enterprises to invest in pollution abatement. Experience now makes clear the need for higher discharge fee rates and steps are being taken in that direction. The attempts to introduce the more complex SO₂ emissions permit trading system also highlighted issues that need to be addressed before the SO₂ ET can be successfully implemented. Against this background, enhancing the awareness and sensitization of the stakeholders, including the enterprises and government bureaus at all levels, is very important.

Estimation of Environmental Benefits. Towards making reasonable estimates of environmental benefits, it is important to give specific attention to emissions estimated before and after the three subprojects began commercial operations in the respective cities. A statistically significant sample of measurements should cover the entire range of fuel quality, type and quality of fuel using equipment, and equipment utilization levels. If necessary, measurements should be taken year-round for certain customer categories, to adequately capture the effects of seasonal variations.

Follow-Up Actions

Based on the issues and lessons from the study, the project performance evaluation report makes recommendations and proposes follow-up actions below:

(i) Sustainability. Continue policy dialogue with responsible authorities in follow-on engagements to revise prices of clean products and services, such as coal gas, CBM/CMM, and centralized district heating, by focusing on:
- Highlighting the financial and other consequences of a non-remunerative tariff regime to for provincial and city price control bureaus.
- Surveys that help assess willingness to pay for various customer categories, with findings provided to the price control bureaus.

(ii) Monitoring. Actively facilitate an improved assessment of environmental benefits of investments in clean energy subprojects by the subproject companies and other enterprises. A possible approach would be to institute systems whereby:
- A good baseline for before-project case can be established by conducting appropriate measurements to ascertain (i) quality and quantity of fuel use (e.g., coal), (ii) equipment performance (e.g., stove, boiler), (iii) fuel emission factors (e.g., SO₂ emission per ton of coal), and (iv) indoor air quality measurements.
- At completion of the project, this before-project data could be used along with indicative data for after the follow-on project to arrive at up-front estimates of environmental benefits.
- Post completion, measurements similar to that for establishing the baseline are made. With the before-project and after-project measurement data thus available, estimates for environmental benefits and indoor air quality can be refined.
## PROJECT FRAMEWORK

### Design Summary

**Impact**
Sustainable development of 3 major cities of Shanxi province (Taiyuan, Datong, and Yangquan) by enhancing environmental quality

- Number of days that meet Class II standards of ambient air quality
- Better institutional framework and other measures for efficient environmental management
- More industrial and commercial enterprises meet national emissions standards
- Further projects along the lines of the various subprojects in the three cities
- Better market based incentives for energy conservation by industrial, commercial and residential energy consumers

**Outcome**
Improved air quality in three cities and reduced indoor air pollution

- Coal use reduction targets in the three cities through (i) replacement of coal by coal gas for households, commercial and industrial applications in Taiyuan; (ii) increasing energy efficiency of district heating services in residential and commercial establishments in Datong urban areas; and (iii) replacement of coal by CBM/CMM gas for households, commercial and industrial applications in urban and suburban areas of Yangquan
- Targets for SO\textsubscript{2}, TSP and NO\textsubscript{2} reduction as set in the RRP, for each of the cities
- Improved institutional

### Appraisal Performance Target/Indicators

- The ambient air quality met Class II standards for more than 300 days per year for the first time (i) in 2008 in Taiyuan and Datong and (ii) in 2007 in Yangquan.
- The EPBs of the three cities have made a beginning towards acquiring requisite expertise as well as facilities and equipment to position themselves to better monitor environment, as well as implement targets and measures that are set by the national, provincial, and city governments.
- Plans to establish a more sophisticated and efficient coking plant by the Taiyuan IA; continued investment by the Datong IA to expand the centralized district heating system; continued expansion by the Yangquan SFOs to source and supply more CBM/CMM gas.
- Increasing commercial orientation of all IA-SFOs, as evident from petitions made to respective government bodies for increases in controlled prices of coal gas (Taiyuan), district heating (Datong) and CBM/CMM gas supply (Yangquan)

### Project Achievement

- Average annual coal savings from the three subprojects, of about: (i) 360,000 tons in Taiyuan from 2005 to 2008; (ii) 345,000 tons in Datong from 2006 to 2008; (iii) 94,500 tons in Yangquan from 2007 to 2008. For Taiyuan and Datong, these are essentially in line with estimates made at appraisal—but have been achieved because of 20% higher than anticipated volume of coal gas sales in Taiyuan, and 30% more floor area serviced by centralized heat supplies in Datong. For Yangquan, the actual outcome is 32% less than the appraisal estimate.
- Average annual reductions of SO\textsubscript{2}, TSP and NO\textsubscript{2} from the three subprojects, of about (i) 7,700 tons, 9,800 tons and 1,200 tons respectively in Taiyuan; (ii) 5,300 tons, 4,800 tons and 2,600 tons respectively in Datong; and (iii) 1,500
## Design Summary

<table>
<thead>
<tr>
<th>Appraisal Performance Target/Indicators</th>
<th>Project Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>capacity for sustainable environmental management&lt;br&gt;• Policy reform that provides for market based incentives for SO$_2$ ET</td>
<td>tons, 1,900 tons and 500 tons in Yangquan. Although substantial reductions in local pollutant emissions have been achieved through the three subprojects, on a per unit of gas sales or district heating service basis, the emissions reductions fall significantly short of appraisal estimates in all three cities.&lt;br&gt;• Automated air quality management systems have been installed in EPBs in all three cities. Continuous pollution monitoring facilities have also been installed in all key emitters in Taiyuan, Datong and Yangquan; and a system for regular monitoring of emissions from other emitters has been instituted in all three cities. In addition, the various IA-SFOs have also instituted well-structured capacity building programs on various managerial, technical, financial, and other relevant aspects.&lt;br&gt;• Specifically pertaining to SO$_2$ ET, (i) the Taiyuan city government passed the SO$_2$ Emission Trading Management Regulation in 1993, and approved operational guidelines for the setting up of a SO$_2$ emissions trading enterprise; and (ii) through a comprehensive training program, personnel from 26 large enterprises as well as the Taiyuan EPB gained an understanding of the issues related to SO$_2$ ET. The reasons behind the little interest in SO$_2$ ET thus far are also increasingly understood by Taiyuan EPB.</td>
</tr>
</tbody>
</table>

## Outputs

### Taiyuan Coal Gasification

- To set up the second unit of a coking plant by December 2003, from which 175 million cubic meters of coal gas is available for sale each year.
- Coking unit began commercial operation in August 2004
- Has generated a saleable volume of coal gas of about 210 million cubic meter per annum per year (from 2005 to 2008)

### Datong District Heating

- To have an improved and efficient centralized heating system in parts of urban Datong by December 2003 that services residential and commercial customers with a combined floor area of 5.1 million square meters
- Following design changes (to source heat from a CHP, and to not set up two large coal-fired boilers), serves residential and commercial customers with a combined floor area of 6.59
<table>
<thead>
<tr>
<th>Design Summary</th>
<th>Appraisal Performance Target/Indicators</th>
<th>Project Achievement</th>
</tr>
</thead>
</table>
| Yangquan Coalbed Methane               | From December 2003, to supply CBM/CMM gas captured from Coal Mine No. 5 to residential, commercial, and industrial customers in urban and suburban Yangquan. | • Various components of this subproject (including three CBM/CMM storage tanks, control stations, monitoring stations, pipelines) were commissioned between late 2004 to mid-2006, and began full commercial operation in the second half of 2006.  
• Design changes affected the capacity of CBM/CMM storage tanks but not the volume of CBM/CMM capture from Coal Mine No. 5.  
• Since beginning commercial operations, the capture of CBM/CMM gas is as per appraisal estimates, as are sales volumes. |
| Institutional Strengthening            | Training in project management to PMO and training in various aspects of managerial, technical, and other matters to IAs | • Given the resident technical skills available within the IAs, the institutional strengthening budget was not fully utilized.  
• PMO staff attended ADB-sponsored training programs on project management and procurement.  
• 51 personnel from the IAs received 745 person-days of training overseas on environmental management and protection, pipeline network operation, network planning and strategy, and other relevant technical and managerial aspects.  
• 716 personnel from the IAs received nearly 37,000 person-days of training within the country on technical, finance and accounting, information technology, and other relevant aspects. |
| SO$_2$ Emissions Trading System in Taiyuan | Assist the SPG to develop an emissions trading system for SO$_2$, and modify the existing pollution levy system to ensure the sustainability of environmental improvement measures. | • Through consulting services provided by overseas and domestic consultants, assisted in sensitization of the stakeholders on the requisite preconditions before SO$_2$ emissions trading can be implemented successfully and sustained  
• Also provided a rationale for increasing pollution levies to encourage enterprises to invest in pollution abatement measures. |

**Notes:**

- ADB = Asian Development Bank, EPB = Environmental Protection Bureau, CBM/CMM = coal-bed-methane/coal-mine-methane, CHP = combined heat and power, ET = emissions permit trading, IA = implementing agency, NO$_2$ = nitrogen dioxide, PMO = project management office, RRP = report and recommendation of the President, SFO = subproject facility operators, SO$_2$ = sulfur dioxide, SPG = Shanxi Provincial Government, TSP = total suspended particulate.
### Table A2.1: Project Cost

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Appraisal ($ million)</th>
<th>Actual ($ million)</th>
<th>Actual/Appraisal (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FC</td>
<td>LC</td>
<td>Total</td>
</tr>
<tr>
<td>Part A Subproject 1: Taiyuan Coal Gasification Plant</td>
<td>69.39</td>
<td>50.90</td>
<td>120.29</td>
</tr>
<tr>
<td>Part B Subproject 2: Datong District Heating System</td>
<td>17.81</td>
<td>20.30</td>
<td>38.11</td>
</tr>
<tr>
<td>Part D Institutional Strengthening</td>
<td>1.30</td>
<td>0.70</td>
<td>2.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>102.00</strong></td>
<td><strong>81.00</strong></td>
<td><strong>183.00</strong></td>
</tr>
</tbody>
</table>

CBM/CMM = coal-bed-methane/coal-mine-methane, FC = foreign currency component, LC = local currency component.
Source: Implementing Agencies, PCR.

### Table A2.2: Financing Sources

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Appraisal ($)</th>
<th>Actual ($)</th>
<th>Actual/Appraisal (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ADB Loan</td>
<td>Commercial Bank Loan</td>
<td>Own Resources Total</td>
</tr>
<tr>
<td>Part A Subproject 1: Taiyuan Coal Gasification Plant</td>
<td>69.39</td>
<td>21.08</td>
<td>29.82</td>
</tr>
<tr>
<td>Part B Subproject 2: Datong District Heating System</td>
<td>17.81</td>
<td>0.00</td>
<td>20.30</td>
</tr>
<tr>
<td>Part C Storage and Distribution System</td>
<td>13.50</td>
<td>1.96</td>
<td>7.14</td>
</tr>
<tr>
<td>Part D Institutional Strengthening</td>
<td>1.30</td>
<td>0.00</td>
<td>0.70</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>102.00</strong></td>
<td><strong>23.04</strong></td>
<td><strong>57.96</strong></td>
</tr>
</tbody>
</table>

CBM/CMM = coal-bed-methane/coal-mine-methane, FC = foreign currency component, LC = local currency component.
Source: Implementing Agencies, PCR.
IMPLEMENTATION AGENCIES AND SUBPROJECT DETAILS

A. The Taiyuan Subproject

1. Taiyuan Coal Gasification Group/Company

1. The Taiyuan Coal Gasification Company (TCGC), which implemented the subproject, has a coking plant that was built in two phases. The first phase coke production facility has a capacity of 720,000 tons of coke. The capacity of the second phase is about 930,000 tons. The second phase was built with ADB support and also produces 504,000 cubic meters (m$^3$) of coal gas per day, or 175 million cubic meters (mcm) per year.

2. The TCGC is part of the Taiyuan Coal Gasification Group (TCGG), which was formed in 1981 as a limited liability state-owned enterprise (SOE). TCGG is now a large, well-diversified multi-business entity engaged comprehensively in the coal chain—including coal mining, washing, coking, coal gas, coal chemical products, coal gangue power generation, heating, pipelines, and city gas distribution. All TCGG activities are in Shanxi province and are concentrated largely in the Taiyuan city area. A group restructuring exercise that began in 1998 carved out some group companies to create the Shanxi Shenzhou Coking Company Limited (SSCCL). The SSCCL was listed on the Shenzhen stock exchange by the year 2000. The SSCCL raised equity through the public listing of its shares (40%) to address the local funding issue for the subproject. As a result, TCGC, the implementing agency (IA) for the TCGP, had access to funds raised from the capital markets, which enabled it to avoid incurring high-cost debt from a local bank to execute the subproject.

3. At the time, TCGC included the Taiyuan Coal Gasification Plant (TCGP), which then comprised the first phase of the coking plant. TCGP later implemented the second phase with ADB support. For the construction of TCGP’s second plant, TCGC raised more than $21.08 million equivalent of local currency through the stock exchange, which enabled TCGC to reach financial closure. These funds, along with the equivalent of $29.82 million from internal resources and equity contributions from SPG and Taiyuan city government and consumer contributions, plus the $61.51 million from the ADB loan, met the entire capital cost requirements of the ADB-supported subproject.

4. The TCGP, which now comprises two coal gasification units, is structured as an independent profit center of the TCGC. Figure A3.1 shows the broad organizational structure of TCGP. The Director of TCGP is supported by deputy directors in charge for production, operations, equipment/technology, and safety, and a chief engineer. The administrative office as well as human resources and engineering departments report directly to the Director. The TCGP management is responsible for the day-to-day operations of the two coal gasification plants and for implementing strategic decisions, including business plans, taken by the TCGG management or/and endorsed by TCGG’s Board of Directors.

5. Having gained significant experience in operating this facility over the past five years, TCGC is planning to set up a more advanced, sophisticated 5 million tons per annum coking facility, which will have 7.63 meter high coke oven batteries. In line with its mandate of being an integrated coal-chain enterprise and also assuring fuel and coking coal supplies for its coking plants, the TCGC has ambitious expansion plans to set up of five industrial zones to have integrated production chains comprising coal mining, coking, gasification, coal chemicals, power generation, and gas supply.

---

1 The commercial bank with which financing arrangements had been previously agreed withdrew support after changes in its senior management in January 2000.
Figure A3.1: Organizational Structure of the Taiyuan Coal Gasification Plant

Taiyuan Coal Gasification Plant.
2. Capacity Building

6. In addition to the Board of Directors, the Supervisory Committee, and company management, the TCGC's governance system also includes annual shareholders' meetings.

7. TCGC established its integrated management system and internal company policies for capacity building and skills upgradation programs on the basis of the code of corporate governance for listed companies in the PRC. Some of the aspects that provide a backdrop against which TCGC approaches capacity building are elaborated in Box A3.1. In addition, TCGC is engaged in activities that need to be managed according to commercial principles and has established internal company policies and systems for capacity building and skills upgrading. Personnel recruitment, training, and incentive systems are devised on the principles of providing equal opportunity to all and encouraging the best. Training programs are organized for all relevant disciplines (management, strategy/planning, production and operations technology, administration, sales and marketing, customer service, accounting, and financial management etc.) and several hundred person-months of training is provided to TCGP personnel each year. All personnel engaged in production are required to pass through training courses at regular intervals.

Box A3.1: Background Information for TCGC's Capacity-Building Initiatives

Operations. The functions that the TCGP manages in conjunction with TCGC management are: procurement of feedstock/raw materials, product marketing and sales, contracting arrangements with entities outside the TCGG for procurement and sales, and arrangement of finances to meet working capital and other requirements.

Accounting. TCGC has established an independent accounting unit (outside the TCGP), which compiles relevant accounting/financial data from all TCGC entities, as per consistent and established accepted accounting principles.

Marketing and Sales Management. This enables the tracking of international and domestic market information through sales activities and market research and formulates price adjustment plans as per the prevailing and likely market conditions in the short term. The recommended price adjustment plans are also part of production planning.

TCGC = Taiyuan Coal Gasification Company, TCGP = Taiyuan Coal Gasification Plant.
Source: TCGC.

3. Customer Orientation and User Perspective

8. The TCGP sells coal gas to the TCGG’s gas supply company. The latter on-sells gas to the ultimate users. About 550,000 households are supplied coal gas from the two TCGP coking plants. This includes a small number of poor and low-income households, with income levels of less than $1/person/day. The tariff for poor and low-income households is CNY0.50/ m$^3$ of coal gas. Other households (more than 95% of the total) pay the normal tariff of CNY0.75/ m$^3$ of coal gas.

9. The gas supply company conducts a sample survey of its consumers every year to ascertain the level of satisfaction with quality of service. The results for surveys conducted in 2008 and 2009 are presented in Table A3.1. The very high (over 99%) satisfaction regarding the operation and maintenance and billing and collection system likely also reflects: (i) the fact that
coal gas prices have remained unchanged since 1 April 2003 (when only the first phase of the TCGP was in operation); (ii) the convenience of using coal gas rather than coal for cooking and water-heating; (iii) the cleanliness associated with not using coal; and (iv) the freeing of space used previously to store coal.

Table A3.1: Coal Gas User Survey Findings (% of satisfied customers)

<table>
<thead>
<tr>
<th>Service</th>
<th>Survey in 2008 (%) of satisfied customers</th>
<th>Survey in 2009 (%) of satisfied customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance of Gas Supply System</td>
<td>99.02</td>
<td>99.06</td>
</tr>
<tr>
<td>Turnaround time for Pipeline Repair</td>
<td>98.00</td>
<td>98.08</td>
</tr>
<tr>
<td>Safety Check</td>
<td>98.63</td>
<td>98.63</td>
</tr>
<tr>
<td>Billing/Collection as per Metered Amounts</td>
<td>99.08</td>
<td>99.12</td>
</tr>
<tr>
<td>Mode of Bill Payment</td>
<td>98.03</td>
<td>97.95</td>
</tr>
</tbody>
</table>

Note: (i) In 2008, questionnaire sheets were distributed to 1200 customers, of which 1,162 responded; and (ii) in 2009, questionnaire sheets were distributed to 1000 customers, of which 966 responded.

Source: Taiyuan Coal Gasification Company.

4. Taiyuan Coal Gasification Project

10. On 23 December 2001, the construction of the second phase of TCGP was started. On 30 April 2004, the first coke oven batteries were put into operation; on 28 August 2004, the second coke oven battery came onstream. TCGG and TCGC officials report that the TCGP began normal production operations on 1 October 2004. By June 2005, following all necessary certifications\(^1\), the TCGP subproject went to full commercial operations. Since then, the plant's technical performance and product quality have consistently met design requirements.

11. Although hundreds of coal gasification and coking plants have been in operation in Shanxi province since the 1980s, the ADB supported subproject (see subproject schematic in Figure A3.2) has unique environmental protection features:

(i) A special high fence wall was developed, tested, and placed around the coal storage area. This fence wall stops most of the dust that is generated in the coal-storage area from crossing the fence wall\(^2\). Special light and low-cost materials have been used to develop the fence wall.

(ii) This the first plant to have 6-meter-high coke oven batteries. It has 100 coke oven batteries. The coke furnace is designed to be suitable for Shanxi coal, the best available equipment at the time the subproject was implemented has been deployed, and the high capacity reduces energy loss and dust emission. The quenching system also collects most gas and dust generated during the quenching process and thus greatly reduces pollutant emissions.

(iii) The production line is equipped with a full range of coke oven gas treatment processes. The key equipment for the production line is the compressor. Two compressors by KKK of Germany are the only equipment that is imported. The compressors transfer all raw coke oven gas passing through different separators and reactors, and send the purified gas to storage tanks. The compressors also provide gas to the furnace and control the operating pressure of the coke oven, making quality very important. TCGP officials say the two KKK compressors

---

\(^1\) As per the PRC project completion and acceptance procedures, the subprojects need to be certified by the city fire brigade, the city health services bureau, the provincial production security supervision and management bureau and the provincial environmental protection bureau.

\(^2\) At the same time, the fence does not prevent air flow from outside to inside the fence wall.
have worked very well since the subproject was commissioned, are maintained in
good condition, and therefore produce good quality with improved efficiency and
reduced pollutant emission. The treatment process can reclaim coal tar,
ammonia, sulfur, thiamine, and benzene. The quality of the gas is also improved
by removing all the chemicals that are not good for transportation and
combustion. The effluent of the treated wastewater can be fully reused for the
quenching system.

12. Implementation. The international competitive bidding procedures produced lower-
than-expected bids, which allowed TCGC to lower its foreign exchange costs. The TCGC
consistently followed established practices for bid management, contract management, project
supervision, data and information management, construction security, and standardization. It
engaged an international consulting firm only to assist with the review of technical design,
preparing bid documents, evaluating bids, and supervising some aspects of construction and
equipment installation. The main compressors for the coking unit were imported essentially to
gain an understanding of the latest technology and to demonstrate its use under local conditions.

13. Performance. Since it went in to full commercial operation, the subproject's technical
performance and product quality have consistently met design requirements. In particular, (i) the
capacity factor has consistently exceeded 100%; (ii) the subproject has been operated with due
consideration to safety of personnel and property; (iii) the subproject has been awarded the blue
mark of environmental performance3; (iv) production of coke has consistently conformed to
required standards4; and (v) coal gas production has been maximized to help realize greater
environmental benefits from coal gas sale to end users. This possibly sets the stage for other
coking units in Shanxi province to modernize and set up more efficient, environmentally friendly
coking facilities.

---

3 The highest certification for environmental management, awarded by the Taiyuan EPB.
4 These require ash content of 12.3% at most, sulfur content of up to 0.7%, and other thermal strength properties to
meet production process requirements of large steel-making furnaces.
Figure A3.2: Schematic of Taiyuan Coal Gasification Plant

Coal Storage

Coal Smashing

Feed System

Coke Furnace/Quenching System

Gas/Liquid Separator

Compressor

Desulfurization System

Benzene Removal System

Purified Gas

Coal gas Supply

Coal Tar Ammonia Separator

Tar Residue

Ammonia

Coke

Coke-Oven Gas

Coal Tar

Thiamine

Sulfur

Benzene
B. The Datong Subproject

1. Datong District Heating Company

14. The Datong District Heating Company (DDHC) became an independent state-owned enterprise (SOE) with limited liability in 1999, with the mandate to provide district heating services in urban areas of Datong city. Since then, the DDHC has focused on becoming a commercially viable and sustainable organization by (i) seeking to rationalize and increase heat prices, and obtaining the necessary approvals from the Datong Price Bureau and Shanxi Price Bureau for doing so; (ii) strengthening the management function to improve operational efficiency and reduce the cost of heat supply; (iii) reducing or slowing increases in labor costs; and (iv) improving service quality and collection efficiency.

15. DDHC has set up high-accuracy metering systems (ultrasonic flow meters with flow computers) at points along the network to monitor heat losses in the entire system and thus establish priorities for investing in measures to reduce losses. DDHC has also become a forward-looking organization and has plans to make necessary investments to take advantage of the anticipated changes in the regulatory framework for district heating.\(^5\)

16. The DDHC’s organizational structure is shown in Figure A3.3. DDHC’s Board of Directors firms up investment and financing plans, while the Board of Supervisors oversees the implementation of operational and investment plans. The general manager is responsible for day-to-day operations and reports to the Board of Directors. A deputy general manager reports to the Board of Supervisors.

---

\(^5\) These may enable district heating service providers to charge customers on the basis of actual heat use rather than charging a fixed amount per month (or per heating season) on the basis of floor area.
Figure A3.3: Organizational Structure of the Datong District Heating Company

DGM = Deputy General Manager, GM = General Manager.
17. DDHC now serves about 75,000 households and about 500 public buildings and commercial consumers in the urban areas of Datong. It has no industrial customers, as industry is located in suburban and rural parts of the city. DDHC has no other business interests. With a heating season of only 165 days per year (1 November through 15 April), DDHC’s main activities during the other months are construction and expansion of the district heating network, equipment maintenance, and ensuring full payment from all customers before the start of the next heating season.

2. Training

18. DDHC’s capacity-building efforts aim (i) to improve the overall operational efficiency of its heat supply network and improve the quality and reliability of heat supply services; (ii) to manage the necessarily simultaneous construction activities at multiple locations; (iii) to enhance customer service standards and improve customer satisfaction; (iv) to successfully introduce customer metering and other necessary technical systems as policy evolves; and (v) to evolve into a commercially oriented organization.

19. DDHC’s capacity-building programs include (i) advanced enterprise management courses (including courses for CEOs) at Tsinghua University for top and senior management; (ii) suitable technical training at Tangfang Corporation for operations and dispatch personnel; (iii) on-the-job training for other personnel through secondments to other district heating supply companies both in and outside Shanxi province; and (iv) inviting technical experts for classroom type training and teaching on selected technical matters. DDHC has also encouraged its talented and experienced personnel to provide training to personnel from other district heating enterprises.

3. Customer Orientation and User Perspective

20. The DDHC also conducts a survey of its residential and commercial customers each year. This survey is conducted during the heating season (1 November to 15 April). DDHC officials report that the surveys have consistently shown that all customer categories, including poor, low-income, and high-income residential customers, as well as public welfare and commercial organizations of various types, are generally satisfied. The underlying reason may be the fact that user tariffs have not increased since even before the Datong District Heating Project (DDHP) came onstream.

21. DDHC has a Consumer Reception Division, which includes a customer complaint center at its headquarters. Upon receiving a complaint, the division responsible for servicing customers in the concerned part of the Datong urban area is alerted. After attending to and addressing the complaint, the concerned division reports back to the customer complaint center at headquarters, which then checks with the customer on whether the complaint has been adequately addressed.

22. To help balance the heat supply system and maintain indoor temperature within 18±2°C, and preferably in the 18-20°C range—and thus reduce customer complaints—DDHC’s standard operating procedures now require at least 30 temperature measurement points for every 10,000 square meter (m²) of floor area serviced.

23. DDHC’s billing and collection system is as follows: (i) poor residential customers are billed and are required to pay on a monthly basis; (ii) the more well-off residential customers are billed and are required to make payment just once in the heating season; and (iii) the
commercial and public welfare customers are billed and required to pay each month. DDHC has established five offices where customers can pay their bills across the urban area; however, DDHC may also go to the customer premises for collection. On a month-to-month basis during the heating season, the collection efficiency is 93–95%. However, DDHC has been successful thus far in ensuring that by the start of the next heating season, all bills have been paid.

4. Datong District Heating Project

24. The ADB supported subproject (DDHP) is part of the district heating service area now managed by the DDHC. The DDHP was in keeping with DDHC’s mandate, as it sought in its original design to (i) replace old and/or small and inefficient coal-fired boilers by new, larger, and more efficient boilers of 80 tons per hour (tph) and 120 tph capacities; (ii) construct the associated 60 kilometers (km) transmission network and 37 heat exchange stations (HES) to connect the new boilers to existing sub-transmission and distribution lines; and (iii) to thus serve customers with a total useful floor area of 5.1 million m².

25. As another utility company conceived the idea in 2003 to set up a 400 megawatt (MW) Datong Pingwang combined heat and power (CHP) plant, the DDHP design was modified. In particular: (i) with heat to be supplied from the 400 MW CHP, there was no need to set up two large peak-load boilers; (ii) the capital investment resources so freed enabled the expansion of the DDHP service area to about 6.59 million m² of useful floor space, by constructing 75 HES (i.e., 38 additional HESs) and 104 km of transmission pipeline (i.e., 44 km additional pipeline). A total of 273 small/inefficient coal-fired boilers were shut down with the implementation of the DDHP. Following the completion of 81.4 km of pipeline and 55 HES, the DDHP began supplying heat in the 2004–2005 heating season. The DDHP went in to full commercial operation by start of the 2005–2006 heating season.

26. Performance. Since the 2005–2006 heating season, DDHP has achieved 100% capacity utilization each year. The heat losses upstream of HES (from CHP to HES) are about 1%, and downstream (from HES to customers) are a further 4%. Through loss reduction measures and proper metering, heat losses in the system have therefore reduced from about 6% to about 5%.

C. The Yangquan Subproject

1. Shanxi Yangquan Gas Company and Gas Distribution Companies

27. The Shanxi Yangquan Gas Company was created to handle the responsibilities for the IA during the implementation of the various components of this subproject. Upon completion, the assets were handed over to three gas pipeline distribution companies: (i) the Yangquan City Gas Distribution Company (YCGC); (ii) the Pingding Gas Company (PGC); and (iii) the Jiaoqu Gas Company (JGC). The three companies are part of the Yangquan Coal Mining Group (YCMG), which operates several coal mines. The YCMG operates the Coal Mine Number 5—the source of the coal-bed-methane/coal-mine-methane (CBM/CMM) gas, which is captured, stored, and transmitted to three gas distribution companies.

28. YCMG operates 19 coal mines in Yangquan city area, of which only five have CBM/CMM capture facilities thus far. In line with the increasing recognition by the Yangquan city government of the need to prevent atmospheric release of methane during coal mining operations, YCM plans to begin methane capture from more of its operating mines. In line with this
objective, YCMG has also formulated a five-year perspective capacity-building plan to increase the number of certified methane capture and storage facility operators.

29. The YCGC is the largest distribution company in Yangquan city, has operated since 1988, and serves customers in urban areas. In 2008, it supplied a little over 165 mcm of gas, to about 80,000 households (30.05 mcm), 354 public buildings (18.75 mcm), 234 commercial consumers (8 mcm) and five industrial consumers (over 108.27 mcm). YCGC also served over 1,000 poor urban households in 2008, which accounted for about 456,000 m³ of gas. YCGC obtains gas from five gas suppliers, one of them being the Yangquan group's Coal Mine Number 5.

30. The feasibility study for setting up PGC to supply gas in Pingding suburban areas was approved in January 2001 and PGC's first asset is the ADB-supported subproject component (a gas storage tank), along with requisite pipelines to serve its customers. It supplied a total of 27.25 mcm to households (7.75 mcm), public buildings (5 mcm), and industrial customers (14.5 mcm). The JGC was also established in 2001 and in 2008 supplied 3.2 mcm to households (1.05 mcm) and commercial consumers (2.15 mcm). PGC and QGC obtain all gas from the Coal Mine Number 5.

31. The YCGC is structured in three parts: (i) administrative departments; (ii) gas sales and gas service business units; and (iii) other independent units in diversified areas such as engineering design, construction, manufacture and sale of accessories for gas use, and LPG supply. The independent units provide services to the gas sales and gas service business units for a fee. Figure A3.4 shows the YCGC's organization. YCGC provides an example of a state-owned enterprise that is able to respond to changing circumstances. Along with continuing to expand its CBM/CMM gas supply network since the ADB subproject completion, YCGC has tried to overcome some of its financial problems—owing to its inability to raise CBM/CMM gas sales prices—by expanding its profit-making and market-driven gas accessories business. It also has plans to exit the liquefied petroleum gas (LPG) supply business, as its LPG consumers switch to using CBM/CMM gas. With increased CBM/CMM gas sales through the ADB-supported subproject as well as further increases anticipated over the next several years, YCGC has also oriented its capacity-building plans to develop a well-structured system that includes training in various aspects of CBM/CMM business operations, as well as technical training.

32. Both PGC and JGC began operations with the help of financing from the ADB project loan and the Yangquan city government and the respective local governments of Pingding county and Jiaoluo township. The two gas companies started supplying CBM/CMM for the first time to suburban Yangquan consumers with the commissioning of the ADB supported subproject component. They are small companies and depend upon YCGC for technical assistance and guidance on matters from time to time.
Appendix 3

Yangquan City Gas Company

Independent Business Units
- Liquefied Petroleum Gas
- Construction
- Gas Accessories
- Commercial Service Center
- Decorate/Service Center
- Gas Design Agency

Departments
- Administration
- Finance
- Personnel
- Production/Supply Management
- Engineering/Safety
- Procurement

Divisions
- Sales
- Service

Figure A3.4: The Yangquan City Gas Distribution Company Organization
2. Training

33. YCGC's training and capacity-building initiatives are influenced by objectives that are similar to DDHC's. Upon completion of the ADB-supported subproject in Yangquan, YCGC reorganized into four divisions to cover its entire CBM/CMM supply business, and established an internal management incentive mechanism to encourage the four divisions to enhance their supply network and improve (i) the operational efficiency of their respective networks, (ii) maintenance practices, (iii) customer service, and (iv) financial management. YCGC also established a comprehensive human resource database, which is used as a basis for planning training activities on a yearly basis.

34. The training program encompasses (i) training in various aspects of company business operations and management, such as finance, accounting, marketing, sales, customer service, and receivables management; (ii) maintenance scheduling and management training; and (iii) training of personnel engaged in work where risks of fire, explosion, or methane leak is high, such as compressor operations, tank maintenance, and pipeline leak repair. All personnel engaged in high-risk positions need to be certified operators.

3. Customer Orientation and User Perspective

35. YCGC obtains CBM/CMM gas from five sources, of which one is the ADB-supported storage tank at Wukuang (which collects CBM/CMM gas from Coal Mine Number 5). By the end-2008, YCGC served about 80,000 residential customers, 354 public welfare buildings, 234 commercial customers, and 5 industrial users. Under its tariff collection system, about 30,000 residential customers and about 50% of all other users have pre-paid electronic cards. For the remaining 50,000 residential customers and 50% of non-residential customers, YCGC raises bills each month and collects at individual household and company premises. YCGC reports that all households have been paying regularly. Some non-residential customers could not make full payments in 2008 as their businesses suffered following the financial crisis.

36. YCGC conducts a comprehensive survey each year in September, when it obtains feedback from all customers on quality of service. The company physically inspects gas service connections of all its customers each year to detect supply safety or reliability problems. Maintenance requirements are addressed at the earliest.

37. YCGC has set up a customer complaint center and has service quality standards that require it to address normal complaints within 2 hours. YCGC reports that it has successfully complied with this requirement over the past several years. YCGC also reports that customer complaints are rare, as it routinely conducts physical surveys while transmission and distribution pipelines are under construction, and when service connections are provided.

38. YCGC claims a very high satisfaction level from its customers. The fact that gas prices to customers have not been allowed to rise since 1998 is only one of the reasons; the convenience of using gas instead of coal and high service quality are the other factors. Likewise, PGC and JGC, which service about 10,000 and 2,800 customers respectively[^1], also report a high level of satisfaction from their customers.

[^1]: PGC's customers include 130 public welfare customers and one industrial enterprise, in addition to approximately 10,000 households. JGC's customers include 33 commercial users in addition to approximately 2,800 households.
4. Components of the Yangquan Subprojects

39. The ADB subproject comprises several components: (i) a 50,000 m$^3$ gas storage tank at Wukuang, near Coal Mine Number 5, which serves as a buffer to hold produced CBM/CMM gas before it is sent by pipeline to the three gas distribution companies; (ii) a 50,000 m$^3$ gas storage tank at Beijiao within the Yangquan urban area; (iii) a 50,000 m$^3$ gas storage tank at Songjiazhuang in Pingding, which is the gas purchase point for the PGC; and (iv) three control stations, 38 regulating stations, and 131 km of gas distribution pipelines. Two major changes were made from the original project design envisaged at appraisal: (i) the 50,000 m$^3$ storage tank was constructed at Pingding instead of a 20,000 m$^3$ gas storage tank in Jiaoqu; and (ii) 38 regulating stations were supported by the ADB fund, compared with the 39 originally planned.

40. The components were constructed, tested for start-up, and commissioned by January 2006. In particular: (i) the final section of the pipelines was completed in September 2004; (ii) the Beijiao storage tank was commissioned in June 2004; (iii) the Wukuang storage tank was commissioned in January 2006; and (iii) the Songjiazhuang storage tank was tested and accepted by January 2006. After certifications for each component, the subproject is stated to have been completed and begun normal operations by December 2006.

41. Performance. The Yangquan subproject components have performed well since they began normal operations, as their full capacity utilization levels demonstrate. In fact, the gas storage tank at Wukuang is sized to cater to some further expansion of coal-mining operations of Coal Mine Number 5.
POLICY FRAMEWORK FOR ENVIRONMENTAL PROTECTION

A. Overview

1. With an average annual gross domestic product (GDP) growth of over 9% over three decades (1978 to 2008), the People’s Republic of China (PRC) has improved living standards of the vast majority of its population and lifted millions out of poverty. An undesirable consequence of PRC’s economic growth focus, however, has been pollution and environmental degradation—one of the most important causes being the rapidly rising energy demand coupled to a high dependence on coal. The PRC is now the world’s second largest consumer of energy and has the highest dependence on coal among the world’s top 10 energy consumers.¹

2. In the PRC, environmental protection is managed through a four-pronged approach: (i) integration of environmental protection plans with overall socioeconomic development plans; (ii) a combination of pollution prevention and remedy of major pollution sources; (iii) polluters to pay, including fees, fines, and compensation; and (iv) enforcement of laws and regulations.

B. Balancing Environmental Protection with Economic Development

3. Although the PRC did not formally consider environment improvement as part of its development objectives until the turn of the century, it did introduce projects aimed at improving the local environment, including urban air quality and indoor air quality. Two salient environmental protection-related targets set for the 10-year period 2001–2010 were (i) a 20% reduction of energy consumption per unit of GDP, and (ii) a 10% reduction of total emissions of major pollutants. With the 10th Five-Year Plan (FYP) (2001–2005) for socioeconomic development, there was a change from a singular focus on physical and output targets for economic growth to quality of growth and sustainable development. This was further reinforced in the 11th FYP (2006–2010), which stated that: (i) economic growth is no longer the sole objective but one of several guiding principles for sustained growth; and (ii) other FYP objectives with equal status (priority) include the increased efficiency of resource use and environmental protection.

4. Many aspects of the national environmental protection (NEP) plan for 2001–2005 were incorporated in the socioeconomic development plan for the 10th FYP period. Key goals of the NEP, which are still being pursued country-wide, include the following: (i) to phase out/close production lines that consume resources inefficiently and result in substantial environmental pollution; (ii) to enhance development of coal gasification or liquefaction, and to increase coal-bed-methane/coal-mine-methane capture; (iii) to have pollutant emission from industry comply with national standards or local standards²; and (iv) to expedite development of district heating and gas supply capacity in urban areas so that no households in high-density city areas directly burn coal. The NEP for 2006–2010, many aspects of which were also incorporated in the socioeconomic development plan for the 11th FYP period, also set target indicators (Table A4.1). It is noteworthy that the targets pertain only to a reduction of SO₂ emissions and keeping SO₂ concentrations within targeted bounds because it is hoped that the measures taken to achieve these targets will also reduce emissions and concentrations of other major air pollutants, such as nitrogen oxides and particulate matter.

² Environmental standards or pollution reduction targets set by provincial and city governments are more stringent than those of the national Government.
Table A4.1: Selected Environmental Indicators of the National Environmental Protection (2006–2010)

<table>
<thead>
<tr>
<th>NEP Indicators</th>
<th>2005 (Baseline)</th>
<th>2010 (Target)</th>
<th>Targeted Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharged amount of SO$_2$ (‘000 tons)</td>
<td>25,490</td>
<td>22,950</td>
<td>10% reduction</td>
</tr>
<tr>
<td>Percentage of key cities where air quality meets Class II standards for at least 292 days annually (i.e., 80% of days per year)</td>
<td>69.4</td>
<td>75</td>
<td>5.6% increase</td>
</tr>
</tbody>
</table>

NEP = National Environmental Protection, SO$_2$ = sulfur dioxide.

Note: Taiyuan, Datong, and Yangquan are three of the 113 key cities.

5. The target set by the Shanxi Provincial Government (SPG) for SO$_2$ reduction by 2010 is more stringent than the national target. SPG’s targeted reduction is 13% from 2005 levels, i.e., a decline in SO$_2$ emissions of about 1.3 million tons per year by 2010. The target is to be achieved through various initiatives, such as (i) reducing coal use in households by developing centralized district heating and gas supply systems for including coal gas, CBM/CMM, and natural gas; and (ii) optimizing the industrial mix, keeping in view the natural resource endowments of the province and the need to reduce pollutant emissions while allowing for economic growth. SPG plans to accord environmental protection top priority in highly polluted areas that are also the economic growth centers of Shanxi province. These include Taiyuan, Datong, and Yangquan cities.

C. Measures to Improve Ambient Air Quality

6. A large number of environmental protection measures have been initiated and implemented all over PRC. Measures designed specifically for checking air pollution and improving air quality are discussed below.

1. Measures Mandated by Government of PRC

7. Pollution Control in Urban Areas. In 1996, the Government of the PRC approved the total emission control plan for major pollutants, with the specific objective of improving air and water quality. In line with this objective, the measures that were introduced to reduce urban pollution levels, included (i) closure of industrial plants located within city limits, and relocation to outside cities; (ii) identifying highly polluting enterprises as key polluters for more thorough monitoring; (iii) removing old polluting buses and taxis from service and replacing them with vehicles that met new, more stringent emission standards; and (iv) providing tax incentives to citizens for purchase of cars with small engines.

8. Pollution Control Zones. In 1998, the Government of the PRC approved the National Acid Rain and Sulfur-Dioxide Control Zoning Plan, with the objective of focusing environmental protection action on areas that experienced significant acid rain or were otherwise characterized by high sulfur-dioxide pollution. The 10th and 11th FYPs included specific measures to reduce the undesired implications of atmospheric pollutants. These include (i) analyzing the existing conditions and establishing a baseline; (ii) establishing the total mass loading target and concentration target of SO$_2$; (iii) controlling SO$_2$ emissions by, for instance,

---

3 Key polluters are subject to continuous monitoring. Where equipment for continuous monitoring in real time is not installed, the enterprise is subject to a regular sampling program and random checks. The pollutants that are monitored include: sulfur-dioxide, nitrogen oxides, suspended particulate matter. For chemical industries, special pollutants such as fluorides and carbon-monoxide may also be monitored.

4 Acid rain is caused largely by emissions of compounds of sulfur and nitrogen.
pre-treatment of high-sulfur coal prior to use in a boiler or furnace, and closure of small and inefficient power plants; (iv) establishing institutionalized monitoring systems; and (v) setting a budget to realize the SO$_2$ reduction target.

9. **Total Pollution Loading Control.** Mass loading for air pollutants is one of the key measures being used to control atmospheric pollution. The introduction of SO$_2$ control zones, pollution discharge permits, and SO$_2$ discharge fees is part of the overall total pollution loading (TPL) control strategy. Through TPL control, the MEP aims ultimately to ensure that the total amount of pollutants emitted or discharged in a specific area remains within the area's environmental capacity. However, because the amounts now exceed environmental capacity in most areas, this effectively means targets for reducing the total amount of pollutant discharges over a specified period of time (paras. 15 and 16).

2. **Measures in Shanxi Province**

10. **SPG's Supervision Regulation.** In support of the MEP regulations and targets, the SPG accelerated the process of ensuring that all emissions from industrial enterprises comply with MEP standards. SPG's Order No. 189 said that any enterprise that did not comply with standards by December 2008 should be closed. The respective city governments and the city EPBs are held accountable for compliance to standards and for meeting pollution reduction targets.

11. **SPG's Approach to Optimizing the Energy Supply System.** SPG put several measures in place to support environmental regulations and targets from the start of the 10$^{th}$ FYP period, such as: (i) relocation or closure of coal-fired power plants, cement factories, and chemical manufacturers that were high polluters, had low operational efficiency, or were located in a relatively more environmentally sensitive area—for example, close to an urban area in a city; (ii) accelerated phasing out of enterprises in sectors approved for closure by the Government of the PRC; and (iii) emphasis on introduction and expansion of centralized heating, gas utilization, clean coal technologies, dust control, and installation of flue gas desulfurizers in coal-fired power plans. SPG also instituted massive rewards for counties and cities that contribute substantively to environmental improvement and improved air quality, in particular.

12. **Shanxi City Governments’ Plans for Environmental Protection.** Measures introduced by the governments of the cities of Taiyuan, Datong, and Yangquan reflect the SPG’s approach and include the following: (i) comprehensive urban planning, including expansion of centralized district heating and gas supply services; and (ii) equipping all coal-fired power plants with dust removal and desulfurization devices. In addition, specific city governments have instituted other measures, such as: (i) extending subsidies to households for using the relatively less polluting treated clean coal rather than raw coal (Datong); (ii) mandating enterprises that use boilers of above 2 tons per hour (tph) capacity, to have high efficiency desulfurization facilities (Datong); (iii) implementing the coal-to-gas project (Taiyuan); and (iv) ensuring that buses meet new emission standards (Taiyuan).

D. **Implementation of Environment Protection Measures**

**Institutional Structure**

13. The Ministry of Environmental Protection (MEP) of the Government of the PRC is responsible for policy formulation, making national environmental protection plans, and setting national targets for environmental protection. To ensure that the environmental protection
measures are implemented, the MEP is supported by (i) regional environmental supervision centers (RESC); and (ii) the national environmental monitoring center (NEMC). The six RESCs oversee the enforcement of environmental measures, investigate serious pollution cases, and resolve cross-regional environmental disputes. The RESCs work in conjunction with the city and provincial environmental protection bureaus (EPB). The NEMC is the national focal point for all environmental monitoring data on environmental quality and emissions and discharges and all such data compiled by provincial and city environment monitoring centers flows to the NEMC on a regular basis. The NEMC also provides technical assistance on environmental monitoring to provincial and city EMCs.

14. The provincial EPB is the department of the provincial government responsible for environmental protection. It is supported by the Environmental Supervision and Law Enforcement Team and the provincial environmental monitoring center. The "key emitters" are subject to continuous monitoring, and most "key emitters" by end of 2008 have computerized real-time monitoring equipment. The other smaller emitters are monitored intermittently through regular quarterly, half-yearly, or annual onsite inspections conducted by the supervision and enforcement team and EMCs. In addition, some surprise onsite inspections may also be conducted on all emitting enterprises.

E. Environmental Standards/Guidelines

15. The MEP is responsible for formulating national environmental standards and guidelines, especially regarding environmental quality and pollutant discharge limits. The provincial government may also formulate its own environmental standards and guidelines—as long as they are more stringent that those set by the MEP. Industrial pollution control standards fall in to three broad categories: (i) ambient environmental quality standards, (ii) pollutant discharge standards, and (iii) monitoring methodology standards. The national ambient air quality standards are shown in Table A4.1.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Unit</th>
<th>Time for Average</th>
<th>Class I</th>
<th>Class II</th>
<th>Class III</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>mg/m³</td>
<td>Annual average</td>
<td>0.02</td>
<td>0.06</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily average</td>
<td>0.05</td>
<td>0.15</td>
<td>0.25</td>
</tr>
<tr>
<td>TSP</td>
<td>mg/m³</td>
<td>Annual average</td>
<td>0.08</td>
<td>0.20</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily average</td>
<td>0.12</td>
<td>0.30</td>
<td>0.50</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>mg/m³</td>
<td>Annual average</td>
<td>0.04</td>
<td>0.10</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily average</td>
<td>0.05</td>
<td>0.15</td>
<td>0.25</td>
</tr>
<tr>
<td>NOx</td>
<td>mg/m³</td>
<td>Annual average</td>
<td>0.05</td>
<td>0.05</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily average</td>
<td>0.10</td>
<td>0.10</td>
<td>0.15</td>
</tr>
<tr>
<td>NO₂</td>
<td>mg/m³</td>
<td>Annual average</td>
<td>0.04</td>
<td>0.04</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daily average</td>
<td>0.08</td>
<td>0.08</td>
<td>0.12</td>
</tr>
<tr>
<td>CO</td>
<td>mg/m³</td>
<td>Daily average</td>
<td>4.00</td>
<td>4.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

CO = carbon monoxide, mg/m³ = milligram per cubic meter, PM₁₀ = particulate matter of less than 10 microns diameter, NO₂ = nitrogen dioxide, NOx = nitrogen oxide, PRC = People's Republic of China, SO₂ = sulfur dioxide, TSP = total suspended particulate.

Note: Class I standards are a statement of long-term objectives of ambient air quality. Class II standards are set for residential, general industrial, and agricultural areas. Class III standards are set for specified industrial zones.

Source: Ministry of Environmental Protection, Government of PRC.
F. Setting Environmental Protection Targets

16. The MEP is responsible for setting environmental protection targets at the national level. The targets so set are distributed amongst various provinces. The provincial governments may set their own targets, as long as they are more stringent than the environmental quality and pollutant discharge targets it is allocated by the MEP. Ultimately, the targets are achieved through measures implemented by enterprises or through closure of highly polluting enterprises. The distribution of targets follows a complex three-step process that leads to three levels of contracts or agreements. For instance, for SO$_2$ emission reduction, these contracts and agreements are finalized between (i) MEP and provincial EPB—this specifies SO$_2$ emission reduction targets to be met by a specific province; (ii) provincial EPB and EPBs of the various cities in the province—this specifies the target to be met by a specific city; and (iii) city EPB and enterprises in the city—this specifies the targets to be met by a specific enterprise. The environment related five-year targets in the national socioeconomic and environmental plans are normally phased in to five successive one-year targets. The contracts and agreements are also normally entered into on an annual basis.

17. Pollution Discharge Permit. The contracts/agreements referred to above are in fact the pollution discharge permits (PDP) that the city EPBs allocate to various enterprises. Without the PDP, the enterprise is not allowed to discharge pollutants. The PDP prescribes the type of pollutants (SO$_2$ for atmospheric emissions and COD for discharges in water), the permitted amounts of pollutant discharges, and the concentration levels of pollutants. PDP enforcement is being strengthened with each passing year.

G. Special Environmental Regulations

18. Environmental Impact Assessments. Three different levels of environmental impact assessments (EIA) are required for projects, according to the potential environmental impact of the project. If the potential environmental impact is considered “significant,” a full EIA report is required. The full EIA report is to be prepared after an all-round appraisal of environmental impacts and includes: (i) an identified set of recommended pollution prevention measures, on the basis of a diligent assessment of integrated and comprehensive approaches to environmental management; and (ii) feasibility analysis and cost implications of the recommended impact abatement measures on impact on air quality, water bodies, and the ecology. If the potential environmental impact is considered “gentle,” the EIA report may only be a tabulated version that spells out the environmental impact and remedial measures. If the potential environmental impacts are considered “negligible,” it is not necessary to appraise environmental impacts.

19. All full and tabulated EIA reports are finalized following feedback from the public and affected parties. For the more sensitive projects, the concerned government department is required to conduct a public hearing that involves all potentially affected parties.

20. Three Synchronisms. A three synchronisms regulation declares that (i) design documents for new production facilities (or expansions) can be approved by the concerned EPB only if the design of environmental protection and control facilities is also an integral part of the facilities design; (ii) construction of production facilities can begin only after the implementation plan is approved, and the implementation plan includes the engineering, construction, and/or installation of environmental protection and control facilities; and (iii) production operations can begin only when the concerned EPB has certified the environmental protection control facilities.
21. **Mandatory Pollution Control within a Prescribed Time Period.** An EPB is authorized to enforce pollution control to keep pollution emission and discharge within PDP limits. An EPB can penalize an enterprise or organization that violates environmental PDP limits from CNY10,000 to CNY100,000. The EPB first advises the violator to rectify the situation and regularly inspects the progress. Only if the pollution control activities are not effectively implemented within the prescribed time limit does the EPB order the enterprise to close or suspend production operations pending merger with other organizations or a shift to another less polluting production line.

22. **Pollution Levy.** The pollution levy regulation stipulates a discharge fee and a penalty. The discharge fee is set by (i) computing the equivalent amounts of emissions and discharges of all pollutants from a given polluting source; (ii) ranking the equivalent emissions and discharge amounts in descending order; and (iii) applying the discharge fee rate of CNY0.62 per kg of SO$_2$ equivalent on the top three pollutants only. To determine the penalty, officials (i) measure pollutant concentrations in the vicinity of the emission and discharge points as per prescribed methodologies and standards; and (ii) apply the penalty charge fee on the entire quantity of the top three pollutants if the measured concentrations exceed the relevant national standards. The penalty fee rate is at least three times higher than the discharge fee rate.
## TRAINING PROVIDED

<table>
<thead>
<tr>
<th>Participants</th>
<th>Training Venue</th>
<th>No. of Personnel</th>
<th>No. of Person-Days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overseas Training</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Taiyuan</td>
<td>Japan</td>
<td>7</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>USA</td>
<td>8</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>Germany, USA</td>
<td>7</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Australia</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>- Datong</td>
<td>Germany, Finland</td>
<td>10</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>Denmark</td>
<td>10</td>
<td>140</td>
</tr>
<tr>
<td>- Yangquan</td>
<td>France, Italy</td>
<td>6</td>
<td>90</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>51</strong></td>
<td><strong>745</strong></td>
</tr>
<tr>
<td><strong>In-Country Training</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Taiyuan</td>
<td>PRC</td>
<td>300</td>
<td>3,000</td>
</tr>
<tr>
<td>- Datong</td>
<td>PRC</td>
<td>190</td>
<td>970</td>
</tr>
<tr>
<td>- Yangquan</td>
<td>PRC</td>
<td>226</td>
<td>32,964</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>716</strong></td>
<td><strong>36,934</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>767</strong></td>
<td><strong>37,679</strong></td>
</tr>
</tbody>
</table>

PRC = People’s Republic of China, No. = Number, USA = United States.
Source: Government of PRC, implementing agencies.
ECONOMIC AND FINANCIAL REEVALUATION OF SUBPROJECTS

A. Introduction

1. The objectives of this economic and financial reevaluation are to determine the economic and financial viability of the three subprojects in Taiyuan, Datong, and Yangquan cities on the basis of updated information on subproject operating costs, production of outputs, sales, and prices; and to assess the economic and financial internal rates of returns of the three subprojects. The methodology broadly follows the approach adopted at completion, as given in the project completion report (PCR). The analyses are carried out in accordance with the ADB Guidelines for the Economic Analysis of Projects by comparing the with- and without-project scenarios that weigh subproject benefits (i.e., environmental benefits) against the initial investments and periodic and routine maintenance requirements over a 20-year period. All expenditures and revenues are in constant 2008 prices.

B. Input Data and Assumptions

2. The inputs and assumptions for financial analyses related to the three subprojects are shown in Tables A6.1, A6.2 and A6.3. The approach has essentially been to rely on capital costs data (including interest-during-construction) on the PCR and operating data from commissioning to the end of 2008 provided by the concerned IA.

Table A6.1: Parameters for Financial Analyses of the Taiyuan Subproject

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Financial Model Inputs/Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>As provided in the PCR</td>
</tr>
<tr>
<td>Fixed operating cost</td>
<td>Labor costs, administrative costs and other fixed costs for 2005 to 2008, based on updated data provided by TCGC (the IA).</td>
</tr>
<tr>
<td>Variable operating costs</td>
<td>Based on updated data provided by TCGC for 2005 to 2008. Includes financial costs of coal. Coal is procured from the TCGG's coal mining operations. The internal transfer prices of coal are decided by the TCGG Board of Directors. The costs of utilities (electricity, coal gas, etc.) are also provided by TCGC.</td>
</tr>
<tr>
<td>Revenues (major products and chemical by-products)</td>
<td>The two major products are coke and coal gas. In addition, the by-product chemicals include coal tar, sulfur ammonia, and benzene. Part of the coal gas is used internally in the coking plants. The remainder is sold to the TCGG's gas pipeline/supply company for sale to ultimate consumers. TCGP's revenue stream comes from sales made to the gas pipeline/supply company. Revenues from sale of all products are also as provided by TCGC.</td>
</tr>
</tbody>
</table>

IA = implementing agency, PCR = project completion report, TCGC = Taiyuan Coal Gasification Company, TCGG = Taiyuan Coal Gasification Group.
Source: Taiyuan Coal Gasification Company.
Table A6.2: Parameters for Financial Analyses of the Datong Subproject

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Financial Model Inputs/Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>As provided in the PCR</td>
</tr>
<tr>
<td>Fixed operating cost</td>
<td>As per data on labor cost, administrative, and marketing expenses, and other fixed costs provided by DDHC for the ADB-supported DDHP for the years 2006 to 2008. Indicative data on a per unit of heat supply basis is also provided for 2002. Data for intervening years is interpolated.</td>
</tr>
<tr>
<td>Variable operating costs</td>
<td>As per data for heat purchase (from a 400 MW CHP) provided by DDHC for the years 2004 to 2008. (Note: no steam purchases as DDHC has no industrial customers). As per data on utility and other variable costs provided by DDHC for 2006 to 2008; prorated as per capacity utilization for 2004 and 2005.</td>
</tr>
<tr>
<td>Revenues</td>
<td>As per data on heat sales price and square meter of district heating area served; data available for 2004 to 2008.</td>
</tr>
</tbody>
</table>

ADB = Asian Development Bank, CHP = combined heat and power, DDHC = Datong District Heating Company, DDHP = Datong District Heating Project, MW = megawatt, PCR = project completion report.

Source: DDHC.

Table A6.3: Parameters for Financial Analyses of the Yangquan Subproject

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Financial Model Inputs/Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost</td>
<td>As provided in the PCR</td>
</tr>
<tr>
<td>Fixed operating cost</td>
<td>As per data on labor cost, administrative and marketing expenses, and other fixed costs as per PCR</td>
</tr>
<tr>
<td>Variable operating costs</td>
<td>As per updates available from YCGC, regarding cost of CBM/CMM off-take price since 2005.</td>
</tr>
<tr>
<td>Revenues</td>
<td>As per price data for various customer categories available from YCGC. Volume of CBM/CMM sales per customer category is estimated on the basis of: (i) customer category-wise sales data in 2008 (for YCGC and JGC); and (ii) total volume sales data for 2005 to 2008 for PGC.</td>
</tr>
</tbody>
</table>


Sources: Yangquan City Gas Company, Pingding Gas Company, and Jiaoqu Gas Company.

3. Further inputs and assumptions necessary for economic analysis of the various subprojects are (i) shadow pricing of capital costs, fixed operating costs, and variable operating costs to reflect economic costs, as per established ADB norms; (ii) using economic price of coal; and (iii) benefits from reduced emissions of local pollutants from reduction in coal use. Economic cost of coal is based on free-on-board price of Shanxi Premium Blend coal at Qinhuangdao port. Given that the coal needs to be transported over 600 km by rail from coal mines in Shanxi province to the Qinhuangdao port, the corresponding economic costs in Shanxi are estimated. Table A6.4 provides the relevant inputs and assumptions to estimate the economic costs of a 5,500 kCal/kg coal.

---

1 For capital costs, the conversion factor (i.e., multiplier to convert financial costs to economic costs) for land is 1.0; for civil works is 1.1; for equipment is 1.1; and for other costs is 0.93. For fixed operating costs, the conversion factor for skilled labor costs is 2.0; for unskilled labor costs is 0.7; and for other items is 0.93. For variable operating costs, the conversion factor for coal purchase costs (when based on border prices of coal) is 1.0 and for other items is 0.93.
Table A6.4: Economic Cost of Coal in Shanxi (2005–2008)

<table>
<thead>
<tr>
<th>Item</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal price FOB ($/ton)</td>
<td>47.4</td>
<td>55.6</td>
<td>60.2</td>
<td>106.8</td>
</tr>
<tr>
<td>Exchange rate (CNY/$)</td>
<td>8.19</td>
<td>7.97</td>
<td>7.61</td>
<td>6.95</td>
</tr>
<tr>
<td>Coal Price in Qinhuangdao (CNY/ton)</td>
<td>388</td>
<td>438</td>
<td>460</td>
<td>740</td>
</tr>
<tr>
<td>Load and unload charges (CNY/ton)</td>
<td>10.00</td>
<td>10.15</td>
<td>10.79</td>
<td>12.16</td>
</tr>
<tr>
<td>Railway transportation cost (CNY/ton-km)</td>
<td>0.09</td>
<td>0.10</td>
<td>0.10</td>
<td>0.11</td>
</tr>
<tr>
<td>Losses by railway transportation (%)</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Transport distance (Coal Mine-Qinhuangdao) (km)</td>
<td>638</td>
<td>638</td>
<td>638</td>
<td>638</td>
</tr>
<tr>
<td>Coal price in Shanxi (CNY/ton)</td>
<td>306.7</td>
<td>354.1</td>
<td>371.0</td>
<td>633.1</td>
</tr>
<tr>
<td>Coal price in Shanxi ($/ton)</td>
<td>37.4</td>
<td>44.4</td>
<td>48.8</td>
<td>91.1</td>
</tr>
</tbody>
</table>

CNY = yuan.

*August–December average.


4. Benefits from reduced pollutant emissions are based on emissions savings from reduced coal consumption as (i) coal gas replaces coal use in Taiyuan's households, commercial, and industrial consumers; (ii) coal use in Datong for district heating services reduces as old/inefficient boilers are shut down and heat is purchased from a high-efficiency CHP; and (iii) CBM/CMM gas replaces coal use in Yangquan's households and for commercial and industrial consumers. Emissions savings from reduced per ton coal use are as provided by the respective environmental protection bureaus (EPB) of the three cities at the time of project completion (Table A6.5). No reliable updates were available to the Independent Evaluation Mission.

5. Differences in coefficients for reduction of pollutants emissions are to be expected between the three cities, as coal use is reduced for different reasons. Therefore, it is likely that the carbon dioxide (CO₂) emission reduction coefficient of 44 kg of CO₂ per ton of coal saved provided by the three EPBs is not correct. See Table A6.5.

Table A6.5: Emission Savings per ton of Coal Use Reduction (kg/ton of coal)

<table>
<thead>
<tr>
<th>Emissions</th>
<th>Taiyuan</th>
<th>Datong</th>
<th>Yangquan</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM₁₀</td>
<td>32.5</td>
<td>14.0</td>
<td>20.0</td>
</tr>
<tr>
<td>SO₂</td>
<td>25.7</td>
<td>16.0</td>
<td>16.0</td>
</tr>
<tr>
<td>NOₓ</td>
<td>4.1</td>
<td>7.6</td>
<td>5.0</td>
</tr>
<tr>
<td>CO₂</td>
<td>44.0</td>
<td>44.0</td>
<td>44.0</td>
</tr>
</tbody>
</table>

CO = carbon dioxide, PM₁₀ = particulate matter of less than 10 microns diameter, NOₓ = nitrogen oxide, SO₂ = sulfur dioxide.

Source: Taiyuan EPB, Datong EPB, and Yangquan EPB; as provided to ADB at the time of project completion in 2006.

6. A value is ascribed to reduced emissions per person per year on the basis of the findings of an ADB study for which such data is readily available. The study was supported through a PPTA for Loan 2260-PRC². The data from this study is revalued in 2008 prices, and scaled up according to the available population data for Shanxi province and the three cities. The results presented in Table A6.6 are used for further analyses.

² ADB. 2006. Report and Recommendations of the President to the Board of Directors: Proposed Loan to the People's Republic of China: Inner Mongolia Autonomous Region Environment Improvement Project. Manila (Loan 2260, for $120 million, approved on 29 September).
Table A6.6: Benefits from Emission Reductions (CNY/ton of emissions)

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiyuan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM₁₀</td>
<td>3,441</td>
<td>3,613</td>
<td>3,794</td>
<td>3,984</td>
<td>4,183</td>
</tr>
<tr>
<td>SO₂</td>
<td>832</td>
<td>874</td>
<td>917</td>
<td>963</td>
<td>1,011</td>
</tr>
<tr>
<td>NOₓ</td>
<td>916</td>
<td>962</td>
<td>1,010</td>
<td>1,060</td>
<td>1,113</td>
</tr>
<tr>
<td>Datong</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM₁₀</td>
<td>3,320</td>
<td>3,486</td>
<td>3,660</td>
<td>3,843</td>
<td>4,035</td>
</tr>
<tr>
<td>SO₂</td>
<td>805</td>
<td>846</td>
<td>888</td>
<td>932</td>
<td>979</td>
</tr>
<tr>
<td>NOₓ</td>
<td>883</td>
<td>926</td>
<td>973</td>
<td>1,021</td>
<td>1,072</td>
</tr>
<tr>
<td>Yangquan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM₁₀</td>
<td>2,572</td>
<td>2,701</td>
<td>2,836</td>
<td>2,978</td>
<td>3,127</td>
</tr>
<tr>
<td>SO₂</td>
<td>641</td>
<td>674</td>
<td>707</td>
<td>743</td>
<td>780</td>
</tr>
<tr>
<td>NOₓ</td>
<td>673</td>
<td>707</td>
<td>742</td>
<td>779</td>
<td>818</td>
</tr>
</tbody>
</table>

PM₁₀ = particulate matter of less than 10 microns diameter, NOₓ = nitrogen oxide, SO₂ = sulfur dioxide.
Source: Independent Evaluation Mission findings.

C. Results of Economic and Financial Reevaluation

Table A6.7: Financial Internal Rate of Return (Taiyuan Coal Gasification Plant) (RMB million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Cost</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Total Cost</th>
<th>Revenues Without VAT and Sales Tax</th>
<th>Income Tax</th>
<th>Revenues After Income Tax</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>39</td>
<td>39</td>
<td></td>
<td>39</td>
<td>262</td>
<td>(39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>134</td>
<td>134</td>
<td></td>
<td>134</td>
<td>262</td>
<td>(134)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>646</td>
<td>646</td>
<td></td>
<td>646</td>
<td>262</td>
<td>(646)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>313</td>
<td>91</td>
<td>109</td>
<td>513</td>
<td>262</td>
<td>262</td>
<td>(251)</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>131</td>
<td>692</td>
<td>823</td>
<td>888</td>
<td>22</td>
<td>1,047</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>158</td>
<td>786</td>
<td>944</td>
<td>1,069</td>
<td>22</td>
<td>1,071</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>194</td>
<td>765</td>
<td>959</td>
<td>1,098</td>
<td>27</td>
<td>1,194</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>149</td>
<td>875</td>
<td>1,024</td>
<td>1,250</td>
<td>56</td>
<td>1,213</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,253</td>
<td>40</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>149</td>
<td>925</td>
<td>1,075</td>
<td>1,268</td>
<td>45</td>
<td>1,223</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>(113)</td>
<td>149</td>
<td>925</td>
<td>961</td>
<td>1,268</td>
<td>45</td>
<td>262</td>
<td></td>
</tr>
</tbody>
</table>

FIRR = financial internal rate of return, VAT = value-added tax.
Source: Independent Evaluation Mission estimates.
Table A6.8: Financial Internal Rate of Return (Datong District Heating Project)
(RMB million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Cost</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Total Cost</th>
<th>Revenues without VAT and Sales Tax</th>
<th>Income Tax</th>
<th>Revenues After Income Tax</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>38</td>
<td></td>
<td>38</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td>(38)</td>
</tr>
<tr>
<td>2002</td>
<td>58</td>
<td></td>
<td>58</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
<td>(58)</td>
</tr>
<tr>
<td>2003</td>
<td>71</td>
<td></td>
<td>71</td>
<td>71</td>
<td></td>
<td></td>
<td></td>
<td>(71)</td>
</tr>
<tr>
<td>2004</td>
<td>108</td>
<td>38</td>
<td>14</td>
<td>160</td>
<td>28</td>
<td>-</td>
<td>28</td>
<td>(132)</td>
</tr>
<tr>
<td>2005</td>
<td>108</td>
<td>43</td>
<td>37</td>
<td>188</td>
<td>69</td>
<td>-</td>
<td>69</td>
<td>(119)</td>
</tr>
<tr>
<td>2006</td>
<td>49</td>
<td>88</td>
<td>136</td>
<td>136</td>
<td>136</td>
<td>-</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>46</td>
<td>84</td>
<td>130</td>
<td>130</td>
<td>130</td>
<td>-</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>122</td>
<td>122</td>
<td>-</td>
<td>122</td>
<td>(1)</td>
</tr>
<tr>
<td>2009</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>140</td>
<td>140</td>
<td>-</td>
<td>140</td>
<td>17</td>
</tr>
<tr>
<td>2010</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>44</td>
<td>79</td>
<td>123</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>(38)</td>
<td>44</td>
<td>79</td>
<td>84</td>
<td>171</td>
<td>10</td>
<td>161</td>
<td>77</td>
</tr>
</tbody>
</table>

FIRR (Before Tax) = 5.1%
FIRR (After Tax) = 3.5%

FIRR = financial internal rate of return, VAT = value-added tax.
Source: Independent Evaluation Mission estimates.
Table A6.9: Financial Internal Rate of Return (Yangquan Subproject)
(RMB million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Cost</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Total Cost</th>
<th>Revenues without VAT and Sales Tax</th>
<th>Income Tax</th>
<th>Revenues After Income Tax</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>15</td>
<td></td>
<td>15</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>(15)</td>
</tr>
<tr>
<td>2002</td>
<td>82</td>
<td></td>
<td>82</td>
<td>82</td>
<td></td>
<td></td>
<td></td>
<td>(82)</td>
</tr>
<tr>
<td>2003</td>
<td>101</td>
<td></td>
<td>101</td>
<td>101</td>
<td></td>
<td></td>
<td></td>
<td>(101)</td>
</tr>
<tr>
<td>2004</td>
<td>22</td>
<td></td>
<td>22</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td>(22)</td>
</tr>
<tr>
<td>2005</td>
<td>25</td>
<td>4</td>
<td>4</td>
<td>33</td>
<td>18</td>
<td>-</td>
<td>18</td>
<td>(15)</td>
</tr>
<tr>
<td>2006</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>23</td>
<td>1</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>2007</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>28</td>
<td>2</td>
<td>25</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2009</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2010</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2012</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2013</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2015</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2016</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2017</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2018</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2019</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2020</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2021</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2022</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2023</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2024</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2025</td>
<td>(25)</td>
<td>1</td>
<td>5</td>
<td>(18)</td>
<td>25</td>
<td>2</td>
<td>23</td>
<td>41</td>
</tr>
</tbody>
</table>

FIRR (Before Tax) = 4.05%
FIRR (After Tax) = 3.12%

FIRR = financial internal rate of return, VAT = value-added tax.
Source: Independent Evaluation Mission estimates.
Table A6.10: Economic Internal Rate of Return (Taiyuan Coal Gasification Plant)  
(RMB million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Cost</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Total Cost</th>
<th>Economic Benefit</th>
<th>Local Environmental Benefit</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>41</td>
<td>41</td>
<td></td>
<td>82</td>
<td>(41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>140</td>
<td>140</td>
<td></td>
<td>280</td>
<td>(140)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>664</td>
<td>664</td>
<td></td>
<td>1328</td>
<td>124</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>320</td>
<td>87</td>
<td>113</td>
<td>521</td>
<td>311</td>
<td>10</td>
<td>(200)</td>
</tr>
<tr>
<td>2005</td>
<td>125</td>
<td>97</td>
<td>222</td>
<td>344</td>
<td>915</td>
<td>43</td>
<td>736</td>
</tr>
<tr>
<td>2006</td>
<td>151</td>
<td>908</td>
<td>1,059</td>
<td>1,210</td>
<td>1,089</td>
<td>57</td>
<td>87</td>
</tr>
<tr>
<td>2007</td>
<td>185</td>
<td>949</td>
<td>1,134</td>
<td>1,271</td>
<td>1,119</td>
<td>63</td>
<td>48</td>
</tr>
<tr>
<td>2008</td>
<td>143</td>
<td>1,020</td>
<td>1,163</td>
<td>1,286</td>
<td>1,268</td>
<td>60</td>
<td>165</td>
</tr>
<tr>
<td>2009</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,271</td>
<td>1,271</td>
<td>66</td>
<td>196</td>
</tr>
<tr>
<td>2010</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2011</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2012</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2013</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2014</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2015</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2016</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2017</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2018</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2019</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2020</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2021</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2022</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2023</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2024</td>
<td>143</td>
<td>998</td>
<td>1,141</td>
<td>1,292</td>
<td>1,292</td>
<td>73</td>
<td>224</td>
</tr>
<tr>
<td>2025</td>
<td>(117)</td>
<td>143</td>
<td>998</td>
<td>1,105</td>
<td>1,292</td>
<td>145</td>
<td>412</td>
</tr>
</tbody>
</table>

EIRR (Without Env. Benefit) = 14.6%
EIRR (With Local Env. Benefit) = 20.7%

EIRR = economic internal rate of return, Env. = environmental.
Source: Independent Evaluation Mission estimates.
Table A6.11: Economic Internal Rate of Return (Datong District Heating Project)
(RMB million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Cost</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Total Cost</th>
<th>Economic Benefit</th>
<th>Local Environmental Benefit</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>41</td>
<td>41</td>
<td></td>
<td>41</td>
<td>(41)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>60</td>
<td>60</td>
<td></td>
<td>60</td>
<td>(60)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>71</td>
<td>71</td>
<td></td>
<td>71</td>
<td>(71)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>110</td>
<td>42</td>
<td>14</td>
<td>166</td>
<td>165</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>2005</td>
<td>113</td>
<td>48</td>
<td>36</td>
<td>197</td>
<td>98</td>
<td>12</td>
<td>(87)</td>
</tr>
<tr>
<td>2006</td>
<td>54</td>
<td>85</td>
<td>139</td>
<td>140</td>
<td>25</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>52</td>
<td>81</td>
<td>133</td>
<td>139</td>
<td>26</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>29</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>32</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>49</td>
<td>77</td>
<td>173</td>
<td>173</td>
<td>32</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>34</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>35</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>37</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>39</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>41</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>43</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>45</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>47</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>50</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>52</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>55</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>58</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>49</td>
<td>77</td>
<td>126</td>
<td>173</td>
<td>60</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>49</td>
<td>77</td>
<td>86</td>
<td>173</td>
<td>64</td>
<td>151</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>(40)</td>
<td>49</td>
<td>77</td>
<td>86</td>
<td>173</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EIRR (Without Env. Benefit) = 11.2%
EIRR (With Local Env. Benefit) = 18.9%

EIRR = economic internal rate of return, Env. = environmental.
Source: Independent Evaluation Mission estimates.
### Table A6.12: Economic Internal Rate of Return (Yangquan Subproject)
(RMB million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Cost</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Total Cost</th>
<th>Economic Benefit</th>
<th>Local Env. Benefit</th>
<th>Net Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>17</td>
<td></td>
<td></td>
<td>17</td>
<td>(17)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>88</td>
<td></td>
<td></td>
<td>88</td>
<td>(88)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>101</td>
<td></td>
<td></td>
<td>101</td>
<td>(101)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>23</td>
<td>-</td>
<td>-</td>
<td>23</td>
<td>61</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>2005</td>
<td>25</td>
<td>4</td>
<td>7</td>
<td>37</td>
<td>37</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2006</td>
<td>4</td>
<td>9</td>
<td>14</td>
<td>31</td>
<td>5</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>3</td>
<td>11</td>
<td>14</td>
<td>36</td>
<td>7</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>7</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>8</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>8</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>9</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>9</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>10</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>10</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>11</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>11</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>12</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>12</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>13</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>13</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>14</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>15</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>16</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td>32</td>
<td>16</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>(25)</td>
<td>2</td>
<td>10</td>
<td>(14)</td>
<td>32</td>
<td>17</td>
<td>63</td>
</tr>
</tbody>
</table>

EIRR (revenues as per sales price) = 7.8%
EIRR (revenue stream based on proxy WTP) = 12.6%
EIRR (revenue stream as per proxy WTP + local environmental benefits) = 16.2%

EIRR = economic internal rate of return, Env. = environmental, WTP = willingness to pay.
Source: Independent Evaluation Mission estimates.
PRICING OF ENERGY AND UTILITY SERVICES

A. Water Pricing

1. Diminishing government subsidies for water supply began to impair water operations and water infrastructure development by the early 1990s and the Government of the PRC initiated water sector reforms. The National Guidelines on Water Tariffs (NGWT), released by the National Development and Reform Commission (NDRC) in 1998, were an integral part of the reform agenda. The NGWT required the water supply companies to set water tariffs on the principles of (i) full cost recovery, (ii) earning a reasonable profit, (iii) encouraging water conservation, and (iv) social equity. The NGWT also provides for conditions on when to adjust water tariffs, as well as how they should be structured and computed. The provincial, city, and county governments are responsible for setting tariffs. No approval is required from the central government, although it must be kept informed of the tariff regime.

2. The other key elements of the water pricing policy are (i) different water tariffs for the different customer categories, i.e., households and public, commercial, and industrial buildings; (ii) to charge a basic lifeline tariff up to a certain level of monthly water consumption for all customer categories, and a higher tariff rate for incremental amounts of water use per month; and (iii) to install a separate water meter for each household for use in implementation of staged water tariffs. Figures A7.1a–c shows the rise in the average water supply tariffs for various customer categories in the three cities of Shanxi province.

![Figure A7.1a: Water Supply Tariff in Taiyuan (CNY/ton)](http://price.h2o-china.com/)

Source: http://price.h2o-china.com/
B. Electricity and Coal Pricing

3. The Government of the PRC issued a plan to reform electricity prices as far back as July 2003. However, progress in revising tariffs has been slow and certain customer categories, including low-income households and other consumers on lifeline rates, are still cross-subsidized. Nonetheless, information suggests that electricity tariffs for various customer categories in Shanxi province have been revised several times since 2000 (Figure A7.2).
4. Given that 80% of power generation capacity in PRC is coal-based, a link would be normally expected between coal and electricity prices. However, electricity prices remain controlled by the government while steam coal prices have become market-oriented since 2002 and are influenced by coal production levels, stock drawdown and build-ups, available railway capacity, and seasonal factors. The implications for the financial performance of power sector players is the principal reason that the Government of the PRC is seriously considering comprehensive reforms of the electricity pricing system. Coking coal prices are also market-oriented.

C. Pricing Issues for Taiyuan Subproject

5. For the ADB-supported Taiyuan Coal Gasification Plant (TCGP), the primary input is coking coal. Coking coal is produced by other divisions of the Taiyuan Coal Gasification Company (TCGC), which ensures adequate supplies to the TCGP. Therefore, the coking coal supply to TCGP is in fact an internal transfer within the Group, and the price at which coking coal is supplied to TCGP need not be entirely market-driven. In this particular case, coking coal price is decided by the Taiyuan Coal Gasification Group (TCGG) Board of Directors. The average price at which coking coal has been delivered to TCGP is as shown in Table A7.1.

6. Table A7.1 also shows the prices of various outputs of the TCGP. The prices of coke and chemical by-products (coal tar, sulfur ammonia and benzene) are market-determined and have been rising over the past few years. TCGP makes available coal gas to the Group's city gas distribution company, which in turn sells coal gas to the ultimate consumers. The internal gas sale price from TCGP to the gas distribution company is set by the Shanxi Pricing Bureau (SPB) because coal gas is considered a public good. The internal transfer price of coal gas was CNY0.265/cubic meter (m$^3$) since the subproject went into commercial operation in June 2005 until it was increased to CNY0.350/ m$^3$ in 2009. Although not entirely related to the ADB-supported
subproject, Table A7.1 also shows the average price at which gas is sold to households, public buildings, and commercial and industrial customers.

7. As per TCGG, the SPB normally increases city gas prices both for internal transfer and for retail sale once every five years. The most recent revision was in April 2003, when the tariff was raised from CNY0.50/m$^3$ to CNY0.75/m$^3$ for all customer categories except low-income households, which still continue to pay CNY0.50/m$^3$. This subsidy to low-income households is not compensated by any government. TCGC submitted another petition to the Taiyuan Price Bureau (TPB) in 2009 for further changes in tariffs of city gas prices. TPB will prepare the justification for the price increase, with inputs from TCGP, and submit the price increase proposals to the SPB for approval.

<table>
<thead>
<tr>
<th>Table A7.1: Input and Output Prices of Taiyuan Subproject</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input prices</strong></td>
</tr>
<tr>
<td>Coking Coal CNY/ton</td>
</tr>
<tr>
<td>Electricity CNY/kWh</td>
</tr>
<tr>
<td>Water CNY/ton</td>
</tr>
<tr>
<td><strong>Output prices</strong></td>
</tr>
<tr>
<td>Coke CNY/ton</td>
</tr>
<tr>
<td>Coal gas CNY/m$^3$</td>
</tr>
<tr>
<td>Coal-tar CNY/ton</td>
</tr>
<tr>
<td>Sulfur ammonia CNY/ton</td>
</tr>
<tr>
<td>Benzene CNY/ton</td>
</tr>
<tr>
<td><strong>Consumer prices</strong></td>
</tr>
<tr>
<td>Coal gas CNY/m$^3$</td>
</tr>
</tbody>
</table>

CNY = yuan, kWh = kilowatt-hour, m$^3$ = cubic meter.
Source: Taiyuan Coal Gasification Group and Taiyuan Coal Gasification Company.

D. Pricing Issues for Datong Subproject

8. For the ADB-supported DDHP subproject, the primary input is heat purchased from a CHP run by a power utility company. The utility company relies on steam coal for power and heat generation from the CHP. It increased heat sales price (excluding VAT) to DDHP from CNY7.61/gigajoule (GJ) in 2004 to CNY9.51/GJ in 2006. However, since it began operations in the 2004-05 heating season, DDHP’s heat sales price to its customers has remained unchanged at CNY18.58/square meters (m$^2$) of useful area. The same heating tariff is applicable to all customer categories. It is noteworthy that heat sales price in Datong city have remained unchanged since 1997.

9. DDHP’s financial performance has thus suffered. It has accumulated losses of CNY87.48 million during the 2006–2008 period. With the Datong city government subsidy to DDHP amounting to CNY61.31 million, DDHP’s net losses thus come to CNY26.17 million. This is equivalent to nearly CNY4/m$^2$ of useful area served.

10. DDHC has worked out a proposal for substantial heat sales price increases. It proposes that (i) seasonal household tariffs (excluding VAT) increase from CNY18.58/m$^2$ of useful area to CNY25.92/m$^2$ of useful area; and (ii) seasonal public buildings and commercial tariffs (excluding VAT) increase from CNY18.58/m$^2$ of useful area to about CNY30/m$^2$ of gross area. With gross area as a basis for computing the monthly bill, the proposed tariff rate increase is much more than 50%. The proposed tariff increase for public buildings and commercial sector customers has been approved by the SPB, while for tariff increase for households is expected to be approved before the start of the 2009–2010 heating season.
11. The Government of PRC’s Ministry of Construction heating tariff reform initiatives will require customers to begin being charged according to actual heat use rather than area of floor space. This change would send customers appropriate price signals to reduce wasteful use of heat. However, each customer’s premises would need to be fitted with individual heat meters. DDHC plans to introduce a consumption-based tariff system as well as improve its own supply-side efficiency. The measures DDHC contemplates include (i) investing in building retrofits (for heat/thermal energy savings), building heat pipe systems, and metering; (ii) simultaneously investing in supply-side efficiency such as renovation of old pipeline, including insulation, reducing water leakage from the network, reducing hot water discharge from heat exchange stations, and enhancing network heat accounting through appropriate metering; and (iii) claiming compensation from the central government, which is expected to set aside a certain budget to encourage reforms in centralized district heating.

E. Pricing Issues for Yangquan Subproject

12. The sales price of CBM/CMM gas to YCGC customers (Table A7.2) has remained unchanged from 1998. PGC and JGC also sell gas to their respective customers at the same price. The price at which the CBM/CMM gas is purchased from the coal mining companies has also remained unchanged since 1998 and is usually CNY1.0/m$^3$ or less. For CBM/CMM gas off-takes from Coal Mine No. 5, the price is fixed at CNY2.0/m$^3$ and has remained unchanged since the subproject components began commercial operations in 2006. However, the prices of utilities have increased since subproject began commercial operation in 2006. The Yangquan city Government subsidizes YCGC. The subsidy amount was fixed at CNY4.40 million in the late 1990s and has remained unchanged since then, except in 2006, when the subsidy amount paid was marginally higher (CNY5.5 million). PGC and JGC are not offered subsidies.

Table A7.2: CBM/CMM Gas Sales Price in Yangquan City

<table>
<thead>
<tr>
<th></th>
<th>Sales Price (CNY/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>0.55</td>
</tr>
<tr>
<td>Welfare organization</td>
<td>0.70</td>
</tr>
<tr>
<td>Commercial organization</td>
<td>0.85</td>
</tr>
<tr>
<td>Industry</td>
<td>0.50</td>
</tr>
<tr>
<td>Alumina plant</td>
<td>0.09</td>
</tr>
</tbody>
</table>

CBM/CMM = coal-bed-methane/coal-mine-methane, CNY/m$^3$ = yuan per cubic meter.

Source: YCGC, PGC, and JGC.

13. In 2008, YCGC forwarded a petition to the Yangquan Price Bureau for an increase of CBM/CMM retail sales prices. With the Yangquan city government preoccupied with fall-out of the global financial crisis, the petition made no progress. The YCGC intends to wait for an opportune time to forward another petition for a price rise of 30% or more.

14. The Yangquan Price Bureau also considers it necessary to revise CBM/CMM off-take prices by gas distribution companies on the basis of costs incurred by coal mining companies on CBM/CMM capture and storage. Given that the Yangquan government now prefers to prevent atmospheric release of methane gas, it is likely that coal mines with inherently relatively less methane accumulations will also be developed for CBM/CMM capture. This is expected to increase the gas supply companies’ overall weighted average off-take price of CBM/CMM gas, and provide further rationale for them to pursue their efforts to increase retail prices.
SULFUR DIOXIDE (SO\textsubscript{2}) EMISSIONS PERMIT TRADING

A. Taiyuan Experience in SO\textsubscript{2} Emissions Permit Trading

1. The Asian Development Bank’s (ADB) advisory technical assistance began in year 2001 and was completed by September 2003.\textsuperscript{1} A high-level Steering Committee was set up to guide and provide necessary high-level support during the implementation phase. An office for SO\textsubscript{2} emissions permit trading was also set up. The technical assistance had several key achievements: (i) a comprehensive training program was attended by personnel from 26 large enterprises engaged in coal, power, steel, chemicals and other mining industries\textsuperscript{2}; (ii) a broad framework was established for SO\textsubscript{2} emissions trading, with the Taiyuan city government passing the SO\textsubscript{2} Emission Trading Management Regulation in 1993 and approving operational guidelines for the setting up of a SO\textsubscript{2} emissions trading enterprise; (iii) suitable software was procured from the United States to help monitor trades; and (iv) appropriate simulations were carried out. These activities helped stakeholders enhance their environmental management capabilities in general and SO\textsubscript{2} emissions trading in particular.

2. SO\textsubscript{2} emissions trading simulations were conducted during 16–18 December 2002. The participants were (i) Taiyuan No.1 Thermal Power Plant; (ii) Taiyuan No. 2 Thermal Plant; (iii) Taiyuan Heavy Mechanical Corporation; and (iv) Taiyuan Gangyudongshan Thermal Company.

3. Since then, 17 enterprises have engaged in some SO\textsubscript{2} trading. The total SO\textsubscript{2} trades amount to 486 tons of SO\textsubscript{2}, with the commercial transactions valued at CNY744,500. Clearly, the SO\textsubscript{2} trading has not taken off. Two of the specific SO\textsubscript{2} trades are described in Table A8.1.

Table A8.1: SO\textsubscript{2} Trading Case – Between Enterprises

| TRADE 1 | A: Lanxing Chemical Company Limited  
| B: Jinxin Machine Corporation |
| --- | --- |
| Trading background | "B" replaced its normal coal-fired boiler by a circulating fluidized-bed boiler and equipped it with high-efficiency desulfurization equipment to reduce SO\textsubscript{2} emission. "A" acquired Taiyuan Chemical Industrial Company for CNY350 million. Taiyuan Chemical Industrial Company produced TDI; the capacity was 20,000 tons per year. "A" planned to upgrade the capacity to 30,000 tons per year and to hire more labor. However, as the Taiyuan Chemical Industrial Company was located in the most polluted area in the city, there was no room for additional SO\textsubscript{2} emission load in this area. "A" was not allowed to apply for additional SO\textsubscript{2} quota. |
| Trading amount | In 2004, "A" purchased 47 SO\textsubscript{2} quotas at a price of CNY1,500/ton, the total transaction amount was CNY70,500. |
| Remarks | This was the first SO\textsubscript{2} emissions permit trade in Taiyuan. |

| TRADE 2 | A: Taiyuan Xiaodian District Heating Company  
| B: many newly established companies |
| --- | --- |
| Trading background | In Taiyuan Xiaodian District, 54 steam boilers (with combined capacity of 130 tons per hour) were removed and replaced by one 100 tons/hour steam boiler. This resulted in SO\textsubscript{2} emissions reductions by about 572.89 tons. |
| Trading amount | B purchased 760 tons SO\textsubscript{2} in 18 trades. |
| Remarks | Most of companies purchased around 10 tons. The largest trade was 256 tons and the smallest 1 ton. |

Source: Taiyuan EPB.

\textsuperscript{1} ADB. 1999. *Technical Assistance for the People’s Republic of China for the Shanxi Air Quality Improvement*. Manila (TA 3325-PRC, for $700,000, approved on 7 December).

\textsuperscript{2} Of these enterprises, some have also carried out specific SO\textsubscript{2} emission permit trades.
B. **SO\textsubscript{2} Emission Targets and Environmental Capacity**

4. One outcome of the advisory technical assistance was the recognition by the Taiyuan EPB that the SO\textsubscript{2} emissions permit trading system is unlikely to succeed as long as total SO\textsubscript{2} emission levels remain above the estimated environmental capacity. For Taiyuan city, the environmental capacity is estimated by Taiyuan EPB at 100,000 tons.

5. In its quest to reintroduce permit trading at the earliest, the Taiyuan EPB has set an ambitious target for SO\textsubscript{2} emission reduction by 2010. This target is much more aggressive than the one set by the Shanxi provincial government (Table A8.2). For 2010, Taiyuan is the only city in Shanxi province for which the SO\textsubscript{2} emission target has been set at the environmental capacity level.

### Table A8.2: SO\textsubscript{2} Emission Targets for Major Cities of Shanxi Province

(tons/year)

<table>
<thead>
<tr>
<th></th>
<th>Taiyuan</th>
<th>Datong</th>
<th>Yangquan</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO\textsubscript{2} emission targets set by Provincial Government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- for 2005</td>
<td>184,500</td>
<td>164,000</td>
<td>NA</td>
</tr>
<tr>
<td>- for 2010</td>
<td>155,500</td>
<td>132,300</td>
<td>NA</td>
</tr>
<tr>
<td>SO\textsubscript{2} emission targets set by City Government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- for 2005</td>
<td>184,500</td>
<td>164,000</td>
<td>NA</td>
</tr>
<tr>
<td>- for 2010</td>
<td>100,000</td>
<td>132,300</td>
<td>NA</td>
</tr>
<tr>
<td>SO\textsubscript{2} Environmental Capacity</td>
<td>100,000</td>
<td>Below 132,300</td>
<td>NA</td>
</tr>
</tbody>
</table>

NA = not available, SO\textsubscript{2} = sulfur dioxide.

Sources: Taiyuan Environmental Protection Bureau and Datong Environmental Protection Bureau.
INDOOR AIR QUALITY

A. Indoor Air Quality Standards

1. The Ministry of Environmental Protection established national indoor air quality standards in 2002, as shown in Table A9. The standards took into account health impacts of continuous exposure to certain types of gases.

**Table A9: National Indoor Air Quality Standard (GB/T18883-2002)**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Limit</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh air flow</td>
<td>m³ per person</td>
<td>&gt;30 Minimum hourly value</td>
</tr>
<tr>
<td>SO₂</td>
<td>mg/m³</td>
<td>0.50 Maximum hourly average</td>
</tr>
<tr>
<td>NO₂</td>
<td>mg/m³</td>
<td>0.24 Maximum hourly average</td>
</tr>
<tr>
<td>CO</td>
<td>mg/m³</td>
<td>10 Maximum hourly average</td>
</tr>
<tr>
<td>CO₂</td>
<td>%</td>
<td>0.1 Maximum daily average</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>mg/m³</td>
<td>0.15 Maximum daily average</td>
</tr>
</tbody>
</table>

CO = carbon monoxide, CO₂ = carbon dioxide, mg/m³ = milligram per cubic meter, m³ = cubic meter, PM₁₀ = particulate matter of less than 10 microns diameter, NO₂ = nitrogen dioxide, SO₂ = sulfur dioxide.

Source: MEP, Government of the People’s Republic of China.

B. Findings on Indoor Air Quality with Coal- and Gas-Fired Cook-Stoves

2. No specific findings from Shanxi province on indoor air quality from use of coal-fired or gas-fired cook-stoves or boilers or other equipment are available. However, a survey of households in and around Beijing city indicates that with coal-fired cook-stoves, indoor concentration of SO₂ is several times the maximum allowable limit and, in some cases, even more than hundred times that when other fuels, such as liquefied petroleum gas or natural gas, are used.¹ When liquefied petroleum gas, coal gas, or natural gas are used, the CO and SO₂ concentrations remain within the stipulated national air quality standards, provided the stove quality is good².

---


A. Resettlement Issues

1. Resettlement issues associated with the project were addressed in accordance with the People’s Republic of China (PRC) laws and regulations. Land acquisition and resettlement began in 2002 and was completed by the end of 2005. Land acquisition costs totaled $1.77 million. Compensation was paid before land acquisition and dispossession on assets. The project management office and the concerned local government bureaus adopted a consultative process through which the affected people were kept fully informed about the project, resettlement policies and options, compensation measures, grievance procedures, and legal rights. A grievance redressal mechanism was also established for each subproject.

1. Taiyuan Subproject

2. About 1.4 hectares (ha) of land was acquired, comprising 0.67 ha of waste land from a village, and 0.73 ha of construction land from the Taiyuan Textile Corporation. The total compensation was CNY3 million for the waste land and CNY5.05 million for the construction land.

3. The village invested compensation from sale of waste land in a furniture processing factory to generate employment and income.

4. At the time of acquisition, the construction land only had one warehouse of the Taiyuan Textile Corporation. The main plant had been shut down, according to the government’s policies at the time. No jobs were lost due to the acquisition of this land.

2. Datong Subproject

5. Although the subproject budgeted for compensation of CNY8.26 million, actual compensation was CNY4.18 million. The reduction is due to the fact that the cost of acquiring land to locate two peak load boilers that were part of the original technical design but were later removed was not incurred. Approval was obtained instead to purchase heat from a combined heat and power (CHP). Land was acquired for temporary use only for pipeline laying. The affected households and enterprises were compensated as per the PRC’s laws and regulations.

3. Yangquan Subproject

6. A total of about 2.8 ha of cultivation land was acquired in Pingding county, for which CNY2.44 million was paid as compensation. The actual land acquisition and compensation paid were much below the estimates made at appraisal (4.57 ha, CNY4.3 million). The land compensation funds were used partly to set up a furniture processing factory and partly to finance new accommodation for senior citizens. A total of 50 persons, including 15 women, were displaced and resettled with a suitable means of livelihood.
Main Iron and Steel Manufacturing Units & Subsidiaries

Baosteel Co., Ltd. > Overview > Main Iron and Steel Manufacturing Units & Subsidiaries

Main Iron and Steel Manufacturing Units

Iron and Steel plant directly under

Baoshan Iron & Steel Co., Ltd. Tube, Pipe and Bar Business Unit

Baosteel Group Corporation | Sitemap | Contact Us | 中文 | ENGLISH

Legal Notice | Links | Anti-bribe Administration Office

Copyright 2004-2012
ICP 05031718 Baosteel Co., Ltd.
Main Iron and Steel Manufacturing Units & Subsidiaries

Baosteel Co., Ltd. > Overview > Main Iron and Steel Manufacturing Units & Subsidiaries

Main Iron and Steel Manufacturing Units

Shanghai Meishan Iron & Steel Co., Ltd.
Address: Zhong Hua Men Wai, Xinjian, Nanjing, Jiangsu Province
Post code: 210039
Tel: (0086 25) 86363114   Fax: (0086 25) 86701540

Baosteel-NSC/Arcelor Automotive Steel Sheets Co., Ltd
Address: Weiwu road, cold rolling building, Baosteel plant
Post code: 201900
Tel: (0086 21) 26643519   Fax: (0086 21) 26643880

Yantai Lubao Steel Pipe Co., Ltd.
Website
Add: No. 186, Xingfu Middle Road, Yantai, China
Post code: 264002
Tel: (0086 635) 6310555   Fax: (0086 635) 6310631
Baosteel Huangshi Coated and Galvanized Sheet Co., Ltd.
Address: 18, Hangzhou Xi road, Huangshi city, Hubei province
Post code: 435003
Tel: (0086 714)6366725 Fax: (0086 714)6351726

Shanghai Baosteel International Economic & Trading Co., Ltd.
Address: Baosteel Tower, 370 Pu Dian Road, Shanghai
Post Code: 200122
TEL: (0086 21)58350000 FAX: (0086 21)50623344

Shanghai Baosight Software Co., Ltd.
Website
Address: 515 Guoshoujing Road, Shanghai Pudong Zhangjiang High-Tech Park
Post code:201203
Tel: (0086 21)50800830 Fax: (0086 21)50800701

Shanghai Baosteel Chemical Co., Ltd.
Website
Address: Baosteel Latitude 3 Road, Shengqiao, Baoshan District, Shanghai
Post code: 200942
Tel: (0086 21)25648409 Fax: (0086 21)56196149

Nantong Baosteel Iron & Steel Co., Ltd.
Address: 161 Northeast Tangzhabe Rd, Nantong
Zip code: 226002
Tel: (0086 513)85549470 Fax: (0086 513)85545771
Folio 85

**Website**
Address: 515 Guoshoujing Road, Shanghai Pudong Zhangjiang High-Tech Park
Post code: 201203
Tel: (0086 21) 50800830  Fax: (0086 21) 50800701

**Shanghai Baosteel Chemical Co., Ltd.**
Website
Address: Baosteel Latitude 3 Road, Shengqiao, Baoshan District, Shanghai
Post code: 200942
Tel: (0086 21) 26648409  Fax: (0086 21) 56196149

**Nantong Baosteel Iron & Steel Co., Ltd.**
Address: 161 Northeast Tangzhaihe Rd, Nantong
Zip code: 226002
Tel: (0086 513) 85549470  Fax: (0086 513) 85545771

**Yantai Baosteel Steel Pipe Co., Ltd.**
Website
Add: No.1030, Yongsda Street, Fushan District, Yantai, China
Post code: 265500
Tel: (0086 535) 6310655  Fax: (0086 535) 6310631
<table>
<thead>
<tr>
<th>Main Iron and Steel Manufacturing Units &amp; Subsidiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOWA TRADING CO., LTD.</td>
</tr>
<tr>
<td>Add: Howa Bldg., 15 Banchi, Ichiban-Cho,Chiyoda-Ku,Tokyo JAPAN</td>
</tr>
<tr>
<td>Tel: 0081-3-32379121</td>
</tr>
<tr>
<td>Fax: 0081-3-3237-9203</td>
</tr>
<tr>
<td>Web: <a href="http://www.howa-trading.com">www.howa-trading.com</a></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>BAOSTEEL EUROPE GMBH</td>
</tr>
<tr>
<td>Add: BAOSTEEL EUROPE GMBH NONNENSTIEG 1 20149 HAMBURG GERMANY</td>
</tr>
<tr>
<td>Tel: 0049-40-41994101</td>
</tr>
<tr>
<td>Fax: 0049-40-41994120</td>
</tr>
<tr>
<td>Web: <a href="http://www.baosteel.eu">www.baosteel.eu</a></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>BAOSTEEL AMERICA INC.</td>
</tr>
<tr>
<td>Add: 85 Chestnut Ridge Road Montvale NJ 07645</td>
</tr>
<tr>
<td>Tel: 1-201-307-3356</td>
</tr>
</tbody>
</table>
BAOSTEEL DO BRASIL LTDA
Add: Rua da Assembleia 10 Sala 4113, Centro CEP 20.119-900 Rio de Janeiro RJ, BRASIL
Tel: 0055-21-25311363
Fax: 0055-21-25310299

BAO-ISLAND ENTERPRISES LIMITED
Add: 20/F, Harbour Centre, 2 Harbour Road, HONGKONG
Tel: 00852-28133327
Fax: 00852-28700001

BAO-TRANS ENTERPRISES LTD.
Add: Room 2801, 28/F, Office Tower, Convention Plaza, 1 Harbour Road, Wan chai, HONGKONG
Tel: 00852-25265765
Fax: 00852-25265764

BAOVALE MINERACAO S.A.
Add: Rua da Assembleia 10 Sala 4113, Centro CEP 20.119-900 Rio de Janeiro RJ, BRASIL
Tel: 0055-21-25311363
Fax: 0055-21-25310299
### IV. SCOPE OF FINANCIAL STATEMENT CONSOLIDATION

#### 1. SUBSIDIARIES (INCLUDING SUBSIDIARIES INDIRECTLY HELD SUBSIDIARIES)

The details of subsidiaries are as follows:

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Type of incorporation and registration</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Principal activities</th>
<th>Other items constituting net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting rights (%)</th>
<th>Consolidation Y/N</th>
<th>Minority shareholders</th>
<th>Amount in minority interests available for reduction of loss share of less minority interest</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ma Steel (HK) Ltd</td>
<td>Subsidiary</td>
<td>Hong Kong</td>
<td>Vicky Leung</td>
<td>Manufacturing</td>
<td>Production and sale of steel products, processing of motor vehicle spare parts and sale of construction materials and chemical products (except dangerous products)</td>
<td>10,003,308</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>10,003,308</td>
<td>10,003,308</td>
<td>---</td>
</tr>
<tr>
<td>Ma Steel (Chizhou)</td>
<td>Subsidiary</td>
<td>Anhui, PRC</td>
<td>Zhou Jiman</td>
<td>Manufacturing</td>
<td>Production, processing and sale of steel plates, steel wires and steel sections; and provision of storage and after-sale services</td>
<td>36,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>0,118,828</td>
<td>0,118,828</td>
<td>---</td>
</tr>
<tr>
<td>Anhui Masteel K. Wah</td>
<td>Joint venture</td>
<td>Anhui, PRC</td>
<td>Xu Ruilin</td>
<td>Manufacturing</td>
<td>Production, sale and transportation of slag products and provision of related consultation services</td>
<td>8,389,000</td>
<td>70</td>
<td>70</td>
<td>Y</td>
<td>41,204,631</td>
<td>41,204,631</td>
<td>---</td>
</tr>
<tr>
<td>Design &amp; Research Institute of Maanshan Iron &amp; Steel Corporation</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Fang Zhengfang</td>
<td>Service industry</td>
<td>Planning and design of metallurgical construction and environmental protection projects, construction supervision and contract service</td>
<td>7,300,000</td>
<td>57.50</td>
<td>100</td>
<td>Y</td>
<td>1,691,014</td>
<td>1,691,014</td>
<td>---</td>
</tr>
<tr>
<td>MG Control Technique Company Limited</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Yan Hua</td>
<td>Manufacturing</td>
<td>Design of automation systems, purchase, installation and repair of automation, computers and communication systems</td>
<td>12,300,000</td>
<td>97.50</td>
<td>100</td>
<td>Y</td>
<td>50,214,718</td>
<td>50,214,718</td>
<td>---</td>
</tr>
<tr>
<td>Ma Steel (Wuhu) Processing and Distribution Co., Ltd</td>
<td>Joint venture</td>
<td>Anhui, PRC</td>
<td>Zhu Jinnan</td>
<td>Manufacturing</td>
<td>Production and sale of metallic products; processing of motor vehicle spare parts and sale of construction materials and chemical products (except dangerous products)</td>
<td>35,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>41,204,631</td>
<td>41,204,631</td>
<td>---</td>
</tr>
<tr>
<td>Anhui Masteel K.Wah New Building Materials Co., Ltd (Anhui Masteel K.Wah)</td>
<td>Joint venture</td>
<td>Anhui, PRC</td>
<td>Xu Ruilin</td>
<td>Manufacturing</td>
<td>Production, sale and transportation of slag products and provision of related consultation services</td>
<td>8,389,000</td>
<td>70</td>
<td>70</td>
<td>Y</td>
<td>41,204,631</td>
<td>41,204,631</td>
<td>---</td>
</tr>
<tr>
<td>Ma Steel International Trade and Economic Corporation (Ma Steel International Trade Corp)</td>
<td>Public</td>
<td>Anhui, PRC</td>
<td>Lu Kecong</td>
<td>Trading</td>
<td>Import of machinery and raw materials and export of steel products</td>
<td>50,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
### IV. SCOPE OF FINANCIAL STATEMENT CONSOLIDATION (CONTINUED)

#### 1. SUBSIDIARIES (INCLUDING SUBSIDIARIES INDIRECTLY HELD SUBSIDIARIES) (CONTINUED)

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business Type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items contribute net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting right (%)</th>
<th>Cons–olid–ation Y/N</th>
<th>Amount in minority interests available for reduction share of loss of minority interest</th>
<th>Minority shareholders</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ma Steel (Guangzhou) Processing and Distribution Co., Ltd. (“Ma Steel (Guangzhou)”</td>
<td>Sino–foreign joint venture</td>
<td>Guangdong, PRC</td>
<td>Zhu Jinnan</td>
<td>Manufacturing</td>
<td>RMB 120,000,000</td>
<td>Production, processing and sale of steel plates, steel wires and steel sections and provision of storage, transportation and after-sale services</td>
<td>711585054</td>
<td>RMB 80,000,000</td>
<td>–</td>
<td>66.7</td>
<td>66.7</td>
<td>Y</td>
<td>60,736,445</td>
<td>60,736,445</td>
<td></td>
</tr>
<tr>
<td>Maanshan Iron &amp; Steel (HK) Limited (“Ma Steel (HK)”)</td>
<td>Wholly-owned subsidiary</td>
<td>Hong Kong, PRC</td>
<td>N/A</td>
<td>Manufacturing</td>
<td>HKD 4,800,000</td>
<td>Trading of steel and iron ores, and provision of steel trading agency services and transportation services</td>
<td>164</td>
<td>HKD 4,800,000</td>
<td>–</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Anhui Masteel Holly Industrial Co., Ltd. (“Holly Industrial”)</td>
<td>Taiwan, HK, Macau and PRC joint venture</td>
<td>Anhui, PRC</td>
<td>Qiu Xiaogen</td>
<td>Manufacturing</td>
<td>RMB 30,000,000</td>
<td>Production and sale of packing materials for steel and other products; provision of on-site packing service, research, development, production and sale of vehicle spare parts, electronic engineering products, and macromolecular compound materials; processing and sale of metal products</td>
<td>780673165</td>
<td>RMB 30,000,000</td>
<td>–</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Maanshan Masteel Huayang Equipment Inspection &amp; Engineering Co., Ltd. (“Huayang Equipment”)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Wu Haitong</td>
<td>Manufacturing</td>
<td>RMB 1,000,000</td>
<td>Provision of equipment inspection, technical, consultancy services, equipment services and equipment inspection work</td>
<td>771138888</td>
<td>RMB 1,000,000</td>
<td>–</td>
<td>90</td>
<td>90</td>
<td>Y</td>
<td>691,240</td>
<td>691,240</td>
<td></td>
</tr>
<tr>
<td>Ma Steel (Jinhua) Processing and Distribution Co., Ltd. (“Ma Steel (Jinhua)”</td>
<td>Sino–foreign joint venture</td>
<td>Zhejiang, PRC</td>
<td>Zhu Jinnan</td>
<td>Manufacturing</td>
<td>RMB 120,000,000</td>
<td>Production, processing and sale of steel plates, steel wires and steel sections and provision of storage, transportation and after-sale services</td>
<td>771138077</td>
<td>RMB 80,000,000</td>
<td>–</td>
<td>75</td>
<td>75</td>
<td>Y</td>
<td>30,240,165</td>
<td>30,240,165</td>
<td></td>
</tr>
</tbody>
</table>
### IV. SCOPE OF FINANCIAL STATEMENT CONSOLIDATION (CONTINUED)

#### 1. SUBSIDIARIES (INCLUDING SUBSIDIARIES INDIRECTLY HELD SUBSIDIARIES) (CONTINUED)

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items constitute net investment</th>
<th>Percentage of equity (%</th>
<th>Percentage of voting right (%)</th>
<th>Cons–olid–ation Y/N</th>
<th>Minority shareholders</th>
<th>Amount in minority interests available for reduction of loss of minority interest</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG Trading and Development GmbH (“MG Trading”)</td>
<td>Wholly-owned subsidiary</td>
<td>Germany</td>
<td>N/A</td>
<td>Trading</td>
<td>EUR 153,388</td>
<td>Trading of equipment, iron and steel products and provision of technology services</td>
<td>N/A</td>
<td>EUR 153,388</td>
<td>–</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Maanshan Iron and Steel (Australia) Proprietary Limited (“Ma Steel (Australia))</td>
<td>Limited liability</td>
<td>Australia</td>
<td>N/A</td>
<td>Mining production and sales</td>
<td>AUD 21,737,900</td>
<td>Production and sale of iron ore through an unincorporated joint venture</td>
<td>N/A</td>
<td>AUD 21,737,900</td>
<td>–</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Ma Steel (Hefei) Iron &amp; Steel Co., Ltd. (“Ma Steel (Hefei)”</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Qin Changrong</td>
<td>Manufacturing</td>
<td>RMB 500,000,000</td>
<td>Smelting and processing of ferrous metals and sale of the products and by-products, production and sale of coke, coke chemical products and power supply, processing of iron and steel products and production and sales of metallic products, iron and steel technological services and related businesses; dock operation, storage, transportation, construction services, leasing properties, and provision of construction services and repair and maintenance of used and repair and maintenance of used</td>
<td>780957175</td>
<td>RMB 500,000,000</td>
<td>–</td>
<td>71</td>
<td>71</td>
<td>Y</td>
<td>359,669,035</td>
<td>359,669,035</td>
<td>(i)</td>
</tr>
<tr>
<td>Ma Steel (Hefei) Processing and Distribution Co., Ltd (“Masteel (Hefei) Processing”)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Zhu Jinnan</td>
<td>Manufacturing</td>
<td>RMB 120,000,000</td>
<td>Processing and sale of hot rolled and cold rolled steel products for vehicles, home appliances and engineering industries, and construction steel framework products; provision of storage and transportation services</td>
<td>780979746</td>
<td>RMB 120,000,000</td>
<td>–</td>
<td>89</td>
<td>89</td>
<td>Y</td>
<td>19,376,154</td>
<td>19,376,154</td>
<td>(i)</td>
</tr>
<tr>
<td>Ma Steel (Hefei) Material Technique Co., Ltd. (“Wuhu Technique”)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Zhu Jinnan</td>
<td>Manufacturing</td>
<td>RMB 150,000,000</td>
<td>Provision of storage and transportation services of automobiles related metal components, trading and processing steel products, provision of related consultancy services</td>
<td>817208718</td>
<td>RMB 150,000,000</td>
<td>–</td>
<td>71</td>
<td>71</td>
<td>Y</td>
<td>47,023,480</td>
<td>47,023,480</td>
<td>(i)</td>
</tr>
</tbody>
</table>
### IV. SCOPE OF FINANCIAL STATEMENT CONSOLIDATION (CONTINUED)

#### 1. SUBSIDIARIES (INCLUDING SUBSIDIARIES INDIRECTLY HELD SUBSIDIARIES) (CONTINUED)

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business Type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items constitute net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting right (%)</th>
<th>Consolidation Y/N</th>
<th>Minority shareholders Amount in minority interests available for reduction share of loss of minority interest</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ma Steel United Electric Steel Roller Co. Ltd.</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Wang Xiaoguang</td>
<td>Manufacturing</td>
<td>USD 30,000,000</td>
<td>Developing, processing, manufacturing and sales of steel rollers, provision of after-sales services and technical consultancy services</td>
<td>86076037-7</td>
<td>USD 15,000,000</td>
<td>USD 15,000,000</td>
<td>51</td>
<td>51</td>
<td>Y</td>
<td>62,018,081 62,018,081</td>
<td></td>
</tr>
<tr>
<td>Maanshan Used Vehicle Trading Centre Co. Ltd.</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Zheng Minzhu</td>
<td>Trading</td>
<td>RMB 500,000</td>
<td>Trading of used automobiles, sale of automobiles and accessories, provision of after-sales services and leasing properties</td>
<td>69423819-4</td>
<td>RMB 500,000</td>
<td>RMB 500,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anhui Jiangnan Iron and Steel Material Quality Monitoring and Testing Co., Ltd. (Jiangnan Iron and Steel)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Zhang Mingru</td>
<td>Manufacturing</td>
<td>RMB 1,000,000</td>
<td>Monitoring and testing of steel materials and products, titanium alloy, thermostatic materials products, raw materials and tools; services of physical and chemical inspection technique, appraisal, appraisal and repair of physical and chemical devices.</td>
<td>69570971-X</td>
<td>RMB 1,000,000</td>
<td>RMB 1,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maanshan Masteel Electric Repair Co., Ltd. (Masteel Electric Repair)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Xu Yulin</td>
<td>Manufacturing</td>
<td>RMB 10,000,000</td>
<td>Technological service in energy saving, environment protection and construction projects, repair of electric facilities and machines</td>
<td>57571955-0</td>
<td>RMB 10,000,000</td>
<td>RMB 10,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td></td>
<td>(i)</td>
</tr>
<tr>
<td>Maanshan Masteel Steel Structure Co., Ltd. (Masteel Steel Structure)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Zhang Maohan</td>
<td>Manufacturing</td>
<td>RMB 530,000,000</td>
<td>Production of high level building steel structure, bridge steel structure, customized machine, sale of metal and construction materials</td>
<td>57571523-4</td>
<td>RMB 530,000,000</td>
<td>RMB 530,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td></td>
<td>(i)</td>
</tr>
<tr>
<td>Maanshan Masteel Surface engineering Technology Co., Ltd. (Masteel Surface engineering)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Chen Jiajia</td>
<td>Manufacturing</td>
<td>RMB 270,000,000</td>
<td>Production, installation and repair of complete equipment and spare parts, application of surface engineering technology</td>
<td>57571800-5</td>
<td>RMB 270,000,000</td>
<td>RMB 270,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td></td>
<td>(i)</td>
</tr>
<tr>
<td>Maanshan Masteel Equipment Installation Engineering Co., Ltd. (Masteel Equipment Installer)</td>
<td>Limited liability</td>
<td>Anhui, PRC</td>
<td>Xia Heng</td>
<td>Manufacturing</td>
<td>RMB 185,000,000</td>
<td>Production, installation and repair of pressure pipelines, boiler and pressure container</td>
<td>57571843-5</td>
<td>RMB 185,000,000</td>
<td>RMB 185,000,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td></td>
<td>(i)</td>
</tr>
</tbody>
</table>
## IV. SCOPE OF FINANCIAL STATEMENT CONSOLIDATION (CONTINUED)

### 1. SUBSIDIARIES (INCLUDING SUBSIDIARIES INDIRECTLY HELD SUBSIDIARIES) (CONTINUED)

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business Type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items constitute net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting right (%)</th>
<th>Consolidation Y/N</th>
<th>Minority shareholders</th>
<th>Amount in minority interests available for reduction share of loss of minority interest</th>
<th>Note</th>
</tr>
</thead>
</table>
### IV. SCOPE OF FINANCIAL STATEMENT CONSOLIDATION (CONTINUED)

#### 1. SUBSIDIARIES (INCLUDING SUBSIDIARIES INDIRECTLY HELD SUBSIDIARIES) (CONTINUED)

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business Type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items constitute net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting right (%)</th>
<th>Consolidation Y/N</th>
<th>Minority shareholders</th>
<th>Amount in minority interests available for reduction of share of loss of minority interest</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maanshan Iron &amp; Steel Zhonglian Maritime Co., Ltd. (&quot;Zhonglian Maritime&quot;)</td>
<td>Limited liability</td>
<td>Anhui, PRC Yi Hua</td>
<td>Service industry</td>
<td>RMB 230,000,000</td>
<td>Domestic coastal, middle and lower reaches of the Yangtze River and Pearl River Delta</td>
<td>591523001-9</td>
<td>RMB 197,249,200</td>
<td>62</td>
<td>62</td>
<td>Y</td>
<td>96,249,200</td>
<td>96,249,200</td>
<td>[i]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Subsidiaries acquired not under common control

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business Type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items constitute net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting right (%)</th>
<th>Consolidation Y/N</th>
<th>Minority shareholders</th>
<th>Amount in minority interests available for reduction of share of loss of minority interest</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ma Steel (Yangzhou) Processing and Distribution Co., Ltd. (&quot;Masteel (Yangzhou) Processing&quot;)</td>
<td>Limited liability</td>
<td>Jiangsu, PRC Zhu Jinnan</td>
<td>Manufacturing</td>
<td>USD 20,000,000</td>
<td>Production, processing and sale of steel plates, steel wires and steel sections; provision of after-sale and storage services (except dangerous chemical products)</td>
<td>77012471-8</td>
<td>USD 20,000,000</td>
<td>71</td>
<td>71</td>
<td>Y</td>
<td>55,039,891</td>
<td>55,039,891</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business Type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items constitute net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting right (%)</th>
<th>Consolidation Y/N</th>
<th>Minority shareholders</th>
<th>Amount in minority interests available for reduction of share of loss of minority interest</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhui Chang Jiang Iron and Steel Co., Ltd. (&quot;Anhui Chang Jiang Iron and Steel&quot;)</td>
<td>Limited liability</td>
<td>Anhui, PRC Li Jianshe</td>
<td>Manufacturing</td>
<td>RMB 1,200,000,000</td>
<td>Production and sale of iron and steel products, trading of iron ore and scrap steel, import and export business</td>
<td>716604002-3</td>
<td>RMB 1,200,000,000</td>
<td>55</td>
<td>55</td>
<td>Y</td>
<td>1,034,827,516</td>
<td>1,034,827,516</td>
<td>[ii]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Subsidiaries acquired under common control

<table>
<thead>
<tr>
<th>Name of investee</th>
<th>Business Type</th>
<th>Place of incorporation and registration</th>
<th>Legal representative</th>
<th>Business nature</th>
<th>Registered capital</th>
<th>Principal activities</th>
<th>Organisation code</th>
<th>Paid-in capital as at year end</th>
<th>Other items constitute net investment</th>
<th>Percentage of equity (%)</th>
<th>Percentage of voting right (%)</th>
<th>Consolidation Y/N</th>
<th>Minority shareholders</th>
<th>Amount in minority interests available for reduction of share of loss of minority interest</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anhui Masteel Intelligent Stereoscopic Parking Equipments Company Limited (&quot;Masteel Auto-Parking&quot;)</td>
<td>Limited liability</td>
<td>Anhui, PRC Qiu Xiaogen</td>
<td>Manufacturing</td>
<td>USD 2,500,000</td>
<td>Development, production, and sales of vehicle automatic transmission product and related spare parts; provision of related design technique, equipment production and transportation services</td>
<td>78018434-7</td>
<td>USD 2,500,000</td>
<td>100</td>
<td>100</td>
<td>Y</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(i) The above subsidiaries were established during the current period.

(ii) During the current year, the Company acquired a 55% equity interest in Anhui Chang Jiang Iron and Steel at RMB1.234 billion as consideration. The detailed information was stated in Note VI.4.

(iii) As at 22 March 2011, the board of directors approved the resolution to inject capital of RMB1.42 billion, by two stages, to Masteel (Hefei). As at 31 December 2011, the capital injection was not completed.

#### 2. CHANGE IN THE SCOPE OF CONSOLIDATION

Except for the newly established subsidiaries during the current year and the statement in Note IV.4, the scope of financial statements consolidation is consistent with the previous year.
Opinions on Major Tasks in Deepening the Reform of Economic System 2010

(National Development and Reform Commission)

This year is a critical year when we continue to tackle with the international financial crisis and maintain steady and rapid economic development. The international and domestic economy has undergone profound adjustment and changes, which need to intensify the reform urgently in order to further break systemic and institutional barriers which restrain the restructuring of the economy and the transformation of the pattern of economic development, and to promote scientific development in a feasible manner. In light of the present situation of reform and development, the opinions on the major tasks in deepening the reform of economic system for 2010 are hereby put forward as follows:

I. Guiding thought and overall requirements

(i) Guiding thought. We must uphold the great banner of socialism with Chinese characteristics, and thoroughly implement the tenets of the 17th National Congress of the Communist Party of China, Third Plenary Session and Fourth Plenary Session of the 17th Central Committee of the Communist Party of China and the Central Economic Working Conference. ……

(ii) Overall requirements. We must combine the maintaining of economic growth and the adjustment of the economic structure together, and focus on systemic and institutional improvement to promote the transformation of the pattern of economic development……

II. Encouraging, supporting and guiding the development of non-public economy

(i) We should implement the policies and measures which aim to encourage and guide the healthy development of private investments, further remove systemic obstacles which restrain the development of private investments, support the investment of private capital to basic industry and infrastructure, public utilities, social undertakings, financial services and other sectors, and effectively stimulate vitality of the
investment in the market. (The National Development and Reform Commission (hereinafter referred to as the “NDRC”) should take the lead, and other relevant departments shall be responsible).

(ii) We should promote the withdrawal of the state-owned capital from the generally competitive industrial sectors in an appropriate manner, focus the investment of state-owned capital on important industries and key sectors, which relate to the national security and are vital to the national economy, and expand the market space for the development of non-public economy. (The State-owned Assets Supervision and Administration Commission (hereinafter referred to as the “SASAC”), the NDRC, and the Ministry of Industry and Information Technology (hereinafter referred to as the “MIIT”) should be responsible.)

(iii) We should continue to improve the policies on supporting small-sized enterprises, build sound credit guarantee system for small-sized enterprises, carry out pilot work on financial products innovation to support the financing of small-sized enterprises, and study and formulate government procurement policies on supporting the development of small-sized enterprises. (The MIIT, The People's Bank of China, the NDRC, the China Banking Regulatory Commission (hereinafter referred to as the “CBRC”), and the Ministry of Finance should be responsible.)

III. To deepen the reform of State-owned enterprises and monopolistic industries

(i) By focusing on pushing forward the bidirectional entrance between broadcasting and telecommunications, we should formulate pilot program for converging the three networks and conduct pilot work accordingly……

(ii) We should push forward the reform of the electricity system and complete the reform of the main-auxiliary separation in power grid enterprises……

(iii) We should push forward the reform of the management system in salt industry……

(iv) We should accelerate to turn large state-owned enterprises, especially central and parent enterprises, into stockholding corporations. And we should strengthen
supervision and administration of state-owned assets, and reinforce the construction of basic systems, such as the system of supervision and administration on state-owned assets overseas. (The SASAC should take the lead.)

IV. To deepen the reform of the prices of resource products and the charges for environmental protection

(i) We should issue implementation measures for adjusting the taxonomic structure of selling prices of electricity, and simplify the taxonomic structure of selling price of electricity.

(ii) We should push forward steadily the reform of water pricing, adopt the tiered pricing system for water supplied to residents in areas where conditions permitted, and push forward comprehensive reform of water conservation and prices for agricultural use. (The NDRC, the Ministry of Housing and Urban-Rural Development, the Ministry of Water Resources, and the Ministry of Finance should be responsible.)

(iii) We should push forward the system of sewage, garbage and medical waste treatment charges in urban areas in an all-around way.

V. To deepen the reform of the fiscal and taxation systems

(i) We should issue the plan on the reform of resource tax.

(ii) We should prepare the budgetary fund for central and local government.

(iii) We should build the system of statistical reports and revenue management on state-owned assets in administrative and public institutions. And we should improve the management system of submitting and using state-owned capital operating earnings by central enterprises. (The Ministry of Finance, the NDRC and the SASAC should be responsible.)

VI. To deepen the reform of the finance system

(i) We should learn from the reform of the international supervision standards to improve the financial supervision system.
(ii) We should amend and issue General Provisions on Loans, actively guide the healthy development of private financing, and speed up the development of multi-level credit market……

(iii) We should speed up the construction of equity investment fund system, put forward relevant administrative measures, and improve the administrative system for venture capital investment into emerging industries……

(iv) We should deepen the reform of financial institutions……

(v) We should improve financial systems in rural areas……

VII. To coordinate and push forward the urban and rural reform

(i) We should deepen the reform of the land administrative system ……

(ii) We should deepen the reform of the household registration system ……

(iii) We should conduct the experimental work on rural reform well in light of the present situation……

VIII. To deepen the reform of people’s livelihood security system

(i) We should study, adjust and optimize the national income distribution pattern and the idea of increasing the proportion of residents' income, and put forward the objectives, the focal points and the measures of the reform……

(ii) We should improve the urban and rural social endowment insurance system, and implement, in an all-around way, the system of transferring and renewing basic endowment insurance relationship for workers of enterprises in urban areas……

(iii) We should establish and improve the management system of the planning and construction of indemnificatory housing. ……

IX. To deepen the reform of social fields

(i) We should issue and implement the outline of national medium and long-term education reforms and development Program. ……
(ii) We should promote the reform of medical and health system in an all-around way, ……

(iii) We should speed up the reform of state-owned literary and artistic college and troupes……

(iv) We should explore and improve the national science and technology innovation system under the conditions of the socialist market economy, and promote the construction of the state innovation system. (The Ministry of Science and Technology should take the lead.)

X. To deepen the reform of foreign-related economic system

(i) We should study and formulate guiding opinions on accelerating the transformation of the pattern of foreign trade development, in order to promote the sustainable development of foreign trade. (The MOFCOM should take the lead.)

(ii) We should study and amend laws and regulations regarding foreign investment ……

XI. To deepen the reform of administrative regime

(i) According to the principles of separating the government from public institutions, the public institutions from enterprises, and the decision-making and monitoring functions from the enforcing functions, we should formulate and issue the overall documents and related supporting documents on promoting the reform of public institutions in a classified manner ……

(ii) To deepen the reform of investment system……

(iii) We should study and promote the reform of government public vehicle-using system for central state organs……

XII. To actively push forward pilot work regarding the comprehensive supporting reform
Shanghai Pudong New District, Tianjin Binhai New District and other experimental districts for the comprehensive supporting reform of the State should, by focusing on the strategic tasks, such as the transformation of the pattern of economic development, the improvement of the level of opening, the coordination of the urban and rural development, and the construction of a resource-saving and environment-friendly society, deepen their reform, take the lead in making breakthroughs, and accumulate reform experience which is worth popularizing……
关于2010年深化经济体制改革重点工作的意见

发展改革委

今年是继续应对国际金融危机、保持经济平稳较快发展的关键一年。国际国内经济深度调整和深刻变化，迫切要求加大改革力度，进一步破除制约经济结构调整和经济发展方式转变的体制机制障碍，切实推动科学发展。结合当前改革发展形势，现就2010年深化经济体制改革重点工作提出以下意见：

一、指导思想和总体要求

（一）指导思想。高举中国特色社会主义伟大旗帜，全面贯彻党的十七大、十七届三中、四中全会和中央经济工作会议精神，深入贯彻落实科学发展观，围绕转变经济发展方式、保障和改善民生深化改革，着力增强发展的内在动力和可持续发展能力，为夺取应对国际金融危机冲击全面胜利和“十二五”规划顺利实施奠定坚实的体制基础。

（二）总体要求。把保持经济增长与调整经济结构结合起来，着力完善促进经济发展方式转变的体制机制；把完善政府调控与充分发挥市场作用结合起来，着力激发经济发展内在动力与活力；把推进社会建设与创新公共服务体制结合起来，着力健全改善民生的保障机制；把提高经济效益与促进社会公平结合起来，着力形成促进社会和谐稳定的体制机制；把加快国内发展与提升开放水平结合起来，着力形成国际合作与竞争新优势。

二、鼓励支持和引导非公有制经济发展

（一）落实鼓励和引导民间投资健康发展的政策措施，进一步消除制约民间投资的制度性障碍，支持民间资本投向基础产业和基础设施、公用事业、社会事业、金融服务等领域，有效激发市场投资活力。（发展改革委牵头，各有关部门负责）

（二）推动国有资本从一般竞争性领域适当退出，切实把国有资本投资重点放在关系国家安全和国民经济命脉的重要行业和关键领域，拓宽非公有制经济发展的市场空间。（国资委、发展改革委、工业和信息化部负责）

（三）继续完善对小企业的支持政策，健全小企业信用担保体系，开展支持小
企业融资的金融产品创新试点，研究制订促进中小企业发展的政府采购政策。（工业和信息化部、人民银行、发展改革委、银监会、财政部负责）

三、深化国有企业和垄断性行业改革

（一）以推进广电和电信业务双向进入为重点，制订三网融合试点方案并开展试点，探索建立保障三网融合规范有序开展的政策体系和体制机制。（工业和信息化部、广电总局等负责）

（二）推进电力体制改革，完成电网企业主辅分离改革，出台输配电体制改革试点工作方案，研究制订农电体制改革方案并开展试点。（发展改革委、国资委、电监会、水利部、财政部、能源局负责）

（三）推进盐业管理体制改革，出台盐业管理体制改革意见及相关配套措施，推动形成新型食盐供给体制和盐业管理体制。（发展改革委、工业和信息化部等负责）

（四）加快推进大型国有企业特别是中央企业母公司层面的公司制股份制改革。加强国有资产监督管理，强化境外国有资产监管等基础性制度建设。（国资委牵头）

四、深化资源性产品价格和环保收费改革

（一）出台关于调整销售电价分类结构的实施办法，简化电价分类结构，推行居民用电阶梯价格制度，健全可再生能源发电定价和费用分摊机制。逐步理顺天然气与可替代能源的比价关系。继续完善成品油价格形成机制。（发展改革委、电监会、能源局负责）

（二）稳步推进水价改革，在有条件的地方实行居民用水阶梯价格制度，推进农业节水与农业水价综合改革。（发展改革委、住房城乡建设部、水利部、财政部负责）

（三）全面推行城市污水、垃圾及医疗废物等处理收费制度，研究建立危险废物处理保证金制度，制订出台推进排污权交易试点的指导意见并扩大试点范围，完善排污费征收使用管理制度。（发展改革委、住房城乡建设部、财政部、环境保护部、工业和信息化部负责）

五、深化财税体制改革

（一）出台资源税改革方案，统一内外资企业和个人城建税、教育费附加制度，
逐步推进房产税改革，研究实施个人所得税制度改革，完善消费税制度，研究开征环境税的方案。（财政部、税务总局、发展改革委、国土资源部、住房城乡建设部、环境保护部负责）

（二）全面编制中央和地方政府性基金预算，试编社会保险基金预算，完善国有资本经营预算，加快形成覆盖政府所有收支、完整统一、有机衔接的公共预算体系。推进预算公开透明，健全监督机制。研究建立地方政府财政风险防控机制。（财政部、人力资源社会保障部、国资委、发展改革委负责）

（三）建立行政事业单位国有资产统计报告和收入管理制度。完善中央企业国有资本经营收益上缴和使用管理制度。（财政部、发展改革委、国资委负责）

六、深化金融体制改革

（一）借鉴国际监管标准的改革，完善金融监管体制。建立宏观审慎管理框架，强化资本和流动性要求，确立系统性金融风险防范制度。建立健全部门间协调配合、信息共享机制和国际合作机制。完善跨境资本流动监管机制。探索规范地方政府金融管理机制。（人民银行、银监会、证监会、保监会、财政部、发展改革委、外汇局负责）

（二）修订出台《贷款通则》，积极引导民间融资健康发展，加快发展多层次信贷市场。尽快出台存款保险制度实施方案，制定出台存款保险条例。（人民银行、银监会负责）

（三）加快股权投资基金制度建设，出台股权投资基金管理办法，完善新兴产业创业投资管理机制。健全创业板市场相关制度，推进场外交易所市场建设，推进形成相互补充、相互促进、协调发展的多层次资本市场体系。（发展改革委、证监会、财政部负责）

（四）深化金融机构改革，加快推进政策性金融机构改革，开展资产管理公司商业化转型试点，深化国有控股商业银行改革。（人民银行、银监会、财政部负责）

（五）完善农村金融体系，全面深化农村信用社改革，引导社会资金投资设立适应“三农”需要的新型农村金融机构，研究制订偏远山区新设农村金融机构费用补贴等办法，研究制订农村抵押担保条例，充分发挥商业性金融、政策性金融和合作金融在支持“三农”中的作用。（银监会、人民银行、财政部负责）
七、协调推进城乡改革

（一）深化土地管理制度改革，研究制定农村集体建设用地管理条例，逐步建立城乡统一的建设用地市场。提出规范农村土地整治的指导意见。修订国有建设用地划拨目录，深化国有建设用地有偿使用制度改革。（国土资源部牵头）

（二）深化户籍制度改革，加快落实放宽中小城市、小城镇特别是县城和中心镇落户条件的政策。进一步完善暂住人口登记制度，逐步在全国范围内实行居住证制度。（公安部、财政部、国土资源部、农业部、人力资源社会保障部负责）

（三）做好新形势下的农村改革试验工作。制订出台进一步加快农业改革发展的意见，推进国有农场与当地经济社会发展融合。制订出台重点国有林区森林资源管理体制改革总体思路，进一步推进国有林场改革试点。推进农村水利建设管理体制改革和农村小型水利设施产权制度改革。深化农村公路管理养护体制改革。（农业部、林业局、水利部、交通运输部等负责）

八、深化民生保障体制改革

（一）研究调整和优化国民收入分配格局，提高居民收入比重的思路，提出改革的目标、重点和措施。积极稳妥实施事业单位绩效工资制度，推进企业职工工资集体协商和支付保障制度建设，改革国有企业特别是垄断行业工资总额管理制度，完善国有企业、金融机构高管人员薪酬分配和监管制度。（发展改革委、人力资源社会保障部、财政部、国资委等负责）

（二）完善城乡养老保险制度，全面实施城镇企业职工基本养老保险关系转移接续制度，研究解决城镇集体企业职工、退休人员及城市无收入老年居民养老保险问题，继续推进事业单位养老保险制度改革试点，完善新型农村社会养老保险相关配套政策并扩大试点范围。（人力资源社会保障部牵头）

（三）建立健全保障性住房规划建设和管理机制，加快廉租住房、公共租赁住房和经济适用住房建设，推进城市和工矿区棚户区改造，出台关于促进房地产市场健康发展的综合性政策。（住房城乡建设部、发展改革委负责）

九、深化社会领域改革

（一）出台并实施国家中长期教育改革和发展规划纲要，以促进公平和提高质量为重点，推进人才培养体制、考试招生制度、现代学校制度和办学体制等改革，并启动相关试点工作。（教育部牵头）
（二）围绕“保基本、强基层、建机制”，全面推进医药卫生体制改革，扎实做好推进基本医疗保障制度建设、初步建立国家基本药物制度、健全基层医疗卫生服务体系、促进基本公共卫生服务逐步均等化、推进公立医院改革试点等五项重点改革。（发展改革委、卫生部、财政部、人力资源社会保障部负责）

（三）加快国有文艺院团体制改革，推进非时政类报刊改革，制订出台公益性新闻出版单位改革意见，基本完成中央各部门各单位经营性出版社转制任务。（文化部、新闻出版总署、人力资源社会保障部负责）

（四）探索完善社会主义市场经济条件下科技创新举国体制，全面推进国家创新体系建设。（科技部牵头）

十、深化涉外经济体制改革

（一）研究制订关于加快转变外贸发展方式的指导意见，促进对外贸易协调可持续发展。（商务部牵头）

（二）研究修订外商投资相关法律法规，进一步简化和规范外资审批程序，建立外资并购安全审查制度。制订出台境外投资条例，加快完善境外投资促进政策和服务体系。（发展改革委、商务部、法制办负责）

十一、深化行政管理体制改革

（一）按照政事分开、事企分开和管办分离的原则，制订出台分类推进事业单位改革的总体方案及相关配套文件，逐步扩大改革试点范围，为全面启动改革创造条件、积累经验。（中央编办、财政部、人力资源社会保障部、发展改革委负责）

（二）深化投资体制改革，出台政府投资条例，加快制定企业投资项目核准和备案管理条例，制定中央政府投资项目决策责任追究指导意见和代建制管理办法，建立重大项目专家评议制度。（发展改革委、法制办负责）

（三）研究推进中央国家机关公务用车制度改革。研究提出深化政府机关后勤服务社会化改革的意见。（发展改革委、中央编办、财政部、人力资源社会保障部、国管局负责）

十二、积极推进综合配套改革试点

上海浦东新区、天津滨海新区等国家综合配套改革试验区，要围绕转变经济发展方式、提升开放水平、统筹城乡发展、建设资源节约型和环境友好型社会等战
略任务深化改革，率先突破，形成有推广价值的改革经验。各部门要积极支持改革试点工作，将专项改革试点放到试验区先行先试。支持和指导各地区各部门开展多种形式的改革试点。（发展改革委牵头）

各地区、各部门要把改革放在更加突出的位置，加强组织领导，狠抓贯彻落实，确保2010年经济体制改革各项目标任务取得实质性突破，国务院已经确定的其他改革任务也要稳步推进。牵头负责部门要积极推动并会同相关部门科学制订改革方案，明确实施步骤和时限要求，落实工作责任；相关部门要结合自身职能，积极配合做好有关工作。发展改革委要加强对年度改革任务的指导推进和综合协调，建立健全部门间统筹协调推进改革的工作机制，督促检查各项改革进展和落实情况，及时向国务院报告。在做好年度改革工作的同时，要认真分析国内外发展的新情况、新变化，从解决制约科学发展的重大体制性问题入手，研究提出中长期改革总体思路，科学编制“十二五”时期重点领域改革规划，进一步提高统筹推进改革的能力和水平。
THE OPINIONS OF MINISTRY OF INDUSTRY AND INFORMATION TECHNOLOGY ON STRENGTHENING THE BUILDING OF GOVERNMENT UNDER THE RULE OF LAW

The Telecommunications Administration Bureau of all provinces, autonomous regions, and municipalities directly under the Central Government, all units directly under the MIIT and all bureaus under the MIIT:

Pursuant to the “opinions of the State Council on strengthening the building of government under the rule of law” (Guofa [2010] No. 33), to further implement the “implementation outline for comprehensively promoting administration according to law”, the MIIT proposes the requirements and scheme as follows:

I. The General Requirements

1. Strengthen the necessity and urgency of the building of government under the rule of law. The Ministry of Industry and Information Technology bear essential responsibilities of managing and administrating industry, telecommunications and information technology, all officials and personnel shall firmly establish the awareness of administration according to law, and effectively enhance the sense of mission, urgency and responsibility of constructing government under the rule of law.

2. The general requirements on strengthening the building of government under the rule of law. At present and in the coming period, we shall comprehensive implementation of the Theory of Scientific Development and fulfill to implement the basic principle of "running the country according to law" and aim at constructing government under the rule of law, transform the industrial development mode, adjust the industrial structure, promote and syncretize industrialization and informatization....
II. Strengthen legal and institutional construction

3. Accelerate the legislation progress. Further improve the legal systems of industrialization and information technology, emphasis on legislation on rare metals management, shipping industry development, industrial energy-saving, information safety and integration of industrialization and informatization….

4. Improve the Regulatory documents legislating procedures. All bureaus of the MIIT shall draft Regulatory documents strictly in accordance with the law. In accordance with the relevant laws and regulations, all kinds of Regulatory documents shall not set the administrative licensing, administrative penalties, and administrative enforcement and shall not increase the obligations of citizens, corporations and other organizations unlawfully….

5. Classify and clear Regulatory documents timely.

6. Strengthen legislation study. Fully demonstrate and reason the necessity and feasibility of legislative projects….

III. Insist on administrating according to law

7. Improve decision-making according to law procedure. Make public participation, expert evaluation, risk assessment, legal review and collective discussion to be the necessary procedure of major decision-making….

8. Further regulate administrative examination and approval. Perform the rights of administrative examination and approval strictly in accordance with the Administrative Permission law….

9. Further standardize administrative enforcement conducts. Exercise powers and perform duties strictly in accordance with the statutory authority and procedures….

10. Explore the tracking feedback and evaluation system. When making decision about industry, telecommunication and informatization involving public interest and
the benefit of people, relevant bureaus shall undertake legality, rationality, feasibility and controllability assessment….

11. Undertake the openness of government information work carefully. Classify the government information resources and increase the degree and level of openness of government information….

12. Strengthen supervision and inspection work. Effectively strengthen the supervision of the lower administrative organs, and promptly correct the illegal or improper administrative behaviors….

IV. Resolve conflicts and disputes according to law

13. Deal with complaint reporting properly. Handle all kinds of complaint reporting properly and lawfully, protect the lawful benefit of people….

14. Strengthen the administrative reconsideration. Give full play to the role of administrative reconsideration in resolving contradictions and disputes….

15. Deal with administrative litigations properly. Execute and fulfill effective judgments of People’s Court voluntarily, treat the judicial suggestion carefully….

16. Deal with the complaint from telecommunication users and undertake mediation work properly, better protect the lawful rights and interests of users….

V. Strengthen the support mechanism

17. Establish the “administration according to law” leading group which in charge of lead and assign “administration according to law” work….

18. Establish the legal popularization learning and training system, improve the awareness and the ability of the officials and personnel to administrate according to law….
19. Improve the support mechanism of administration according to law. Improve and promote the financial and logistic support mechanism of administration according to law....
工业和信息化部关于加强法治政府建设的实施意见

各省、自治区、直辖市通信管理局，部直属各单位，部机关各司局：

为进一步贯彻落实《全面推进依法行政实施纲要》（以下简称《纲要》），根据《国务院关于加强法治政府建设的意见》（国发[2010]33 号），提出以下实施意见：

一、总体要求

1. 加强法治政府建设的必要性和紧迫性。《纲要》实施 7 年来，特别是工业和信息化部成立以来，工业、通信业和信息化领域法制化进程不断推进，在加强和改进制度建设、探索建立健全行政决策机制、规范行政执法行为、加大行政监督力度、依法化解矛盾纠纷和提高公务员依法行政意识和能力等方面开展了大量工作，取得了比较明显的成效。但必须看到，与国务院关于建设法治政府的要求相比，还存在不小的差距。一是依法行政意识有待进一步提高，依法决策程序有待进一步完善。二是工业领域法制建设与转变工业发展方式、调整产业结构和振兴新兴产业的要求相比，有待进一步加强。三是随着互联网的快速发展，互联网管理、网络信息安全等方面的立法步伐有待进一步加快。解决这些问题，必须深化改革、推进依法行政、加强法治政府建设。工业和信息化部承担着工业、通信业和信息化管理的重要职责，全体公务员和行政执法人员要牢固树立依法行政意识，切实增强建设法治政府的使命感、紧迫感和责任感。

2. 加强法治政府建设的总体要求。当前和今后一个时期，要深入贯彻科学发展观，认真落实依法治国基本方略，以建设法治政府为奋斗目标，以转变工业发展方式、调整产业结构、推进工业化和信息化深度融合、维护网络与信息安全、促进中小企业发展、改善民生等为重点，以增强依法行政意识和能力、提高制度建设质量、规范行政权力运行为着力点，不断提高行政机关的公信力和执行力，为保障工业、通信业和信息化又好又快发展及社会和谐稳定发挥更大的作用。
二、加强法律制度建设

3.加快立法进程。进一步完善工业和信息化法律制度，以转变工业发展方式和产业结构调整为主线，根据产业振兴规划要求，重点做好稀有金属管理、船舶工业发展、工业节能、产品质量、信息安全和两化融合等方面的立法工作。加快已列入国务院立法计划的《电信法》、《无线电管理条例》等法律法规以及互联网管理、网络信息安全、手机实名制等相关法律法规的立法步伐，加大工作力度，加强沟通协调，争取尽早出台。提高立法质量，做到重点突出，把握规律，以人为本，切实维护企业和群众的合法权益。

4.健全规范性文件制定程序。部机关各司局要严格依法起草规范性文件。根据有关法律规定，各类规范性文件不得设定行政许可、行政处罚、行政强制事项，不得违法增加公民、法人和其他组织的义务。制度对公民、法人或者其他组织的权利义务产生直接影响的规范性文件，要公开征求意见，由政策法规司进行合法性审核，并经部长办公会集体讨论决定。

5.及时清理规范性文件。对部目前实施的规章和规范性文件通盘考虑、统一清理、分批修订。对于不符合发展要求或者违反法律法规或者相互之间不协调的规章和规范性文件，及时进行修改或者予以废止。按照国务院要求，建立规章和规范性文件定期清理制度，及时公布清理结果。

6.加强立法研究。围绕部中心工作，加强立法研究，注重法律法规和规章立项起草时的前期调研，充分论证立法项目的必要性和可行性，努力提高立法草案起草质量。

三、坚持依法行政

7.完善依法决策程序。要把公众参与、专家论证、风险评估、合法性审查和集体讨论决定作为重大决策的必经程序。相关司局在制定涉及公共利益或者群众切身利益的重大决策事项时，要充分利用门户网站及其他相关渠道，广泛听取、充分吸收各方面意见。要组织专家进行合法性、科学性论证和风险评估，避免和
减少决策失误。对于涉及法律规定的重大决策，交由政策法规司进行合法性审查后，提请部长办公会或者常务会集体讨论决定，确保重大行政决策符合法律规定。

8. 进一步规范行政审批行为。理清职责边界，严格按照“三定”方案和行政许可法的规定，行使行政审批职权。对部保留的行政审批事项，逐项制定行政审批项目的申请条件、期限和程序等配套制度，通过部门门户网站等向社会公布。

9. 进一步规范行政执法行为。强化依法办事的意识，严格依照法定权限和程序行使权力、履行职责。严格遵守法律规定的告知、说明理由、回避、调查取证、听证和集体决定等制度，切实保障行政管理相对人的程序性权利。研究和完善行政处罚程序制度，严格执行行政处罚程序。实行行政执法人员主体资格制度，定期对持有行政执法证件的人员进行培训和考核，不断提高其行政执法水平。

10. 探索跟踪反馈和评估制度。对涉及公共利益或者群众切身利益的工业、通信业和信息化重大决策事项，相关司局在执行过程中，要进行合法性、合理性、可行性和可控性评估，重点是进行社会稳定、环境、经济、合法性等方面的风险评估。探索建立重大行政决策风险评估机制，通过舆情跟踪、重点走访、会商分析等方式，对重大行政决策可能引发的各种风险进行科学预测、综合研判，并制定相应的化解处置预案。

11. 做好政府信息公开工作。梳理信息资源，丰富《政府信息公开目录》内容，妥善处理信息公开与保守国家秘密的关系，加大主动公开力度。完善信息公开工作机制，明确责任分工，不断提高答复质量。加大门户网站建设管理力度，使之成为部推政务公开的重要平台和渠道。

12. 加强监督监察工作。要切实加强对下级行政机关的监督，及时纠正违法或者不当的行政行为。要加强内部审计监督，强化对行政事业性收费和行政处罚资金的监督和管理，严格落实“收支两条线”规定。进一步加强行政监察，促进部机关各司局和各省区市通信管理局及工作人员依照法定权限和程序行使职权、履行职责、提高效能。

四、依法化解矛盾纠纷
13.做好信访工作。进一步规范和完善信访工作流程，创新工作机制，畅通信访渠道，依法妥善处理各类信访事件，提高工作效率，维护群众合法权益。

14.加强行政复议工作。充分发挥行政复议在解决矛盾纠纷中的作用，努力将行政争议化解在初发阶段和行政程序中。加强对复议受理活动的监督，对依法不属于复议范围的事项，要认真做好解释、告知工作。

15.做好行政应诉工作。完善行政应诉制度，对人民法院受理的行政案件，要依法积极应诉，按规定向人民法院提交作出具体行政行为的依据、证据和其他材料。尊重并自觉履行人民法院的生效判决、裁定，认真对待人民法院的司法建议。

16.做好电信用户申诉调解工作。结合当前电信市场发展新形势，完善改进电信服务申诉的受理和处理方式，进一步体现执政为民、服务为民的理念，强化用户申诉处理全过程的合法性、便利性和有效性，更好地保护用户的合法权益。

五、加强保障机制

17.建立依法行政领导小组。建立依法行政领导小组，负责领导和部署依法行政工作，组长由部领导担任，成员为各司局主要负责同志。部依法行政领导小组下设办公室，成员为办公厅、政策法规司、财务司、人事教育司、机关党委和驻部监察局，办公室设在政策法规司，由政策法规司牵头，会同相关部门具体组织并承担有关工作，研究部署全面推进依法行政、加强法治政府建设的具体任务和措施。

18.建立普法学习与培训机制。完善领导干部学法、普法制度。要通过自主学习、专题讲座、集中培训等多种形式，重点学习与履行职责相关的法律知识。部定期组织公务员、行政执法人员培训，适时举办法律知识答卷或竞赛，提高机关公务员和行政执法人员依法行政的意识和能力。

19.完善依法行政保障机制。完善行政执法经费保障机制，将法制工作机构和行政执法部门履行法定职责所需经费统一纳入财政预算。探索以支撑单位为基础，建立工业和信息化法律研究服务机构，针对专业性强、具有前瞻性或者涉及
利益关系比较复杂的立法项目，以及依法行政工作中存在的突出问题进行专题研究，跟踪服务，充分发挥专家和专业机构在政府立法、依法行政工作中的智囊作用。

各单位要把贯彻落实本实施意见与进一步贯彻落实《纲要》和《国务院关于加强法治政府建设的意见》紧密结合起来，根据本单位实际情况，制定切实可行的工作规划，明确工作任务、具体措施、完成时限和责任主体，确定工作重点，扎扎实实推进依法行政工作，加强法治政府建设，务求各项工作不断取得新成效。
THE NOTICE OF THE GENERAL OFFICE OF MOFCOM ON STRENGTHENING THE BUILDING OF GOVERNMENT UNDER THE RULE OF LAW IN COMMERCE AREA

[Promulgation Authority] The General Office of MOFCOM

[Document Number] Decree No. [2011] 54 of MOFCOM

[Promulgation Date] 2011-04-23

October 2010, the State Council promulgated ‘the opinions on strengthening the building of government under the rule of law’ (Guofa [2010] No. 33) which clearly proposed to perform official duties lawfully and strengthen the building of government under the rule of law. To conscientiously implement the basic principle of "running the country according to law", strengthen the building of government under the rule of law in commerce area and perform official duties lawfully, the MOFCOM proposes the requirements and scheme as follows:

I. The General Requirements on Strengthening the Building of Government under the rule of law

At present and in the coming period, we shall comprehensive implementation of the Theory of Scientific Development and fulfill to implement the basic principle of "running the country according to law" and aim at constructing government under the rule of law …

II. The Main Tasks on Strengthening the Building of Government under the rule of law

1. Improve the awareness and capacity of performing official duties lawfully of the officials……
2. Insist on lawful, democratic and scientific decision-making procedure.…

3. Improve the quality of institutional construction.…

4. Highlight the priorities on institutional construction in commerce area.

   (1) Establish and improve the legal system and framework of market circulation which includes regulate market parties, market behavior, market order, market supervision and management and credit management on the basis of market circulation laws to cultivate and improve an unified, open, and orderly compete modern market system. …

   (2) Improve the foreign trade law system which emphasis on optimizing the foreign trade structure and transforming the foreign trade development method.…

   (3) Improve the foreign investment law system and promote the foreign investment facilitation which emphasis on increasing the quality and level of utilizing foreign capital, optimizing the structure of foreign investment utilization, guiding the direction of foreign investment.…

   (4) Accelerate the legislation process of legislation of investment abroad and economic operation to facilitate enterprises to develop abroad.…

   (5) Strengthen legislation of aid to foreign countries which emphasis on optimizing structure, improving quality and efficiency and increase the independent development capacity of the aided foreign countries on the basis of equal treatment, keeping promise, highlighting practical results and jointly development.…

   (6) Strengthen and improve the antitrust legislation and working system to protect the fair market competition.…

   (7) Undertake the AD/CVD, safeguard measures and other trade remedy works and improve the institutional construction of trade remedy and industry safety.

5. Develop bilateral and multilateral exchange and operation actively

   (1) Undertake FTA negotiation and relevant feasibility study, bilateral and
multilateral investment protection agreement negotiation and promote regional operation level….

(2) Actively participate in multilateral and regional coordination and dialogue like G20, BRICKs, UN, OECD, APEC…

(3) Use the WTO Dispute Settlement Mechanism to protect China’s significant economic interests.

(4) Promote the bilateral and multilateral exchange and operation on Intellectual Properties.

(5) Actively participate in the rule formulating of international organizations like UNICITRAL, UNIDROIT, Asian-African Legal Association, WTO Dispute Settlement Mechanism….

(6) Strengthening the international legal exchanges and cooperation….

6. Further transformation of government functions and promote the reform of the administrative examination and approval system….

7. Standardize administration and law enforcement, strengthen supervision and accountability…

8. Make government affairs public and transparent….

9. Resolve social contradictions and disputes in accordance with the law. Improve the complaint reporting mechanism, handle all kinds of complaint reporting properly and lawfully, protect the lawful benefit of people. Execute and fulfill effective judgments of People’s Court voluntarily, treat the judicial suggestion carefully…

10. Strengthen legal institutions and personnel building. Give full play to the coordinating, guiding and supervising role of institutions of legal affairs in promoting administration according to law and constructing government under the rule of law…

III. Strengthen organizational leadership, supervision and inspection
The leaders shall take the overall responsibility of performing official duties lawfully in each unit. The improvement of performing official duties lawfully and constructing government under the rule of law shall be emphasized. We shall Strengthen organizational leadership, supervision and inspection on constructing government under the rule of law…. 
商务部办公厅关于加强商务领域法治政府建设工作的通知

【发布单位】商务部办公厅

【发布文号】商法字[2011]54号

【发布日期】2011-04-23

2010年10月，国务院发布了《关于加强法治政府建设的意见》（国发[2010]33号），对全面推进依法行政、进一步加强法治政府建设提出了明确要求。为在新形势下深入贯彻落实依法治国基本方略，加强商务领域法治政府建设，全面推进依法行政，现就有关工作通知如下：

一、加强法治政府建设的总体要求

当前和今后一个时期，要深入贯彻落实科学发展观，认真贯彻落实依法治国基本方略，以建设法治政府为奋斗目标，以商务体制创新为突破口，以提高工作人员依法行政的意识和能力、坚持科学民主决策、提高制度质量、推进依法行政、改革和政务公开、规范执法、依法化解社会矛盾纠纷为着力点，全面提高商务领域依法行政，不断提高政府公信力和执行力，为保障国民经济又好又快发展和社会和谐稳定发挥更大的作用。

二、加强法治政府建设的主要任务

（一）提高工作人员依法行政的意识与能力。结合商务领域普法工作，建立健全法律知识培训长效机制，采取多种形式进行培训。强化工作人员特别是领导干部的学法、用法制度，注重对依法行政意识强的公务员的录用、培养、交流与提拔。牢固树立依法治国、执法为民、公平正义、服务大局、党的领导为基本内容的社会主义法治理念，全面提高工作人员依法行政的能力与水平，自觉养成依法办事的习惯。（条法司、人事司、各司局）
（二）坚持依法科学民主决策。重大决策要经过公众参与、专家论证、风险评估、合法性审查和集体讨论的程序，严格执行司务会、部务会等集体决策制度。完善重大决策征求意见及听证制度，强化重大决策事前合法性审查、风险评估以及事后效果评估制度。建立健全决策责任追究制度。（办公厅、条法司、有关司局）

（三）提高制度建设质量。认真做好调查研究，准确把握商务发展规律和人民群众需求，充分论证立法项目必要性与可行性，科学编制并严格执行商务规章立法计划。增强商务立法透明度和公众参与度，完善立法公开征求意见、成本效益分析和实施情况后评估制度，丰富公众参与立法的形式。完善规范性文件制订制度，强化规章和规范性文件备案审查制度，建立规章、规范性文件清理长效机制。确保商务法律与世贸组织规则的一致性，严格履行我加入世贸组织承诺，向世贸组织通报、配合其审议我经贸法律文件。（条法司、世贸司、有关司局）

（四）突出商务领域制度建设重点。

1. 以培育完善统一、开放、竞争有序的现代市场体系为目标，致力于建立健全以市场流通法为基础的包括规范市场主体、市场行为、市场秩序、市场监测调控与管理、信用管理为支柱的市场流通法律体系框架。积极推动流通领域基础性立法，加快报废机动车回收、典当、商业网点、酒类、汽车品牌销售、商业特许经营、生活必需品应急供应、生猪屠宰、商务信用体系建设、融资租赁、电子商务、废旧商品回收、大宗商品现货市场、药品流通、流通领域食品安全、物流业、家政服务、住宿餐饮业等方面立法，促进拍卖、旧货、直销等特殊行业健康发展。落实搞活流通、鼓励消费政策，健全储备与调控机制，加强市场预警监测，完善内贸标准体系。（市场秩序司、市场建设司、商贸服务司、市场运行司、条法司）

2. 以优化对外贸易结构、转变外贸发展方式为重点，完善外贸法律体系。近期重点推动《货物进出口管理条例》、《技术进出口管理条例》修订工作，制订《加工贸易管理办法》，完善出口管制制度体系、机电产品招标投标制度、促进技术引进消化吸收再创新的政策措施，健全进出口许可证管理制度。研究开展服务贸易领域立法工作，推动《服务贸易促进条例》出台，制订《国际服务贸易统计管理办法》，建立健全服务贸易管理和促进机制。（外贸司、产业司、服贸司、条法
司）

3. 以提高利用外资质量与水平、优化利用外资结构、引导外商投资方向为重点，完善外商投资法律制度，进一步推动投资便利化。抓紧修订《外商投资产业指导目录》和《中西部地区外商投资优势产业目录》，制订和完善服务领域吸收外资的相关规定；修订外商投资举办投资性公司、创业投资企业、股权投资企业和跨国公司设立地区总部等功能性机构的规定，完善外资并购境内企业安全审查管理规定，理顺境内企业境外上市及外商投资企业境内上市管理机制，拓展外商投资方式；完善外商投资统计及联合年检制度；继续做好省级开发区升级工作，推动出台《国家级开发区管理条例》；加快沿边开发步伐，编制《沿边地区开放开发规划》；促进服务外包产业又好又快发展；及时有效处理外商投诉。（外资司、综合司、条法司）

4. 以促进企业“走出去”为目标，加快对外投资与经济合作立法进程。完善“走出去”政策体系，健全对外投资政策与保障机制，制订《培育国际合作和竞争新优势规划》；起草《对外投资条例》，完善对外投资核准和备案制度；更新发布重点国别投资合作产业指导目录，推动《对外劳务合作管理行业》出台。制订《对外承包工程管理条例》配套措施，制订国别经贸合作规划及农业、基础设施等领域专项合作协议；健全境外安全风险防范和突发事件应急处理机制。（合作司、条法司）

5. 以平等相待、重信守约、注重实效、共同发展为原则，以优化结构、提高质量效益、增强援国自主发展能力为重点，加强援外立法。推动《对外援助管理条例》出台，完善援外项目管理制度及援外贷款管理制度，建立健全援外技术合作项目管理和援外培训项目评估制度。近期出台援外物资项目管理办法、援外相关企业资格管理办法，编制援外物资供给指导目录。（援外司、条法司）

6. 以维护市场公平竞争秩序为目标，加强反垄断领域立法，完善反垄断工作机制。完善经营者集中审查机制，规范审查流程，加强经营者集中执法工作，妥善处理重大复杂的反垄断问题。起草《经营者集中反垄断审查实施条例》，近期出台未依法申报经营者集中查处、评估经营者集中竞争影响、经营者集中附加限制性条件等相关制度。（反垄断局、条法司）
7. 以维护公平竞争秩序和产业安全为目标，加强与业界的协调配合，统筹好上下游产业利益，准确评估贸易救济措施的效果和影响，依法开展反倾销、反补贴、保障措施及相关贸易救济工作，完善贸易救济与产业安全制度建设。反对贸易保护主义，强化政府服务职能，健全贸易摩擦应对机制，采取差异化应对方法，做好国外对我企业和产品发起反倾销、反补贴、保障措施等贸易救济调查的应对工作，维护我合法权益。研究出台贸易调整援助等相关制度。（公平贸易局、产业调查局、条法司）

（五）积极开展多双边交流合作。

1. 积极开展自贸区谈判及相关可行性研究，多双边投资保护协定谈判；落实《海峡两岸经济合作框架协议》（ECFA）、内地与港澳《关于建立更紧密经贸关系的安排》（CEPA）协议，推动两岸四地经贸合作；巩固、拓展多双边经贸协定成果，提升区域互利合作水平。（国际司、条法司、台港澳司、有关司局）

2. 积极配合高访和高层对话及高峰论坛，积极参与二十国集团、金砖国家、联合国、经合组织、亚太经合组织等多边和区域机制的协调与对话，发挥好双边经贸联委会/混委会、区域合作论坛作用，表达我利益诉求；采取多种方式，妥善处理矛盾与摩擦，促进互利共赢和共同发展，营造、维护健康和谐的多双边经贸关系。（各地区司、国际司）

3. 积极运用世贸组织争端解决机制，妥善应对被诉案件；加强相关问题预警研究，适时提起世贸争端案件；积极参与第三方案件，加强案件总结报告工作，有效遏制、反击对华滥用贸易保护主义措施势头，维护我重大经济利益。（条法司、有关司局）

4. 加强知识产权多双边交流合作，做好知识产权谈判、宣传工作。建立健全预警应急机制，完善海外维权和争端解决机制；开展打击侵犯知识产权和制售假冒伪劣商品专项行动；修订《展会知识产权保护办法》，出台与贸易有关的知识产权方面规章。（条法司、市场秩序司、世贸司）

5. 积极参与联合国贸法会、国际统一私法协会及亚非法律协会等国际组织规则制订，参与世贸组织争端解决机制修改及各经贸协议谈判，切实增强我国在国
国际贸易规则修订中的话语权。（条法司、世贸司、公平贸易局、产业调查局）

6. 加强国际法律交流与合作。积极开展中美、中日等双边法律交流，组织实施中日法律研修项目，举办中德经济法培训班，与经合组织、亚太经合组织、国际统一私法协会、国际发展法律组织等国际组织开展法律交流与合作。（条法司、有关司局）

（六）进一步转变职能，推进行政审批制度改革。在加强宏观调控和市场监管同时，更加重视社会管理和公共服务。积极稳妥推进商务行政审批制度改革，进一步减少和调整一般性、事务性行政审批事项，简化行政审批程序，规范行政审批行为，强化后期监管和预警，开展网上电子审批，加快政府职能转变，切实做到简政放权，服务基层，服务广大企业和社会公众。（办公厅、有关司局）

（七）规范行政执法，强化监督问责。严格依照法定权限和程序行使权力，履行职责。依法界定职权，梳理行政执法依据，科学设定执法岗位，建立健全执法主体和执法人员资格制度，完善行政执法案卷评查制度。探索建立公开、公平的评议考核制、责任追究制和执法绩效评估、奖惩机制和办法。规范执法程序，明确执法环节和步骤，制订统一的执法程序和办法。规范行政处罚程序，充分发挥行政处罚委员会作用。整顿和规范市场秩序，加强 12312 商务举报投诉服务中心建设。（条法司、人事司、驻部纪检组监察局、市场秩序司）

自觉接受人大监督、政协民主监督和人民法院依法监督，高度重视舆论监督，保障和支持审计、监察部门依法独立行使监督权；坚持有错必纠、有责必问，并采取适当方式将处理结果公开。（机关纪委、驻部纪检组监察局、财务司、人事司、市场秩序司）

（八）推进政务公开。认真贯彻实施《政府信息公开条例》，坚持以公开为原则，不公开为例外，加大主动公开力度，依法办理依申请公开事项，推进办事公开。加强商务部政府网站建设，强化信息公开、在线办事与交流互动服务能力。完善政务大厅制度建设和内部管理，加强“一个窗口对外”和“一站式”服务。注重新闻宣传和舆论引导，扩大商务信息公开渠道和影响，充分利用部政府网站、《中国对外经济贸易文告》、《国际商报》等媒体平台，完善新闻发布会和吹风会制度。（办公厅、信息化司、有关司局）
（九）依法化解社会矛盾纠纷。完善信访制度，切实解决信访反映的问题，保障信访人、举报人的权利和人身安全。（办公厅）

畅通行政复议渠道，方便当事人提出申请。注重运用调解、和解方式解决纠纷。查明事实，分清是非，依法、公正、及时审理复议案件。探索行政复议委员会制度试点，健全复议机构，建立健全复议激励机制和经费装备保障机制，完善复议与信访衔接机制。完善行政应诉制度，配合人民法院审判活动，积极应诉，尊重并自觉履行人民法院的生效判决。裁定，认真对待人民法院的司法建议。（条法司、办公厅、财务司）

（十）加强法制工作机构和队伍建设。充分发挥法制工作机构在推进依法行政、建设法治政府方面的组织协调和督促指导作用。进一步加强法制工作机构建设，使法制工作机构的规范、编制与其承担的职责和任务相适应。增加法律专业背景公务员的招收比例，加大对法制工作干部的培养、使用和交流力度，重视提拔政治素质高、法律素养好、工作能力强的法制工作干部。法制工作干部要努力提高工作能力和水平，当好依法行政的参谋、助手和顾问。（人事司、条法司）

三、加强组织领导和督促检查

“一把手”对本单位依法行政工作负总责，要将全面推进依法行政、加强法治政府建设摆在更加突出的位置，将依法行政任务与本单位业务工作任务一起部署、一起落实、一起考核。要加强对推进依法行政工作的组织领导、督促指导与监督检查。建立健全依法行政绩效考核体系，认真组织考评工作。对成绩突出的单位和个人，要按照有关规定给予表彰奖励，对工作不力的予以通报批评。

各单位要把本实施意见提出的总体要求和任务分解、细化，明确具体措施、完成时限和责任主体，确定年度工作重点，扎扎实实地推进依法行政工作，务求法治政府建设不断取得新成效，实现新突破。
The Opinions of the People’s Government of Jiangsu Province on Advancing the Building of Government under Rule of Law

[Promulgation Date] 2011-07-14


The People's Governments of all cities and counties, all commissions, offices, departments and bureaus directly under the People’s Government of Jiangsu,

Building a government under rule of law is the necessary requirement of developing socialist market economy, the basic guarantee of promoting social fair and justice and an essential goal of government building. Since we implement “the implementation outline of the state council for comprehensively promoting administration according to law”, all cities and departments in Jiangsu Province insist on putting administration according to law and building government under rule of law as priorities, strengthen the leadership and implement to procure great achievements in building government under rule of law. To solve the social problems and contradictions in the present society, we shall further strengthen institutional construction, administration according to law and strengthen the check and supervision of administrative power as a fundamental work. Therefore, pursuant to “the opinions of the State Council on strengthening the building of government under rule of law” (the State Council publication [2010] No. 33), to further implement the building of government under rule of law, the people’s government of Jiangsu proposes the requirements and scheme as follows:

I. Further specify the general requirements and goals of the building of government under rule of law in Jiangsu Province

1. General requirements. At present and in the coming period, we shall comprehensive implementation of the Theory of Scientific Development and aim at building the
government under rule of law to promote the administration under legal system, institution, standard and procedure….

2. Goals. Pursuant to the goals and tasks of “the implementation outline of the state council for comprehensively promoting administration according to law” and the reality of the building of government under rule of law in Jiangsu Province, we plan to primarily achieve the goals and tasks of building government under rule of law in present stage. It mainly includes: an administrative system featuring standardized behaviors, coordinated operation, fairness and transparency, honesty and high efficiency have been basically established…

II. Further promote the transformation of government functions

3. Deepen the reform of the administrative system. Emphasizing on the transformation of government functions, we shall adjust the relationship between government, market and enterprises in accordance with law, reduce government intervention in microeconomic, support and guide social organizations to participate in social management and services…

4. Reform the administrative management methods. Thoroughly implement the Administrative Licensing Law, we shall timely organize collective clear-up on the items subject to administrative examination and approval to reduce, decentralize or delegate the power to lower level and standardize administrative examination and approval behaviors, and to strengthen the supervision and constraint of the administrative examination and approval power…

5. Comprehensively promote the disclosure of government information. Establish the government information disclosure, supervision system. Government information which does not involve national secrets, commercial secrets and personal privacy shall be published and open to the public timely and accurately…

6. Regulate the administrative power operating in sunshine. Improve all support
system to regulate and strengthen the online open and transparent operation of administrative power…

III. Promote the government legislation and institutional construction

7. Emphasis on the priorities of government legislation. On the basis of "12th Five-Year Plan on the economic and social development in Jiangsu Province", we shall study and legislate laws focusing on accelerating the transformation of the mode of economic development, building Jiangsu’s development strategy, and promoting the coordinated development of urban and rural areas, improving people's living standards, and strengthening government building and relevant systems…

8. Complete government legislation system. Improve public participation and broaden channels of public opinions, expand the range of comments and suggestions, and ensure that the wishes of the people can be fully expressed, reasonable demands and lawful interests can be fully reflected…

9. Strengthen the management of regulations and regulatory documents. Strictly implement the system of uniform registration, uniform numbers, and uniform disclosure of regulatory documents…

IV. Insist on lawful, scientific and democratic decision-making

10. Regulate the administrative decision-making procedure. Make public participation, expert evaluation, risk assessment, legal review and collective discussion to be the necessary procedure of major decision-making…

11. Improve the risk assessment mechanism of administrative decision-making. Establish the expert evaluation, public participation, and assessment of professional organizations and relevant risk assessment mechanisms. The decision-making of major projects and major policies involving the economic and social development and people's vital interests, shall pass the legality, rationality, feasibility and controllability
assessment.

12. Strictly implement the review and accountability mechanism after administrative decision-making.

V. Strengthen and improve the administrative law enforcement

13. Complete and improve the mechanism of administrative law-enforcing. Proceed to promote the reform of the administrative law enforcement system and explore to establish rank-jurisdiction of administrative law enforcement to promote the decentralization of administrative law enforcement power and to decrease the level of administrative law enforcement…

14. Promote the standardization of administrative law enforcement. Administrative law enforcement officials shall perform its power and duty according to law…

15. Innovate administrative law enforcement modes. Promote the informationalization of administrative law enforcement…

VI. Strengthen administrative supervision and accountability

16. Strengthen internal hierarchical supervision and specific supervision. Guarantee and support audit and supervision departments exercise its supervisory power independently and lawfully…

17. Accept the public supervision and media supervision voluntarily…

18. Undertake administrative accountability strictly. Complete and improve the administrative accountability supporting mechanism, punish liable persons…

VII. Prevent and resolve social conflicts and disputes according to law

19. Establish and improve administrative mediation mechanism…
20. Strengthen the administrative reconsideration. Strengthen the supervision on administrative reconsiderations…

21. Deal with complaint reporting properly standardized and lawfully. Handle all kinds of complaint reporting properly and lawfully, protect the lawful benefit of complaints. Guide parties to resolve disputes in legal ways.

VIII. Prevent and resolve social conflicts and disputes according to law

22. Strengthen the organization and leadership. Chief official shall be responsible for building government under rule of law…

23. Complete and improve working mechanism…

24. Establish the legal popularization learning and training mechanism. Improve the awareness and the ability of the officials and personnel to administrate according to law. Emphasis on the legal learning of leaders and chief officials…

25. Strengthen institutional building. Put legal institution and departments building as priorities…

26. Create “rule of law” environment. Further improve the promotion and education of administering and performing duties according to law, building government under rule of law. Create a proper social environment for building government under rule of law…

2011.3.19
江苏省人民政府关于加快推进法治政府建设的意见

发布日期：2011-07-12

（苏政发〔2011〕31号）

各市、县人民政府，省各委、办、厅、局，省各直属单位：

建设法治政府，是发展社会主义市场经济的必然要求，是促进社会公平正义的基本保证，是政府自身建设的重要目标。根据《国务院关于加强法治政府建设的意见》（国发〔2010〕33号）精神，结合我省实际，就加快推进法治政府建设提出如下意见：

一、进一步明确全省法治政府建设的总体要求和目标

（一）总体要求。当前和今后一个时期，全省法治政府建设要深入贯彻落实科学发展观，适应经济社会发展新形势新变化，顺应人民群众的新要求新期待，以建设法治政府为目标，以加强市、县政府依法行政为重点，以事关依法行政全局的体制机制创新为突破口，着力推进政府工作的制度化、规范化、程序化，着力规范行政权力公开透明运行，着力提高政府的公信力和执行力，为推动科学发展、建设美好江苏提供有力的法治保障。

（二）工作目标。根据国务院《纲要》确定的目标任务，结合我省依法行政工作实际，再经过3年左右的努力，基本实现法治政府建设阶段性工作目标。主要包括：政府履行经济调节、市场监管、社会管理和公共服务职能基本到位；行为规范、运转协调、公正透明、廉洁高效的行政管理体制基本形成；行政决策的科学化、民主化、制度化、规范化基本实现；
权责明确、行为规范、监督有效、保障有力的行政执法体制基本建立；防范和化解社会矛盾机制比较完善并规范运行；行政监督机制比较健全、资源有效整合、效能明显提高；行政机关及工作人员依法行政观念、能力和水平被社会基本认可，人民群众对法治政府建设基本满意。其中，到 2012 年底，超过 1/3 的市级政府、被确认为省级依法行政示范点的县级政府率先完成法治政府建设阶段性目标任务。

二、大力推进政府职能转变

（三）深化行政管理体制改革。以转变政府职能为核心，依法调整政府、市场、企业之间的关系，减少政府对微观经济的干预，支持、引导社会组织参与社会管理和服务。加快建设服务型政府，继续优化政府结构、行政层级、职能责任，探索实行省直管县体制，通过 2 年左右努力，完成经济发达镇行政管理体制改革试点任务。积极构建有利于转变经济发展方式的财税体制，增强基层政府提供基本公共服务的财力保障。改革基本公共服务提供方式，实现提供主体和提供方式多元化。健全公共突发事件应急管理制度，提高突发事件预防、预警、应急处置和应急保障能力。

（四）改革行政管理方式。深入贯彻《行政许可法》，适时组织开展行政审批事项集中清理工作，继续减少、下放和规范行政审批，加强对行政审批权的监督制约。制定出台规范行政（便民）服务中心建设的规范性文件，力争用 3 年左右时间基本完成行政（便民）服务中心规范化建设任务。下放、委托给试点镇的许可、审批和公共服务事项，原则上进入镇便民服务中心实行“一站式服务”。积极开展相对集中行政许可权试点。建立完善行政指导、行政合同、行政裁决等制度。

（五）全面推进政务公开。建立健全政府信息公开监督和保障机制，凡不涉及国家秘密、商业秘密和个人隐私的政府信息都要及时、准确地向社会公开，重点抓好财政预算、公共资源配置、重大建设项目批准和实施、社会公益事业建设等领域信息公开，进一步规范政府信息依申请公开的受理和答复工作。完善办事公开制度，所有面向社会服务的政府部门以及医院、学校、公交、公用等公共事业领域，都要实现办事项有关信息充分告知。逐步扩大网上查询、交费、办
证、年检、求助等服务项目的范围，为人民群众提供快捷、方便的优质服务。

（六）规范行政权力阳光运行。按照全面推进、网上运行、权力制约、高效便民的原则，完善各项配套制度，规范和深化行政权力网上公开透明运行工作。认真贯彻执行《江苏省行政权力网上公开透明运行管理暂行办法》，健全行政权力网上公开透明运行领导和工作机制，规范行政权力库、网上政务大厅、行政权力运行平台、行政监察平台和政府法制监督平台建设与管理，将行政权力网上公开透明运行情况纳入年度依法行政考核体系。

三、认真抓好政府立法和制度建设

（七）突出政府立法重点。围绕江苏经济社会发展“十二五”规划，研究制定加快转变经济发展方式、构筑江苏发展战略优势、促进城乡区域协调发展、提高人民群众生活水平以及加强政府自身建设等方面的相关制度，使立法决策、立法进程与形势发展需要相适应，更好地为大局和发展服务。省和较大的市人民政府要组织编制本级政府立法项目库，根据社会关注、实践需要和条件成熟情况安排年度立法项目，增强政府立法工作的前瞻性、计划性、指导性和实用性。

（八）健全政府立法机制。完善公众参与方式，拓宽听取意见渠道，扩大征求意见范围，保证人民群众的意愿得到充分表达，合理诉求和合法利益得到充分体现。建立完善规范性文件听证制度，各级人民政府每年都要选取一些直接涉及公民、法人或其他组织切身利益的法规、规章草案或规范性文件草案进行听证。探索建立开放式、多元化的政府立法机制，对专业性强、社会影响大的立法项目，可邀请有关专家、专业机构参与起草或委托有关专业机构起草。强化政府法制机构在政府立法和规范性文件制定中的主导与协调作用。

（九）加强规章和规范性文件管理。严格实行规范性文件统一登记、统一编号、统一公布制度。严格执行规章、规范性文件备案审查制度，做到有件必备、有备必审、有错必纠。对违法制定下发规范性文件的，依法追究相关责任人的责任。政府规章实施满 1 年，应开展执行情况检查。事关经济社会发展全局和涉及人民群众切身利益的政府规章实施满 3 年、规范性文件发布满 2 年，应根据实施情况进行全面评估：所依据的上位法有重大修改或调整，以及涉及信访、行政复议、行政诉讼案件较多的规章、规范性文件，应及时进行评估，评估结果作为规
章和规范性文件修改或废止的重要依据。规章一般每 5 年，规范性文件一般每 2 年清理一次，清理结果向社会公布。规范性文件自发布之日起有效期一般不超过 5 年。

四、坚持依法科学民主决策

（十）规范行政决策程序。制定行政决策程序规定，健全公众参与、专家论证和政府决定相结合的行政决策机制，把公众参与、专家论证、风险评估、合法性审查和集体讨论决定作为重大决策的必经程序，保证行政决策合法、科学、民主。依法明确重大行政决策的具体范围、事项和量化标准并向社会公布，凡涉及公共利益和人民群众切身利益的重大决策事项都应进行听证。重大决策事项应在会前提交法制机构进行合法性审查，未经合法性审查或经审查不合法的，不得提交会议讨论、作出决策。落实重大行政决策报告制度。

（十一）完善行政决策风险评估机制。建立完善专家论证、公众参与、专业组织评估等相结合的风险评估机制，凡事关经济社会发展和人民群众切身利益的重大政策、重大项目等决策事项，都要进行合法性、合理性、可行性和可控性评估。评估事项主要包括：行政决策是否符合法律法规和国家政策，是否符合本地经济社会发展实际，是否做到公开公正公平，是否为绝大多数群众接受，出台的时机是否成熟，配套措施是否完善，所涉及资金是否到位，以及影响社会稳定和其他重大事项。通过综合评估确定决策事项的风险等级，凡风险不可控的，不得列入决策议程。

（十二）严格行政决策后评价和责任追究。对重大行政决策要跟踪执行情况，通过民意反映、抽样检查、跟踪反馈、评估审查，及时发现问题，纠正偏差，必要时作出停止执行的决定。各级人民政府每年要选取 1－2 件直接关系民生、对经济社会发展有较大影响的重大行政决策事项进行重点评估。严格执行决策责任追究制度，对超越法定权限、违反法定程序的决策行为以及行政决策失误造成严重后果的行为，都要依法依纪追究有关领导和直接责任人的责任。

五、加强和改进行政执法工作

（十三）完善行政执法体制。继续推进行政执法体制改革，探索建立行政执法
法级别管辖区制度，推动行政执法权力下放，减少行政执法层级。整合执法资源，加大综合执法推进力度，构建职能集中、管理规范、层级协调、上下一致、运行有效的综合执法体系，实现文化市场、资源环境、农业、交通运输管理等领域综合执法工作新突破。开展行政管理体制改革试点的经济发达镇成立综合行政执法机构，实行综合行政执法。加强对试点镇综合执法的监督管理。

（十四）推进行政执法规范化。行政执法部门依法行使权力、履行职责，维护公共利益和经济社会秩序。平等对待行政相对人，同样情形同等处理。制定行政程序规定，建立完善行政处罚、行政许可、行政检查、行政强制、行政征收等行政执法及其他行政管理中的回避、公开、告知、听证、说明理由等各项行政程序制度。制定行政裁量权具体工作规范，健全行政裁量权基准动态完善和有效应用机制。建立完善行政案件监督审查制度，开展重大行政处罚、重大行政许可备案审查工作。深入推行行政执法责任制。

（十五）创新行政执法方式。大力推行政执法信息化，积极推行移动执法和行政处罚裁量、文书制作电子化，用科技手段提升执法质量。以合法、规范、实用为原则，探索实行行政执法案例指导制度。建立完善行政执法风险防范机制，有效防范和控制执法风险。坚持教育指导为先，全面推行全程说理式执法、行政监管劝勉、执法事项提示、轻微问题告诫、突出问题约谈、重大案件回访等柔性执法方式。

六、切实加大行政监督和问责力度

（十六）加强内部层级监督和专门监督。构建科学合理的政府绩效评估指标体系和评估机制，建立行政机关依法行政档案，增强行政机关层级监督的针对性和实效性。保障和支持审计、监察部门依法独立行使监督权。审计、监察部门要根据不同地区和时期市场经济运行、行政权力运行情况和突出问题，确定审计和监察监督的重点领域、重点环节、重点岗位，开展专项审计和执法监察。探索建立行政机关内部监督联席会议制度。

（十七）自觉接受群众监督和舆论监督。在自觉接受人大监督、政协民主监督和人民法院依法实施监督的同时，更加重视人民群众的监督和社会舆论监督，建立完善群众举报投诉制度和保障新闻舆论监督制度，构建言路畅通、办理快捷、
反馈及时的社会监督运转机制。高度重视网络监督，用好网络问政平台，建立常态的政民网上互动机制和快速反应机制，积极回应民意诉求，主动与公众对话沟通，全面提升应对网络舆情的能力。

（十八）严格实施行政问责。认真执行《行政监察法》、《公务员法》、《行政机关公务员处分条例》和《党政领导干部问责暂行规定》，健全行政问责配套制度体系，严肃查处问责案件。坚持把行政不作为、失职渎职、滥用职权和严重损害群众利益的行为作为问责重点，做到有错必纠、有责必问。对因违法行政导致一个地区、一个部门发生重大责任事故、事件的，要依法依纪严肃追究有关领导直至行政首长的责任。问责决定一般应当向社会公开。

七、依法防范和化解社会矛盾

（十九）建立健全行政调解机制。建立政府负总责、政府法制机构牵头、各职能部门为主体的行政调解工作体制，制定完善行政调解制度，明确行政调解原则、范围、程序和相关规定，充分发挥行政调解在化解矛盾纠纷中的作用。各级人民政府及其部门应加强行政调解机构和调解员队伍建设，健全行政调解工作机制，推动行政调解工作创新发展。建立行政调解与人民调解、司法调解相衔接的大调解联动机制，实现各类调解主体的有效互动，形成调解工作合力。

（二十）加强行政复议工作。强化对复议受理活动的监督，建立作为被申请人的行政机关负责人重大复议案件出庭应诉制度，创新复议工作方式方法，全面提高复议质量和效率。加强复议制度、机构、队伍和业务工作规范化建设，健全适应复议工作特点的激励机制和经费装备保障机制。探索开展相对集中行政复议审理工作，扎实推进行政复议委员会试点。完善行政复议与信访的衔接机制。认真做好行政应诉工作，大力推行行政机关负责人出庭应诉。

（二十一）推进信访工作制度化、规范化和法治化。以改革创新精神扎实做好新时期信访工作，健全信访联席会议制度，联合接访机制和有效解决信访问题的保障机制，加快信访信息系统建设，形成“党委政府统一领导、信访主管部门统一管理、职能部门各司其职、纪检监察机关督促检查、全社会齐抓共管”的信访工作大格局。对可以通过复议、诉讼等法律程序解决的信访事项，积极引导当事人通过法律途径解决。
八、全面落实法治政府建设保障措施

（二十二）强化组织领导。认真落实行政首长负责制，建立完善由主要负责人牵头的依法行政领导协调机制，统一领导本地区、本部门依法行政工作。县级以上人民政府每年要对推进依法行政工作进行具体部署，县级以上人民政府常务会议、政府工作部门办公会议每半年要听取 1 次依法行政工作汇报，政府及其部门推进依法行政工作领导小组要定期召开成员单位负责人会议，研究解决依法行政工作重要事项。各级人民政府及其部门要根据实际，制订加快法治政府建设工作规划，明确目标任务、具体措施、完成时限、责任主体和奖惩措施。已制订工作规划的地方和部门要对照国务院及省政府有关规定进行修改完善。省政府工作部门要加强对本系统依法行政工作的指导、督促和检查。

（二十三）完善工作机制。建立符合国务院《纲要》精神和政府、部门实际的法治政府建设指标体系，科学评价建设情况和水平。根据分类指导、以点带面、重点突破、全面推进的原则，采取省、市、县协作，重点联系、培育典型等形式，促进有条件、基础好的地区加快推进法治政府建设。全面落实推进依法行政报告制度，按规定报告年度推进依法行政情况。加强和改进依法行政考核工作，考核指标纳入地方各级人民政府目标考核、绩效考核评价体系，考核结果作为对政府及部门领导班子和领导干部综合考核评价的重要内容。建立干部“德、能、勤、绩、廉、法”六位一体的述职述廉述法考评机制和依法行政工作激励机制。加强依法行政示范点培育管理。

（二十四）落实学法制度。各级人民政府及其部门要建立法律知识学习培训长效机制，重点落实领导干部学法制度。制订领导干部依法行政知识培训计划，力争用 2 年左右时间，将市、县人民政府领导班子成员和省、市、县人民政府部门负责人全部轮训一遍。县级以上人民政府常务会议每年集中学法不少于 2 次。认真负责政府法治部门领导职务干部任前法律知识测试和依法行政情况考察制度，测试考核结果作为任职的依据。行政学院和公务员培训机构要把行政机关公务员法律知识培训纳入工作计划，把依法行政知识纳入教学内容。建立行政执法人员上岗培训和日常培训、轮训常态化工作机制，行政执法人员法律知识培训时间每年不少于 15 天，培训情况和学习成绩作为行政执法人员任职晋职的依据之
（二十五）加强机构建设。高度重视法制机构建设，推行县级人民政府法制工作和机构规范化建设，保证法制机构规格、设置、编制与其他承担的职责任务相适应，法制机构办公、办案及推进依法行政工作经费全部纳入财政预算。乡（镇）人民政府、街道办事处配备 1—2 名专兼职法制员。加大对法制干部的培养、使用和交流力度，重视提拔使用政治素质高、法律素养好、工作能力强的法制干部。政府法制机构及其工作人员要提高新形势下面开展工作的能力和水平，努力当好政府及其部门领导在依法行政方面的参谋、助手和法律顾问。

（二十六）营造法治环境。全面推进依法行政，建设法治政府宣传教育工作，完善依法行政新闻发布会制度，抓实政府及其部门网站、刊物的依法行政宣传，提高依法行政工作宣传质量和效果。建立健全行政责任制度及信息工作例会、信息员培训等制度，提高信息工作水平。大力弘扬社会主义法治精神，加强法治文化建设，创新普法宣传形式，扎实推进行政机关、进乡村、进社区、进学校、进企业，为法治政府建设营造良好的社会氛围。

二〇一一年三月十九日
THE OPINIONS OF THE PEOPLE’S GOVERNMENT OF LIAONING PROVINCE ON ADVANCING THE BUILDING OF GOVERNMENT UNDER RULE OF LAW

[Promulgation Date] 2011-07-14


The People's Governments of all cities and counties, all commissions, offices, departments and bureaus directly under the People’s Government of Liaoning,

To achieve the goals of “the implementation outline of the state council for comprehensively promoting administration according to law”, pursuant to “the opinions of the State Council on strengthening the building of government under rule of law” (the State Council publication [2010] No. 33) and the reality of Liaoning, the people’s government of Liaoning proposes the requirements and scheme as follows:

I. Improve the capacity of administrating and performing duties according to law of civil servants especially of chief officials.

1. Promote the awareness of administrating and performing duties according to law of civil servants especially of chief officials, establish the proper environment of respecting, advocating and abiding by laws…

2. Establish the test and examination mechanism of administration according to law and legal knowledge of officials and cadres as significant basis of their appointment…

3. Increase the legal knowledge examinations in civil servants admission test and management. Legal knowledge questions shall possess more than 20% of scores in the civil servants admission test…

4. Improve the legal learning mechanism of officials and cadres. The governments of cities and counties shall conduct more than 2 seminars on administration according to law for officials and cadres…

5. Establish long-term legal knowledge learning and training mechanism. Administrative law enforcement personnel could conduct administrative law
enforcement only after them passed the legal test and achieve legal certifications…

II. Strengthen and improve institutional construction

6. Formulate legislation plan scientifically. We shall legislate laws focusing on accelerating the transformation of the mode of economic development, improving people's living standards, and strengthening government building and relevant aspects…

7. Institutional construction shall satisfy the legal authority and procedure. In accordance with the relevant laws and regulations, all kinds of Regulatory documents shall not set the administrative licensing, administrative penalties, and administrative enforcement unlawfully and shall not increase the obligations of citizens, corporations and other organizations unlawfully…

8. Increase public participation in legislation. Establish and complete democratic and open institutional construction mechanism…

9. Establish and complete the cost-benefit analysis system and social risk assessment system before the drafting of regulations and regulatory documents…

10. Further improve the coordinate mechanism of government legislation. Government legal departments shall play its dominant and coordinating functions in institutional construction…

11. Conduct evaluation after the enforcement of regulations and improve and complete the validity period mechanism of regulatory documents. Legislation authorities shall conduct evaluation in 3 years after the enforcement of regulations. For significant regulations, the evaluation shall be conducted in 1 year after the enforcement of these regulations and publish the evaluation results…

12. Clear up regulations and regulatory documents timely. Regulations shall be conducted clear-up woks every 1 year and regulatory documents shall be every 2 years…

13. Strengthen the review and recording work of regulations and regulatory
documents. The legislative authorities shall submit the legislations for the review and recording within 30 days after the date of promulgation…

III. Regulate administrative decision-making mechanism

14. Regulate administrative decision-making procedure. Make public participation, expert evaluation, risk assessment, legal review and collective discussion to be the necessary procedure of major decision-making…

15. Decision drafts shall be submitted to legal departments for legal review before it is made…

16. Establish administrative decision-making risk assessment mechanism…

17. Establish tracking and feedback mechanism of administrative decision-making. Organize experts or professional institutions to evaluate when it is necessary…

18. Establish and complete the accountability mechanism of administrative decision-making…

IV. Ensure strictly, standardized, fair and civilized law enforcement

19. All governments shall strictly perform duties according to law, pay more attention on social management and public service, emphasis on supporting and improving people’s livelihood…

20. Establish coordinate and adjudicate mechanism of administrative law enforcement disputes. Disputes between administrative law enforcement departments shall be settled by negotiation. When negotiation cannot reach agreement, disputes shall be submitted to the legal departments of their common upper government to coordinate and adjudge…

21. Improve and complete the financial support mechanism of administrative law enforcement. Administrative law enforcement authorities shall not damage use, withhold, or embezzle the confiscated property…

22. Standardize the administrative law enforcement discretion. All administrative law
enforcement departments of the governments shall establish the discretion standard of administrative penalties…

23. Improve and complete the recording and review mechanism of administrative law enforcement. The authority shall establish recording of administrative law enforcement includes administrative licensing, administrative penalties, and administrative enforcement and review the recordings timely…

24. Strengthen the management of administrative law enforcement personnel. Government legal departments shall verify the qualifications of the government-owned administrative law enforcement departments and publish the results in the media of the administrative zone…

25. Further establish and complete the accountability mechanism of administrative law enforcement. Administrative law enforcement departments shall conduct periodical evaluation of its law enforcement officers on their law enforcement performance…

V. Promote the disclosure of administration affairs comprehensively

26. Promote the disclosure of government information. Government information which involves significant policies information shall be published and open to the public timely and accurately except for confidential information according to law…

27. Improve the interactive platform between government and the public…

28. Promote the openness of administration. Relevant departments shall publish the basis, conditions, requirements, procedures and results of administration affairs; make the parties fully informed of the information related to the administration affairs…

VI. Strengthen the supervision and accountability of administration

29. All governments shall accept legal supervision from the People's Congress, the democratic supervision from the People's Political Consultative Committee, the supervision from judicial authorities, public supervision and media supervision
30. Strengthen internal hierarchical supervision and specific supervision. Guarantee and support audit and supervision departments exercise its supervisory power independently and lawfully…

31. Establish and complete the administration accountability mechanism and compensation mechanism. For the unlawful administrative conducts, liable person shall bear relevant responsibility…

VII. Resolve social conflicts and disputes according to law timely

32. All governments shall establish and complete effective social interests reflecting and social contradictions coordinating and resolving mechanism, establish scientific social prewarning and emergency reaction mechanism…

33. Conduct administrative reconsideration as a main method in resolving social contradictions and disputes…

34. Improve and complete administrative reconsideration organs and recruit administrative reconsideration personnel to ensure more than 2 personnel handling each administrative reconsideration case…

35. Clean the channel of administrative reconsideration and improve the efficiency of administrative reconsideration. The accepting rate of administrative reconsiderations which satisfy the legal condition shall be 100%...

36. Undertake the administrative lawsuit responding properly. Coordinate the People’s court in administrative lawsuits and support the People’s court to excise judicial power independently…

VIII. Establish the support mechanism of building government under rule of law

37. Establish the “administration according to law” leading group which in charge of lead and assign “administration according to law” work…

38. The chief officials of all governments and departments shall bear the first
responsibility of building government under rule of law…

39. Strengthen the planning and implement of building government under rule of law…

40. Strengthen the examination of building government under rule of law…

41. Strengthen the building of government legal departments, especially for cities and counties…

42. Further improve the promotion and education of administrating and performing duties according to law, building government under rule of law. Create a proper social environment for building government under rule of law…

2011.2.25
辽宁省人民政府关于加强法治政府建设的实施意见

各市人民政府，省政府各厅委、各直属机构：

为加快实现《国务院全面推进依法行政实施纲要》（以下简称《纲要》）提出的建设法治政府的奋斗目标，根据《国务院关于加强法治政府建设的意见》（国发[2010]33 号，以下简称《意见》），结合辽宁实际，制定本实施意见。

一、提高公务员特别是领导干部依法行政的能力

1、切实增强公务员特别是领导干部依法行政的意识，形成尊重法律、崇尚法律、遵守法律的良好氛围。公务员特别是领导干部要自觉养成依法办事的习惯，切实提高运用法治思维和法律手段解决经济社会发展中各种矛盾和问题的能力。要重视提拔使用依法行政意识强、善于用法律手段解决问题、推动发展的优秀干部。

2、建立依法行政情况考察和法律知识测试制度。拟任县级以上政府及其部门领导职务的干部，应对其是否掌握相关法律知识以及依法行政情况进行考察或测试，考察测试结果作为任职的重要依据。

3、加大对公务员录用及管理中法律知识测查力度。在公务员录用考试中，法律知识试题分值不少于试题总分比重的 20%。对从事行政执法、政府法制等工作的公务员，应当组织专门的法律知识考试，考试成绩达到良好以上的，方可从事行政执法、政府法制等方面的工作。

4、完善领导干部学法制度。各级政府及政府部门要制订年度法制讲座计划和学法计划，做到学法的计划、内容、时间、人员、效果“五落实”。市、县（市、区）政府每年至少举办 2 期领导干部依法行政专题研讨班，安排 1 次政府常务会议前学法活动。

5、建立法律知识学习培训长效机制。重点加强对行政执法人员通用法律知识培训、专业法律知识轮训和新法律法规专题培训。行政执法人员经过政府法制
培训机构考试合格，取得行政执法证件后，才可从事行政执法工作。各级政府部门应当定期组织行政执法人员参加专业法律知识培训，年度集中培训时间不少于一周。要把培训情况、考试成绩作为考核内容和任职晋升的依据。

二、加强和改进制度建设

6、科学确定立法计划。建立和完善向社会公开征集立法项目的体制和机制，鼓励单位和个人向政府提出立法意向。重点加强有关完善经济体制、改善民生和发展社会事业以及政府自身建设方面的立法。对社会高度关注、实践急需、条件相对成熟的立法项目，要作为重点，集中力量，尽早出台。

7、制度建设应当符合法定权限和程序，严格遵守宪法和上位法的规定，维护法制统一。必须从实际出发，遵循并反映经济和社会发展规律及制度建设本身的规律，切实增加制度的科学性和可操作性。不得违法设定行政许可、行政处罚、行政收费、行政强制等事项，不得违法增加公民、法人和其他组织的义务。

8、扩大立法的公众参与度，建立健全民主公开的制度建设机制。通过召开听证会、论证会、座谈会等形式征求社会各界关于制度建设的意见和建议。除依法需要保密的，地方性法规、规章和规范性文件草案都要向社会公开征求意见，统一反馈意见采纳情况。

9、建立健全法规、规章和规范性文件起草前的成本效益分析制度、社会风险评估制度。成本效益分析报告和社会风险评估报告应当作为审议草案的重要依据。

10、进一步完善政府立法的协调机制。加强政府法制机构在制度建设中的主导和协调作用，市、县（市、区）政府制发规范性文件，应当由政府法制机构进行审核，政府部门制定规范性文件应经部门的法制机构审核。要进一步强化立法协调的权威性，坚决克服制度建设过程中的部门利益和地方保护倾向。

11、做好规章实施后的评估工作，完善规范性文件有效期制度。制定机关要在规章施行后 3 年内组织评估，对重要规章应当在实施一年后组织评估并公布评估结果。规范性文件应当注明有效期，有效期最长不得超过 5 年。标注“暂行”、“试行”的，有效期不得超过 2 年。有效期满需要继续实施的，要在有效期届满前 6 个月组织评估，并重新公布。

12、及时开展规章和规范性文件清理工作。规章实施后每 5 年清理一次，规
规范化文件实施后每2年清理一次，但新的法律、法规施行，上级行政机关提出应当对规章、规范性文件进行清理，或者规章、规范性文件存在重大问题，或者不适应经济社会发展新形势要求的，应当及时进行清理。

13. 加大规章和规范性文件备案审查工作力度。制定机关要自觉规范性文件发布之日起30日内报送备案，报备率要达到100%。备案审查机关要严格审查报送备案的文件，定期通报各单位报送备案情况，及时依法处理公民、法人或者其他组织提出的审查建议，对违法或者不当的规章和规范性文件，要责令制定机关限期纠正并重新报送备案；拒不纠正的，依法予以撤销并向社会公布。

三、健全行政决策机制

14. 规范行政决策程序，健全行政决策规则。要把公众参与、专家论证、风险评估、合法性审查和集体讨论决定作为重大决策的必经程序。对政府重大投资建设、重大公共设施、公用事业价格调整、企业改制、土地征用、房屋搬迁、环境保护、教育医疗、社会保障制度改革等事项，在决策前应当充分吸收各方面意见，意见采纳情况及其理由要以适当形式反馈或者公布。涉及面广、与人民群众利益密切相关的行政决策事项，应当向社会公开征求意见。

15. 作出重大决策前，决策草案应由政府法制机构进行合法性审查，未经合法性审查或者经审查不合法的，不得提交讨论。作出重大决策必须经政府常务会议或者部门领导班子会议集体讨论决定，法制机构主要负责人应当列席会议。

16. 建立行政决策风险评估机制，做到“综合评估、风险可控”。各级政府及其部门要制订重大决策社会稳定风险评估机制的实施意见。

17. 建立行政决策跟踪反馈制度。重大行政决策实施满一年后，实施部门应当通过抽样检查、跟踪调查、效益指标考核等方式，提出对决策执行情况进行跟踪反馈报告。决策机关要根据收集到的意见和建议适时对决策进行评估，必要时组织专家或者委托专业机构进行评估，并适时调整和完善有关决策。

18. 健全行政决策责任追究制度。明确监督主体、监督内容、监督对象、监督程序和方式，实现决策权和决策责任的统一。对违反决策规定、出现重大决策失误、造成重大损失的，要按照“谁决策、谁负责”的原则严格追究责任。

四、全面保证严格、规范、公正、文明执法

19. 各级政府应当严格依法履行职责，要更加重视社会管理和公共服务，着
力保障和改善民生，切实解决就业、教育、医疗、社会保障、保障性住房等人民群众最关心的问题。加大行政执法力度，严厉查处危害安全生产、食品药品安全、自然资源和环境保护、社会治安等方面的违法案件，维护公共利益和经济社会秩序。研究建立行政执法级别管辖制度，深入推进相对集中行政处罚权制度，扩大实施领域，明确实施范围。一个部门内部有多支行政执法队伍的，要整合为一支执法队伍。理顺各类园区、开发区管委会的行政执法体制，明确其执法主体资格、职责。20、建立行政执法争议协调裁决制度。行政执法部门之间发生行政执法争议的，由双方协商解决。协商不能达成一致的，提请共同的上一级政府法制机构协调解决，协调无法达成一致的，由政府法制机构报请本级政府裁决。争议未经协调或者裁决之前，除关系公共安全或者公民人身安全的，行政执法部门不得单方作出行政处罚决定。政府法制机构对裁决执行情况进行监督。21、完善行政执法经费保障机制，实行罚缴分离、收支两条线的财政预算管理制度。行政执法部门不得规定行政处罚指标，实施罚款、没收违法所得、没收非法财物时，应当向当事人出具省财政部门统一制发的专用票据。行政执法部门不得损毁和使用、截留、坐支、私分罚没财物。行政执法工作所需经费纳入本级政府财政预算予以保障。不得以任何形式将罚没收入、行政事业性收费与行政执法部门的经费挂钩。22、规范行政执法自由裁量权。各级政府所属行政执法部门应当全部制定行政处罚自由裁量权实施标准。在建立行政处罚的基准制度、先例制度和说明制度的基础上，研究建立行政处罚自由裁量权实施标准的动态完善机制和有效应用机制，切实减少行政执法的随意性。开展规范行政审批（许可）自由裁量权工作，逐步建立规范行政审批（许可）自由裁量权制度。积极探索规范行政强制、行政征收、行政收费等领域的自由裁量权。23、健全行政执法案卷评查制度。严格执行《辽宁省行政执法案卷立卷标准（试行）》和《辽宁省行政执法文书档案管理办法》。行政执法部门应当建立行政许可、行政处罚、行政强制等行政执法的案卷。行政许可、行政处罚、行政强制等行政执法形成的监督检查记录、证据材料、执法文书等应当按照规定的标准进行收集、整理、立卷、归档，并实行集中统一管理。定期开展案卷评查，实现行
政执法案卷的规范化管理。

24、加强对行政执法队伍的管理。政府法制机构要对本级政府所属行政执法部门的行政执法主体资格进行审核确认，审核确认结果在本行政区域内新闻媒体上公告。依法委托其他行政机关或者组织行使行政执法职责的，由委托部门公告。垂直管理的行政执法部门的行政执法主体资格，由其所在地同级政府法制机构审核确认。行政执法人员必须经过统一考试，并取得政府法制机构核发的行政执法证件。禁止临时工、合同工及其他不具备执法资格的人员执法。

25、进一步健全行政执法责任制。行政执法部门要定期对本部门行政执法人员的执法情况进行评议考核，考核结果作为对行政执法人员奖励惩处和晋升晋级的重要依据。行政执法中存在严重问题的，不能评优和晋级，并依法追究责任。

五、全面推进政务公开

26、积极推进政府信息公开。完善政府信息公开规则，建立政府信息服务系统，加大便民服务力度。明确信息公开的范围、方式、时限、内容，除依法应当保密的以外，凡涉及公众关注的重大政策信息，都应当依法、准确、及时公布。在政府公众信息网上公开的政府信息应能够免费查阅、下载。推进财政预算、公共资源配置、重大建设项目批准和实施、社会公益事业建设等领域的政府信息公开。

27、完善政府与公众的互动平台。各级政府和政府部门应当加强与公众的信息沟通、交流，对于群众的呼声要及时回应，公众意愿要得到及时反映，充分保障公民的知情权、参与权、表达权和监督权。应当通过便于公众知晓的载体、方式公开政府信息，为公众查阅政府信息提供场所和其他便利条件。依申请提供政府信息，除依法可以收取的费用外，不得收取其他任何费用。

28、推进办事公开。要把公开透明作为政府工作的基本制度，拓宽办事公开领域。所有面向社会服务的政府部门都要全面推进办事公开制度，依法公开办事依据、条件、要求、过程和结果，充分告知办事项目有关信息。要规范和监督医院、学校、公交、公用等公共企事业单位的办事公开工作，重点公开岗位职责、服务承诺、收费项目、工作规范、办事纪律、监督渠道等内容。

六、强化行政监督和问责

29、各级政府应当自觉接受人大的法律监督、政协的民主监督、司法机关实
施的监督和人民群众及社会舆论的监督。要向同级人大常委会专项报告依法行政情况，认真办理人大议案和代表建议。主动听取政协的意见，认真办理政协委员关于政府工作的提案。自觉接受司法监督，行政诉讼出庭应诉率要达到100%，判决裁定依法履行率要达到100%。通过设置举报箱、意见箱、电子信箱、开通热线电话等形式，畅通社会监督渠道。

30、强化政府内部层级监督和专门监督。落实《辽宁省行政执法监督规定》，强化上级政府对下级政府，政府对其所属部门的监督管理。整合监督资源，加大监督力度，形成监督合力，围绕社会热点和民生等问题开展专项监督检查。不断规范政府派出机构的执法行为，规范乡镇政府委托村民自治组织实施行政管理的行为。保障和支持审计、监察等部门依法独立行使监督权。

31、健全行政责任追究和违法造成损失的追究赔偿制度。对行政不作为、失职渎职、滥用职权、以权谋私的行为，超越法定权限、违反法定程序做出决策和制定发布规范性文件的行为，违法实施行政许可、行政处罚、行政收费、行政强制的行为，以及因推进依法行政不力，导致发生严重违法行政案件、造成重大社会影响的，要依法追究严格追究责任人直至行政首长的责任。

七、依法及时化解社会矛盾纠纷

32、各级政府应当建立健全有效的反映社会诉求、协调解决社会矛盾的机制，建立科学完善的社会预警和应急反应机制。大力开展矛盾纠纷排查调处工作，对应当由行政机关调处的民事纠纷，行政机关应当依照法定权限和程序，遵循公开、公平、公正的原则及时处理。积极建立行政调解制度，科学界定行政调解范围，规范行政调解行为，发挥居民委员会、村民委员会等基层组织的调解作用。对资源开发、环境污染、公共安全事故等方面的社会纠纷，以及涉及人数较多、影响较大、可能影响社会稳定的社会纠纷，行政机关要主动进行调解。

33、充分发挥行政复议在解决矛盾纠纷中的主渠道作用。探索开展相对集中行政复议审理工作，积极试行由县级以上政府行政复议机构统一受理政府部门的行政复议案件。将调解工作列入行政复议案件审理重要程序，注重运用调解方式解决纠纷，提高案件调解结案率。调解达不成协议的，要及时依法公正做出复议决定。

34、健全行政复议机构，充实行政复议人员，确保每件行政复议案件均有2
名以上行政复议人员办理。实行行政复议人员资格制度，加快行政复议队伍职业化、专业化建设，开展行政复议后备人才培养工作。建立健全适应行政复议工作特点的激励机制和经费装备保障机制。

35、畅通行政复议渠道，提高行政复议效率。符合法定条件的行政复议申请按时受理率达到 100%，按时办结率达到 100%。对行政复议案件审理中发现的共性违法行政问题，行政复议机构要及时制发建议书，要求有关机关予以纠正，并向上级机关报告相关情况。

36、认真做好行政应诉工作。各级政府及政府部门要建立完善的行政应诉制度，积极配合人民法院的行政审判活动，支持人民法院依法独立行使审判权。建立行政首长出庭应诉制度，重大行政案件要由行政机关负责人出庭应诉。

八、建立法治政府建设的保障机制

37、各级政府及政府部门成立的由主要领导任组长的推进依法行政领导小组，应当负担起本地区、本部门推进依法行政组织领导责任，进一步加大贯彻实施《纲要》的力度，保证各项工作落到实处。要根据工作需要及主要领导的变化情况及时调整领导机构成员。加强对依法行政工作的总结，树立先进典型，定期进行表彰奖励。

38、各级政府及政府部门的主要领导是法治政府建设的第一责任人。政府常务会议至少每半年听取一次依法行政工作汇报，政府部门办公会议每季度听取一次依法行政工作汇报，及时解决本地区、本部门在推进依法行政工作中存在的突出问题。县级以上政府每年要书面向本级党委、人大常委会和上一级政府报告推进依法行政情况，政府部门每年要书面向上级政府和上一级政府有关部门报告推进依法行政情况。

39、加强对法治政府建设的规划和部署。市、县（市、区）政府要根据本地区经济社会发展状况，制定依法行政规划和年度工作计划，明确目标任务、具体措施、完成时限和责任单位。各市政府要在 2011 年上半年制定本地区法治政府建设标准，对法治政府建设的各项指标进行分解、细化和考核。

40、加强对依法行政的考核力度。落实《辽宁省依法行政考核办法》，完善依法行政考核机制，将依法行政考核评价结果纳入各级政府、政府部门及其工作人员绩效考核指标体系，并与组织人事部门的干部考核挂钩，作为干部奖惩任免
的重要依据。提高依法行政考核在对下级政府、政府部门绩效考核中的权重分值。

41、要按照《意见》和《辽宁省全面推进依法行政规划（2010—2014 年）》
要求，加强政府法制机构特别是市、县（市、区）政府法制机构的建设，加大政
府法制干部的培养、教育、使用和交流力度。各级政府法制机构要切实履行好在
推进依法行政、建设法治政府中所承担的统筹规划、综合协调、督促指导、监督
检查和考评等职责，充分发挥好参谋、助手和法律顾问的作用。

42、深入开展法治宣传教育，积极开展政府法制理论研究和社会主义法治理
念教育，充分利用“六五”普法活动，营造全面推进依法行政，加快建设法治政
府的良好环境。

二〇一一年二月二十五日
Several Opinions of the State Council on Encouraging and Guiding the Healthy Development of Private Investment
(No.13 [2010] of the State Council)

The people’s governments of all provinces, autonomous regions and municipalities directly under the Central Government, all ministries and commissions of the State Council and all institutions directly under the State Council:

Since the reform and opening up, the private investment in our country has developed and expanded continuously and become a vital force in promoting economic development, adjusting the industrial structure, prospering the rural-urban market and increasing social employment. While firmly consolidating and developing the public sector of the economy, we shall firmly encourage, support and guide the development of the non-public sectors of the economy and further encourage and guide private investment, which is conducive to adhering to and improving the basic economic system at the primary stage of socialism in our country, developing the mixed ownership economy on the basis of the modern property right system and promoting fair economic competition among all ownership systems and their joint development; which is conducive to improving the socialist market economy system, giving full play to the fundamental role of the market in the allocation of resources and building a market environment of fair competition; which is conducive to stimulating the inherent momentum of economic growth, stabilizing the foundation for sustainable development and promoting the stable yet rapid development of the economy in a long term; and which is conducive to increasing social employment, increasing residents’ income, driving domestic consumption and promoting social harmony and stability. We hereby put forward the following opinions:

I. Further enlarging the fields and scope of private investment

1. We shall thoroughly implement a series of policies and measures such as the Several Opinions of the State Council on Encouraging, Supporting and Guiding the Development of Individual, Private and Other Non-public Sectors of the Economy (No.3 [2005] of the State Council), and encourage and guide the entry of private capital into the industries and fields where such entry is not explicitly forbidden by a law or regulation. We shall regulate the access threshold of investment and create a market environment of fair competition and equal access. The standards for market access and preferential and supportive policies shall be open and transparent, various investors shall be treated equally, and no extra conditions shall be set exclusively for the private capital.

2. We shall clearly define the scope of government investment. Government investment shall be mainly made in the economic and social fields which relate to the national security and where resources cannot be allocated effectively through market. We shall encourage and support the entry of private capital in the infrastructure,
municipal works and other public service fields where market operations are practicable.

3. We shall further adjust the layout and structure of the state-owned economy. The emphasis of investment of state-owned capital shall be placed on constantly strengthening and consolidating the key industries and crucial fields relating to the lifeline of the national economy. We shall create broader market space for private capital in the ordinary competitive fields.

4. We shall actively boost reform in the fields of medicine, education and other social undertakings. We shall regard privately-run social undertakings as an important supplement to the development of public undertakings, and by making overall plans and rational layout, speed up the nurture and formation of a public service system with the government investment playing a dominant role and the private investment playing an ancillary role.

II. Encouraging and guiding the entry of private capital in the fields of basic industries and infrastructure

5. We shall encourage the participation of private capital in the transportation construction. We shall encourage the investment of private capital in the construction of railway, waterway, port and pier, civil airport, general aviation facilities and other projects in the form of sole proprietorship, controlling shareholding, non-controlling shareholding, etc. We shall press ahead with the research and making of plans on the reform of the railway system, introduce market competition, promote diversification of investors, encourage the participation of private capital in the construction of main lines and by-lines of railways, railway car ferries and railway stations, yards and other facilities, and allow the participation of private capital in the construction of coal lines, special passenger lines, urban railway transport and other projects in the form of holding non-controlling shares. We shall explore and establish the investment funds for the railway industry, actively support railway enterprises in accelerating their shareholding structure reform and going public, and provide more channels and ways for the entry of private capital in the field of railway construction.

6. We shall encourage the participation of private capital in the construction of water engineering projects. We shall establish a fee compensation mechanism, offer government subsidies, and in the form of bidding, contracting, leasing, etc., attract the investment of private capital in the construction of farmland water, inter-basin water transfer, integrated water resource utilization, water and soil conservation and other water engineering projects.

7. We shall encourage the participation of private capital in the electric power construction. We shall encourage the participation of private capital in the construction of new energy industries including wind energy, solar energy, geothermal energy, biomass energy, etc. We shall support the participation of private capital in the construction of hydraulic power plants and thermal power plants in the form of sole proprietorship, controlling shareholding or non-controlling shareholding, as well as its
participation in the construction of nuclear power plants in the form of non-controlling shareholding. We shall open wider the electric power market, actively promote the electricity price reform, accelerate the popularization of grid price competition, carry out project bidding, and improve the electric power supervision system, so as to create a sound environment for private power generating enterprises to participate in competition on equal footing.

8. We shall encourage the participation of private capital in the construction of oil and natural gas. We shall support the entry of private capital in the field of exploration and exploitation of oil and natural gas in the form of cooperation with the state-owned oil enterprises in the exploration and exploitation of oil and natural gas. We shall support the participation of private capital in the construction of facilities and networks for the storage, transportation and pipeline transport of crude oil, natural gas and petroleum products in the form of non-controlling shareholding.

9. We shall encourage the participation of private capital in the telecommunications construction. We shall encourage the entry of private capital in the basic telecommunications operation market in the form of non-controlling shareholding. We shall support private capital in the value-added telecommunications business. We shall strengthen the supervision over monopoly and unfair competition in the telecommunications field to promote fair competition and boost sharing of resources.

10. We shall encourage the participation of private capital in land consolidation and treatment as well as exploration and exploitation of mineral resources. We shall actively guide the participation of private capital in the construction of land consolidation, reclamation and other projects in the form of bidding, encourage and guide the investment of private capital in the recovery and treatment of the geological environment of mines, and insist on fully opening the mining right market to private capital.

III. Encouraging and guiding the entry of private capital in the fields of construction of municipal public utilities and policy-based housing

11. We shall encourage the participation of private capital in the construction of municipal utilities. We shall support the entry of private capital in the fields of urban water supply, gas supply, heat supply, sewage and garbage disposal, public transportation, urban park greening, etc. We shall encourage the active participation of private capital in the restructuring and reorganization of municipal utility enterprises and institutions, and may adopt a market-based operating mode for qualified municipal utility projects to transfer property right or operating right to the private sector.

12. We shall further deepen the reform of the municipal utility system. We shall actively introduce the mechanism of market competition, vigorously promote a bidding system for the investors and operators of municipal utilities, and establish a sound franchise system for municipal utilities. We shall improve the government procurement system, establish standard government supervision and fiscal subsidy
mechanisms, and accelerate the reform of the pricing and fee charge system of municipal utility products, so as to create a sound system environment for encouraging and guiding the entry of private capital in the field of municipal utilities.

13. We shall encourage the participation of private capital in the construction of policy-based housing. We shall support and guide the investment of private capital in the construction of policy-based housing, including low-income housing, public rental housing, etc., and the participation of private capital in the reconstruction of shanty towns, and private investors shall enjoy the corresponding policies on the construction of policy-based housing.

IV. Encouraging and guiding the entry of private capital in the field of social undertakings

14. We shall encourage the participation of private capital in the medical development. We shall support private capital in establishing medical institutions, including various types of hospitals, community health service institutions, sanatoriums, outpatient departments, clinics, health stations (infirmaries), etc., and participating in the restructuring and reorganization of public hospitals. We shall support private medical institutions in providing public health services, basic medical services and basic medical insurance services as a designated institution. We shall effectively carry out the taxation policies for non-profit medical institutions. We shall encourage the rational movement of medical human resources to private medical institutions, and ensure that private medical institutions are treated equally with public hospitals in terms of the introduction of talents, professional title evaluation, scientific research projects, etc. We shall strengthen supervision over various medical institutions in terms of medical quality, medical behaviors, fee charge standards, etc. to promote the soundness of private medical institutions.

15. We shall encourage the participation of private capital in the development of education and social training. We shall support private capital in establishing various educational and social training institutions, including institutions of higher learning, elementary and high schools, kindergartens, vocational schools, etc. We shall amend and improve the Regulation on the Implementation of the Non-state Education Promotion Law of the People’s Republic of China, effectively execute the talent encouragement policies and public finance subsidy policies for non-state schools, accelerate the formulation and improvement of financial, property right, social insurance and other policies for promoting the development of non-state education, and study and establish an exit mechanism for non-state schools.

16. We shall encourage the participation of private capital in the development of social welfare undertakings. We shall, in various forms such as land use assurance, credit support and government procurement, encourage the investment of private capital in the construction of specialized service facilities and the establishment of various social welfare institutions which provide support (nursing) services for the aged, recovery and nursing services for the disabled, etc.
17. We shall encourage the participation of private capital in the development of the cultural, tourism and sports industries. We shall encourage private capital to participate in advertising, printing, art performance, entertainment, cultural initiatives, cultural fair and exhibition, film production, network culture, cartoons and games, distribution of publications, digitalized production of cultural products and the relevant services, as well as the construction of cultural facilities including museums, libraries, cultural centers, cinemas, etc. We shall encourage the participation of private capital in the rational exploitation of tourism resources, construction of tourism facilities and various tourism and recreational activities. We shall encourage the investment of private capital in the production of sport goods and construction of various stadiums and fitness facilities, and encourage private investors to engage in sports, fitness, contest performance and other activities.

V. Encouraging and guiding the entry of private capital in the field of financial services

18. We shall allow the establishment of financial institutions with private capital. We shall ease the limitations on shareholding proportion in financial institutions, under the premise of strengthening effective supervision, promoting standard operations and preventing financial risks. We shall support the participation of private capital in the increase of registered capital and shares of commercial banks in the form of share purchase, as well as the restructuring of rural credit cooperatives and urban credit cooperatives. We shall encourage private investors to promote or participate in the formation of village banks, loan companies, rural mutual fund support bodies and other financial institutions, and relax the restrictions on a corporate bank’s minimum ratio of capital contribution to a village bank or community bank. We shall effectively carry out the policies on making full pre-tax loss provisions for loans to small- and medium-sized enterprises, and simplify the examination and approval procedures for write-off of bad debts of small- and medium-sized financial institutions. We shall properly relax the restrictions on the shareholding ratio of a single investor in a petty loan company, and apply the same financial subsidy policies for village banks to petty loan companies in their agriculture-related businesses. We shall support the establishment of credit guarantee companies with private capital, and improve the risk compensation mechanism and risk sharing mechanism for credit guarantee companies. We shall encourage the establishment of financial intermediaries with private capital and the participation of private capital in the restructuring and reorganization of securities, insurance and other financial institutions.

VI. Encouraging and guiding the entry of private capital in the field of commercial and trade circulation

19. We shall encourage the entry of private capital in the commodity wholesale and retail and modern logistics fields. We shall support the development of private wholesale and retail enterprises, and encourage the investment of private capital in chain operation, e-commerce and other new circulation forms. We shall guide the investment of private capital in the third-party logistical service field, create
conditions for private logistics enterprises to undertake the logistics outsourcing businesses of the traditional manufacturing industry and commercial and trade industry, and support the cooperative development and joint distribution services of small- and medium-sized private commercial and trade circulation enterprises. We shall accelerate the reform of the administrative system of the logistics industry, encourage the consolidation and full utilization of resources of logistics infrastructure, promote the network operation of logistics enterprises, build a convenient and highly efficient financing platform, create a fair and well-regulated market competition environment, and promote the socialization of logistical services and the market-based utilization of resources.

VII. Encouraging and guiding the entry of private capital in the industrial field of science and technology for national defense

20. We shall encourage the entry of private capital in the investment and construction fields of the industry of science and technology for national defense. We shall direct and support the orderly participation of private enterprises in the restructuring and reorganization of military industrial enterprises, encourage the participation of private enterprises in the development of high technologies for both military and civil uses and the industrialization thereof, and allow the participation of private enterprises in the military industrial production and scientific research tasks in accordance with the relevant provisions.

VIII. Encouraging and guiding the reorganization and amalgamation of private capital and its participation in the reform of state-owned enterprises

21. We shall direct and encourage private enterprises to combine private capital through the property right market for the rational flow of property rights and carry out acquisitions, mergers and restructuring across regions or industries. We shall encourage and support the rational flow of private capital within this country to realize the orderly and graded industrial transfer and its participation in the development of western China, revitalization of old industrial bases in northeast China, etc., rising of central China, construction of a new countryside as well as development for poverty alleviation. We shall support the significant growth of qualified private enterprises in both size and strength through amalgamation, reorganization, etc., i.e. into group companies with unique characteristics and strong market competitiveness.

22. We shall encourage and direct private enterprises to participate in the restructuring and reorganization of state-owned enterprises in various forms such as non-controlling shareholding, controlling shareholding and asset acquisition. We shall rationally reduce the proportion of state-owned capital in the state-owned holding enterprises. Private enterprises shall, during its participation in the restructuring and reorganization of state-owned enterprises, earnestly implement the policies and requirements of the state on assets disposal, debt disposal, social security, etc., properly settle employees pursuant to law, and protect the legitimate rights and interests of employees of enterprises.
IX. Propelling private enterprises to strengthen independent innovation, transformation and upgrade

23. We shall effectively carry out the preferential tax policies for stimulating enterprises to increase R&D input, to encourage private enterprises to make more R&D input, enhance their capacities of independent innovation and own core technologies with independent intellectual property rights. We shall assist private enterprises in establishing engineering research centers or technological development centers, increasing technology reserves and doing a good job in the training of technical personnel. We shall support the participation of private enterprises in the state’s key science and technology plan projects and technological breakthrough projects, so as to constantly improve the technological level and R&D capacities of enterprises.

24. We shall quicken the implementation of incentive policies for promoting the materialization of scientific and technological achievements, actively develop the technological market, and improve the science and technology achievement registration system, so as to provide conveniences for private enterprises to transfer and purchase sophisticated technologies. We shall accelerate the development and mechanism innovation of science and technology service institutions which provide such services as analysis and testing, inspection and test, business incubation, technological appraisal and technological consulting, so as to provide a service platform for the independent innovation of private enterprises. We shall actively promote market competition in the high-tech service fields such as information service outsourcing, intellectual property, technology transfer and achievement materialization, and support private enterprises in carrying out technical service activities.

25. We shall encourage private enterprises to make more efforts to develop new products and update and upgrade products. The research and development expenses incurred for new products may be deducted before tax under the policy of “deduction of expenses plus a percentage” pursuant to the relevant provisions. We shall encourage private enterprises to carry out brand strategies, strive to develop famous products and improve the quality of products and level of services. We shall encourage private enterprises to make technological improvements, eliminate backward production capacities and accelerate technological upgrade by speeding up depreciation of fixed assets and other means.

26. We shall encourage and direct private enterprises to develop strategic new industries. We shall encourage and direct them to transform and improve traditional industries through the extensive use of information technologies and other high-technologies, vigorously develop the circular economy and green economy and invest in the construction of new industries with development potentials such as energy conservation and emission reduction, water conservancy and consumption reduction, biomedicine, information network, new energies, new materials, environmental protection and comprehensive utilization of resources.
X. Encouraging and guiding the active participation of private enterprises in international competition

27. We shall encourage private enterprises to “go abroad” and actively participate in international competition. We shall support the internationalized operations of private enterprises in such fields as R&D, production and marketing, as well as their exploitation of strategic resources and establishment of international sales networks. We shall support private enterprises in carving out an international market through their own brands, independent intellectual property and independent marketing activities and accelerating the nurture of multinational enterprises and international famous brands. We shall support the formation of consortiums among private enterprises and between private enterprises and state-owned enterprises so that they could jointly make various forms of overseas investment by using their respective advantages.

28. We shall improve the promotion and safeguard system for overseas investment. We shall establish the policy consultation mechanism with the relevant countries to encourage and promote the international movement of private capital, carry out various forms of dialogue and exchange, and develop cooperative relations which are longstanding, stable, reciprocal and mutually beneficial. We shall strive for a favorable investment and trade environment and more preferential policies for private enterprises to “go abroad” by signing bilateral agreements on private capital cooperation and using the multilateral agreement system. We shall supplement and improve the policies on encouraging overseas investment, and treat private enterprises equally with other enterprises in terms of capital support, finance and insurance, foreign exchange administration, quality inspection, customs clearance, etc.

XI. Creating a sound investment for private investment

29. We shall clear and revise the provisions of laws, regulations and policies unfavorable for the development of private investment, tangibly protect the legitimate rights and interests of private investment, and nurture and safeguard an investment environment of equal competition. When formulating laws, regulations and policies involving private investment, we shall heed the opinions and suggestions of the relevant chambers of commerce and private enterprises so as to fully reflect the reasonable requirements of private enterprises.

30. We shall clarify the rules and unify the standards for government funds arranged by the relevant departments of the people’s governments at all levels, including but not limited to investments within the fiscal budget, special construction funds, funds for guiding venture investment, loans of international financial organizations and foreign governments, and equally treat various investors including private investors. We shall support the inclusion of products and services of private enterprises in the catalogue of government procurement.

31. Various financial institutions shall, on the basis of preventing risks, innovate and make flexible use of various financial instruments, increase their financing support for
private investment, and offer better financial services for private investment. The people’s governments at all levels and the relevant supervision departments shall constantly improve the financing guarantee system for private investment, improve the venture investment mechanisms, develop equity investment funds, and continue to support the financing of private enterprises on the stock and bond markets.

32. We shall conduct an overhaul of matters subject to administrative examination and approval which involve private investment, simplify steps, shorten time limits, further promote the openness and standardization of the contents, standards and procedures of administration, and increase the efficiency of administrative services. We shall further scrutinize and regulate the fees and charges involving enterprises to effectively alleviate the burden on private enterprises.

XII. Strengthening the services for private investment and the guidance and compliance administration of private investment

33. The statistics departments shall strengthen their statistical work on private investment so as to accurately reflect the progress and distribution of private investment. The competent investment departments, industrial administrative departments and industrial associations shall do a good job in the monitoring and analysis of private investment, keep track of the latest developments of private investment, and reasonably guide private investment. They shall strengthen the construction of investment information platforms, and timely publish the industrial policies of the state, development and construction plans, market access standards, latest information on industries at home and abroad and other information, so as to direct private investors to accurately judge situations and reduce blind investment.

34. We shall establish a sound service system for private investment. We shall give full play to the role of such self-disciplinary organizations as chambers of commerce and industrial associations, and actively nurture and develop intermediary organizations which provide legal, policy, consulting, finance, financial, technical, management, market information and other services for private investment.

35. We shall strengthen effective supervision when relaxing market access. The relevant departments of the people’s governments at all levels shall, in accordance with the requirements of the relevant laws and regulations, urge private investors to handle the investment and construction formalities, and urge private investors to abide by the state’s industrial policies and provisions on environmental protection, land use, energy conservation, quality, security, etc. We shall establish a sound enterprise credit system, and direct private enterprises to establish standard systems of property rights, finance, employment, etc. and conduct business pursuant to law. Private investors shall constantly improve their own quality and capacities, have a sense of good faith and a sense of responsibility, actively create conditions to satisfy the market access requirements and actively assume the corresponding social responsibilities.

36. We shall create a favorable public opinion atmosphere for the healthy development of private investment. We shall vigorously publicize the guidelines,
policies and measures of the CPC Central Committee and the State Council for encouraging, supporting and guiding the development of non-public sectors of the economy, and publicize and report objectively and impartially the positive role of private investment in promoting the economic development, adjusting the industrial structure, prospering the rural-urban market, expanding social employment, etc. We shall actively publicize the exemplary deeds of private entrepreneurs who conduct business according to law and in good faith, earnestly fulfill their social responsibilities and actively partake in public welfare undertakings.

All regions and all departments shall attach greater importance to the work of encouraging and guiding the healthy development of private investment, further emancipate mind, change notions, deepen reform, make innovations and seek truth; and in accordance with the requirements of these Opinions, lose no time in the research and formulation of detailed implementing measures, put the relevant policies and measures into practice as soon as possible, endeavor to create a policy environment and a public opinion atmosphere in favor of the healthy development of private investment, effectively promote the sustainable and sound development of private investment, promote the rational growth of investment, optimization of structure, increase of benefits as well as sound and rapid economic and social development.

State Council
May 7, 2010
国务院关于鼓励和引导民间投资健康发展的若干意见

国发[2010]13号

http://www.gov.cn/zwgk/2010-05/13/content_1605218.htm

各省、自治区、直辖市人民政府，国务院各部委、各直属机构：

改革开放以来，我国民间投资不断发展壮大，已经成为促进经济发展、调整产业结构、繁荣城乡市场、扩大社会就业的重要力量。在毫不动摇地巩固和发展公有制经济的同时，毫不动摇地鼓励、支持和引导非公有制经济发展，进一步鼓励和引导民间投资，有利于坚持和完善我国社会主义初级阶段基本经济制度，以现代产权制度为基础发展混合所有制经济，推动各种所有制经济平等竞争、共同发展；有利于完善社会主义市场经济体制，充分发挥市场配置资源的基础性作用，建立公平竞争的市场环境；有利于激发经济增长的内生动力，稳固可持续发展的基础，促进经济长期平稳较快发展；有利于扩大社会就业，增加居民收入，拉动国内消费，促进社会和谐稳定。为此，提出以下意见：

一、进一步拓宽民间投资的领域和范围

（一）深入贯彻落实《国务院关于鼓励支持和引导个体私营等非公有制经济发展若干意见》（国发[2005]3号）等一系列政策措施，鼓励和引导民间资本进入法律法规未明确禁止准入的行业和领域。规范设置投资准入门槛，创造公平竞争、平等准入的市场环境。市场准入标准和优惠政策要公开透明，对各类投资主体同等对待，不得对民间资本设置附加条件。

（二）明确界定政府投资范围。政府投资主要用于关系国家安全、市场不能有效配置资源的经济和社会领域。对于可以实行市场化运作的基础设施、市政工程和其他公共服务领域，应鼓励和支持民间资本进入。

（三）进一步调整国有经济布局和结构。国有资本要把投资重点放在不断加强和巩固关系国民经济命脉的重要行业和关键领域，在一般竞争性领域，要为民间资本营造更广阔的市场空间。

（四）积极推进医疗、教育等社会事业领域改革。将民办社会事业作为社会公共事业发展的重要补充，统筹规划，合理布局，加快形成政府投入为主、民间投资为辅的公共服务体系。

二、鼓励和引导民间资本进入基础产业和基础设施领域

（五）鼓励民间资本参与交通运输建设。鼓励民间资本以独资、控股、参股等方式投资建设公路、水运、港口码头、民用机场、通用航空设施等项目。抓紧制定铁路体制改革方案，引入市场竞争，推进投资主体多元化，鼓励民间资本参与铁路干线、铁路支线、铁路轮渡以及站场设施的建设，允许民间资本参股建设煤运通道、客运专线、城际轨道交通等项目。探索建立铁路产业投资基金，积极支持铁路企业加快股改上市，拓宽民间资本进入铁路建设领域的渠道和途径。

（六）鼓励民间资本参与水利工程建设。建立收费补偿机制，实行政府补贴，通过业主招标、承包租赁等方式，吸引民间资本投资建设农田水利、跨流域调水、水资源综合利用、水土保持等水利项目。
（七）鼓励民间资本参与电力建设。鼓励民间资本参与风能、太阳能、地热能、生物质能等新能源电力建设。支持民间资本以独资、控股或参股形式参与水电站、火电站建设，参股建设核电站。进一步放开电力市场，积极推进电价改革，加快推行竞争上网，推行项目业主招标，完善电力监管制度，为民营发电企业平等参与竞争创造良好环境。

（八）鼓励民间资本参与油气天然气建设。支持民间资本进入油气勘探开发领域，与国有石油企业合作开展油气勘探开发。支持民间资本参股建设原油、天然气、成品油的储运和管道输送设施及网络。

（九）鼓励民间资本参与电信建设。鼓励民间资本以参股方式进入基础电信运营市场。支持民间资本开展增值电信业务。加强对电信领域垄断和不正当竞争行为的监管，促进公平竞争，推动资源共享。

（十）鼓励民间资本参与土地整治和矿产资源勘探开发。积极引导民间资本通过招标投标形式参与土地整理、复垦等工程建设，鼓励和引导民间资本投资矿山地质环境恢复治理，坚持矿业权市场全面向民间资本开放。

三、鼓励和引导民间资本进入市政公用事业和政策性住房建设领域

（十一）鼓励民间资本参与市政公用事业建设。支持民间资本进入城市供水、供气、供热、污水和垃圾处理、公共交通、城市园林绿化等领域。鼓励民间资本积极参与市政公用企事业单位的改组改制，具备条件的市政公用事业项目可以采取市场化的经营方式，向民间资本转让产权或经营权。

（十二）进一步深化市政公用事业体制改革。积极引入市场竞争机制，大力推行市政公用事业的投资主体、运营主体招标制度，建立健全市政公用事业特许经营模式。改进和完善政府采购制度，建立规范的政府监管和财政补贴机制，加快推进市政公用产品价格和收费制度改革，为鼓励和引导民间资本进入市政公用事业领域创造良好的制度环境。

（十三）鼓励民间资本参与政策性住房建设。和支持和引导民间资本投资建设经济适用住房、公共租赁住房等政策性住房，参与棚户区改造，享受相应的政策性住房建设政策。

四、鼓励和引导民间资本进入社会事业领域

（十四）鼓励民间资本参与发展医疗事业。支持民间资本兴办各类医院、社区卫生服务机构、疗养院、门诊部、诊所、卫生所（室）等医疗机构，参与公立医院转制改组。支持民营医疗机构承担公共卫生服务、基本医疗服务和医疗保险定点服务。切实落实非营利性医疗机构的税收政策。鼓励医疗人才资源向民营医疗机构合理流动，确保民营医疗机构在人才引进、职称评定、科研课题等方面与公立医院享受平等待遇。从医疗质量、医疗行为、收费标准等方面对各类医疗机构加强监管，促进民营医疗机构健康发展。

（十五）鼓励民间资本参与发展教育和社会培训事业。支持民间资本兴办高等学校、中小学校、幼儿园、职业教育等各类教育和社会培训机构。修改完善《中华人民共和国民办教育促进法实施条例》，落实对民办学校的人才鼓励政策和公共财政资助政策，加快制定和完善促进民办教育发展的金融、产权和社保等政策，
研究建立民办学校的退出机制。

（十六）鼓励民间资本参与发展社会福利事业。通过用地保障、信贷支持和政府采购等多种形式，鼓励民间资本投资建设专业化的服务设施，兴办养老（托）老服务和残疾人康复、托养服务等各类社会福利机构。

（十七）鼓励民间资本参与发展文化、旅游和体育产业。鼓励民间资本从事广告、印刷、演艺、娱乐、文化创意、文化会展、影视制作、网络文化、动漫游戏、出版物发行、文化产品数字制作与相关服务等活动，建设博物馆、图书馆、文化馆、电影院等文化设施。鼓励民间资本合理开发旅游资源，建设旅游设施，从事各种旅游休闲活动。鼓励民间资本投资生产体育用品，建设各类体育场馆及健身设施，从事体育健身、竞赛表演等活动。

五、鼓励和引导民间资本进入金融服务领域

（十八）允许民间资本兴办金融机构。在加强有效监管、促进规范经营、防范金融风险的前提下，放宽对金融机构的股比限制。支持民间资本以入股方式参与商业银行的增资扩股，参与农村信用社、城市信用社的改制工作。鼓励民间资本发起或参与设立村镇银行、贷款公司、农村资金互助社等金融机构，放宽村镇银行或社区银行中法人银行最低出资比例的限制。落实中小企业贷款税前全额拨备损失准备金政策，简化中小金融机构呆账核销审核程序。适当放宽小额贷款公司单一投资者持股比例限制，对小额贷款公司的涉农业务实行与村镇银行同等的财政补贴政策。支持民间资本发起设立信用担保公司，完善信用担保公司的风险补偿机制和风险分担机制。鼓励民间资本发起设立金融中介服务机构，参与证券、保险等金融机构的改组改制。

六、鼓励和引导民间资本进入商贸流通领域

（十九）鼓励民间资本进入商品批发零售、现代物流领域。支持民营批发、零售企业发展，鼓励民间资本投资连锁经营、电子商务等新型流通业态。引导民间资本投资第三方物流服务领域，为民营企业承接传统制造业、商贸业的物流业务外包创造条件，支持中小型民营企业物流企业发展共同配送。加快物流业管理体制改革，鼓励物流基础设施的资源整合和充分利用，促进物流企业网络化经营，搭建便捷高效的融资平台，创造公平、规范的市场竞争环境，推进物流服务的社会化和资源利用的市场化。

七、鼓励和引导民间资本进入国防科技工业领域

（二十）鼓励民间资本进入国防科技工业投资建设领域。引导和支持民营企业有序参与军工企业的改组改制，鼓励民营企业参与军民两用高技术开发和产业化，允许民营企业按有关规定参与承担军工生产和科研任务。

八、鼓励和引导民间资本重组联合和参与国有企业改革

（二十一）引导和鼓励民营企业利用产权市场组合民间资本，促进产权合理流动，开展跨地区、跨行业兼并重组。鼓励和支持民间资本在国内合理流动，实现产业有序梯度转移，参与西部大开发、东北地区等老工业基地振兴、中部地区崛起以及新农村建设和扶贫开发。支持有条件的民营企业通过联合重组等方式做大做强，发展成为特色突出、市场竞争力强的集团化公司。
（二十二）鼓励和引导民营企业通过参股、控股、资产收购等多种形式，参与国有企业的改制重组。合理降低国有控股企业中的国有资本比例。民营企业在参与国有企业改制重组过程中，要认真执行国家有关资产处置、债务处理和社会保障等方面的政策要求，依法妥善安置职工，保证企业职工的正当权益。

九、推动民营企业加强自主创新和转型升级

（二十三）贯彻落实鼓励企业增加研发投入的税收优惠政策，鼓励民营企业增加研发投入，提高自主创新能力，掌握拥有自主知识产权的核心技术。帮助民营企业建立工程技术研究中心、技术开发中心，增加技术储备，搞好技术人才培训。支持民营企业参与国家重大科技计划项目和技术攻关，不断提高企业技术水平和研发能力。

（二十四）加快实施促进科技成果转化的鼓励政策，积极发展技术市场，完善科技成果登记制度，方便民营企业转让和购买先进技术。加快分析测试、检验检测、创业孵化、科技评估、科技咨询等科技服务机构的建设和机制创新，为民营企业的自主创新提供服务平台。积极推动信息服务外包、知识产权、技术转移和成果转化等高技术服务领域的市场竞争，支持民营企业发展技术服务平台。

（二十五）鼓励民营企业加大新产品开发力度，实现产品更新换代。开发新产品发生的研究开发费用可按规定享受加计扣除优惠政策。鼓励民营企业实施品牌发展战略，争创名牌产品，提高产品和服务水平。通过加速固定资产折旧等方式鼓励民营企业进行技术改造，淘汰落后产能，加快技术升级。

（二十六）鼓励和引导民营企业发展战略性新兴产业。广泛应用信息技术等高新技术改造提升传统产业，大力发展循环经济、绿色经济，投资建设节能减排、节水降耗、生物医药、信息网络、新能源、新材料、环境保护、资源综合利用等具有发展潜力的新兴产业。

十、鼓励和引导民营企业积极参与国际竞争

（二十七）推动民营企业“走出去”，积极参与国际竞争。支持民营企业在研发、生产、营销等方面开展国际化经营，开发战略资源，建立国际销售网络。支持民营企业利用自有品牌、自主知识产权和自主品牌，开拓国际市场，加快培育跨国企业和服务名企业。支持民营企业之间，民营企业与国有企业之间组成联合体，发挥各自优势，共同开展多种形式的境外投资。

（二十八）完善境外投资促进和保障体系。与有关国家建立鼓励和促进民间资本国际流动的政策磋商机制，开展多种形式的对话交流，发展长期稳定、互惠互利的合作关系。通过签订双边民间投资合作协议、利用多边协定体系等，为民营企业“走出去”争取有利的投资、贸易环境和更多优惠政策。健全和完善境外投资激励政策，在资金支持、金融服务、外汇管理、质检通关等方面，民营企业与其他企业享受同等待遇。

十一、为民间投资创造良好环境

（二十九）清理和修改不利于民间投资发展的法规政策规定，切实保护民间投资的合法权益，培育和维护平等竞争的投资环境。在制定涉及民间投资的法律、法规和政策时，要听取有关商会和民营企业的意见和建议，充分反映民营企业的
合理要求。

（三十）各级人民政府有关部门安排的政府性资金，包括财政预算内投资、专项建设资金、创业投资引导资金，以及国际金融组织贷款和外国政府贷款等，要明确规则、统一标准，对包括民间投资在内的各类投资主体同等对待。支持民营企业的产品和服务进入政府采购目录。

（三十一）各类金融机构要在防范风险的基础上，创新和灵活运用多种金融工具，加大对民间投资的融资支持，加强对民间投资的金融服务。各级人民政府及有关部门要不断完善民间投资的融资担保制度，健全创业投资机制，发展股权投资基金，支持民营企业进行融资。

（三十二）全面清理整合涉及民间投资管理的行政手续事项，简化环节，缩短时限，进一步推动管理内容、标准和程序的公开化、规范化，提高行政服务效率。进一步清理和规范涉企收费，切实减轻民营企业负担。

十二、加强对民间投资的服务、指导和规范管理

（三十三）统计部门要加强对民间投资的统计工作，准确反映民间投资的进展和分布情况。投资主管部门、行业管理部门及行业协会要切实做好民间投资的监测和分析工作，定期发布民间投资动态，合理引导民间投资。要加强投资信息平台建设，及时向全社会公开发布国家产业政策、发展规划和市场准入标准、国内外行业动态等信息，引导民间投资者正确判断形势，减少盲目投资。

（三十四）建立健全民间投资服务体系。充分发挥商会、行业协会等自律性组织的作用，积极培育和发展为民间投资提供法律、政策、咨询、财务、金融、技术、管理和市场信息等服务的中介组织。

（三十五）在放宽市场准入的同时，切实加强监管。各级人民政府有关部门要依照有关法律法规要求，切实督促民间投资主体履行投资建设手续，严格遵守国家产业政策和环保、用地、节能以及质量、安全等规定。要建立和完善企业信用体系，指导民营企业建立规范的产权、财务、用工等制度，依法经营。民间投资主体要不断提高自身素质和能力，树立诚信意识和责任意识，积极创造条件满足市场准入要求，并主动承担相应的社会责任。

（三十六）营造有利于民间投资健康发展的良好舆论氛围。大力宣传党中央、国务院关于鼓励、支持和引导非公有制经济发展的方针、政策和措施。客观、公正报道民间投资在促进经济发展、调整产业结构、繁荣城乡市场和扩大社会就业等方面的积极作用。积极宣传依法经营、诚实守信、认真履行社会责任、积极参与社会公益事业的民营企业家的先进事迹。

各地区、各部门要把鼓励和引导民间投资健康发展工作摆到更加重要的位置，进一步解放思想，转变观念，深化改革，创新求实，根据本意见要求，抓紧研究制定具体实施办法，尽快将有关政策措施落到实处，努力营造有利于民间投资健康发展的政策环境和舆论氛围，切实促进民间投资持续健康发展，促进投资合理增长、结构优化、效益提高和经济社会又快又好发展。

国务院
二〇一〇年五月七日