

Public Disclosure Authorized

**CONFORMED COPY**

---

---

**LOAN NUMBER 4864-CHA**  
**GRANT NUMBER TF057757-CHA**

# **Project Agreement**

**(Second Liaoning Medium Cities Infrastructure Project)**

**between**

**INTERNATIONAL BANK FOR RECONSTRUCTION  
AND DEVELOPMENT**

**and**

**LIAONING PROVINCE**

**Dated September 19, 2007**

---

---

## **PROJECT AGREEMENT**

Agreement dated September 19, 2007, entered into between INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT (“Bank”) AND LIAONING PROVINCE (“Project Implementing Entity”) (“Project Agreement”) in connection with:

- (1) the Loan Agreement (“Loan Agreement”) of the same date between PEOPLE’S REPUBLIC OF CHINA (“Borrower”) and the Bank; and
- (2) the Global Environment Facility Grant Agreement (“Co-financing Agreement”) of the same date between PEOPLE’S REPUBLIC OF CHINA (“Recipient”) and the Bank, acting as an implementing agency of the Global Environment Facility (“Co-financier”), for the Co-financing (as hereinafter defined).

The Bank and the Project Implementing Entity hereby agree as follows:

### **ARTICLE I – GENERAL CONDITIONS; DEFINITIONS**

1.01. The General Conditions (as defined in the Appendix to the Loan Agreement), with the modifications set forth below, constitute an integral part of this Agreement:

(a) Whenever used in the General Conditions, the term “Borrower” shall include the term “Recipient” and the term “Loan” shall include the term “Grant” except in Article III, Article IV and Sections 7.02(a), 7.05, 7.07 and 7.08 of the General Conditions.

(b) Whenever used in the provisions of Sections 5.01, 5.02, 5.09 and 5.11, the term “Legal Agreement” means any of the Loan Agreement, the Co-financing Agreement or the Project Agreement. “Legal Agreements” means collectively, all of such agreements.

(c) Whenever used in the provisions of Section 5.11, the term “Loan” means the Loan or the Co-financing.

1.02. Unless the context requires otherwise, the capitalized terms used in the Project Agreement have the meanings ascribed to them in the Loan Agreement or the General Conditions.

### **ARTICLE II – PROJECT**

2.01. The Project Implementing Entity declares its commitment to the objectives of the Project. To this end, the Project Implementing Entity shall: (a) carry out, and cause the Project Cities and Project Companies to carry out the Project in accordance with the provisions of Article V of the General Conditions; and (b) provide, or cause to be

provided, promptly as needed, the funds, facilities, services and other resources required for the Project.

2.02. Without limitation upon the provisions of Section 2.01 of this Agreement, and except as the Bank and the Project Implementing Entity shall otherwise agree, the Project Implementing Entity shall, and shall cause the Project Cities to carry out the Project in accordance with the provisions of the Schedule to this Agreement.

**ARTICLE III – REPRESENTATIVE; ADDRESSES**

3.01. The Project Implementing Entity’s Representative is the Governor or a Vice Governor; or such other person or persons as said Governor or a Vice Governor shall designate in writing, and the Project Implementing Entity shall furnish to the Bank sufficient evidence of the authority and the authenticated specimen signature of each such person.

3.02. The Bank’s Address is:

For the Bank:

International Bank for Reconstruction and Development  
1818 H Street, N.W.  
Washington, D.C. 20433  
United States of America

Cable:	Telex:	Facsimile:
INTBAFRAD Washington, D.C.	248423(MCI) or 64145(MCI)	1-202-477-6391

3.03. The Project Implementing Entity’s Address is:

For Liaoning Province:

Liaoning Provincial Department of Finance  
103 North Nanjing Street  
Heping District  
Shenyang  
Liaoning Province  
People’s Republic of China 110002

Facsimile:

86-24-2283-4167

AGREED at Beijing, People's Republic of China, as of the day and year first above written.

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

By /s/ David Dollar  
Authorized Representative

LIAONING PROVINCE

By /s/ Xu Weiguo  
Authorized Representative

## SCHEDULE

### **Section I. Institutional and Other Arrangements**

#### **Project Management**

1. The Project Implementing Entity shall maintain, and cause to be maintained, for purposes of carrying out the Project, the following organizations, with terms of reference, staffing and other resources acceptable to the Bank, throughout the period of implementation of the Project:

(a) the Project Coordination Group established at the provincial level, chaired by a Vice Governor of Liaoning to be responsible for providing policy guidance for the Project implementation;

(b) the Liaoning Provincial Department of Finance to be responsible for integrated management of the Project, including providing guidance to the LUCRPO and monitoring day-to-day Project implementation by the LUCRPO;

(c) the LUCRPO under the direction of qualified and experienced managers, staffed with competent personnel in sufficient number, and provided with adequate resources, all in a manner satisfactory to the Bank; said LUCRPO to be responsible for day-to-day Project implementation; and

(d) the Project Management Offices established by Fushun, Panjin, Yingkou, Yingkou EDZ, and Gaizhou to be responsible for day-to-day management of implementation of the Project within its respective jurisdiction.

#### **Resettlement, Environment Protection and Dam Safety**

2. The Project Implementing Entity shall:

(a) take, and shall cause Project Cities and Project Companies to take, all necessary actions to minimize to the extent possible any involuntary loss by persons of shelter, productive assets or access to productive assets or income or means of livelihood, temporarily or permanently in carrying out the Project; and

(b) for this purpose:

(i) prior to commencement of any civil works under the Project, cause the Project Cities and the Project Companies to implement their Respective Resettlement Action Plan, in each case in a manner satisfactory to the Bank; and

- (ii) whenever implementation of Part B of the Project in Fushun would give rise to Displaced Persons, provide, and cause the Project City concerned and its Respective Project Company to provide, (before commencing said Part of the Project) to the Bank for its review, a resettlement action plan prepared in accordance with the principles and procedures set forth in the Resettlement Policy Framework and, thereafter, implement in a manner satisfactory to the Bank such resettlement action plan as shall have been accepted by the Bank.

3. The Project Implementing Entity shall, and shall cause Project Cities and Project Companies to:

- (a) implement the Environmental Management Plan in a manner satisfactory to the Bank and designed to ensure that the Project is implemented in accordance with sound environmental standards and practices; and

- (b) without limitation upon the provisions of sub-paragraph 3(a) above, prior to commencement of any civil works under Part B of the Project in Fushun and Part C of the Project in Panjin, conduct, and cause Fushun and Panjin to conduct, environmental assessments and prepare and implement their respective environmental management plans pursuant thereto during implementation of said Parts of the Project in Fushun and Panjin respectively, all in a manner satisfactory to the Bank, and designed to ensure that Part B in Fushun and Part C of the Project in Panjin are implemented in accordance with sound environmental practices and standards.

4. The Project Implementing Entity shall, and shall cause Project Cities and Project Companies to:

- (a) maintain policies and procedures adequate to enable it to monitor and evaluate, in accordance with guidelines acceptable to the Bank, the implementation of the Environmental Management Plan, its respective Resettlement Action Plan, and the Resettlement Policy Framework, the achievement of the objectives of said Plans and said Framework, and to this end, engage experienced and qualified independent monitoring agencies acceptable to the Bank;

- (b) prepare under terms of reference satisfactory to the Bank, and furnish to the Bank by June 1 and December 31 of each year, commencing December 31, 2007, semi-annual reports of the results of such monitoring and evaluation activities, together with any revisions proposed to be introduced into such Plans and Framework in order to achieve their respective objectives; and

- (c) introduce such revisions into said Plans and Framework as shall have been agreed with the Bank.

5. (a) The Project Implementing Entity shall cause Gaizhou, by December 31, 2007, to engage an independent dam safety expert, with qualifications and experience and under terms of reference, satisfactory to the Bank. According to said terms of reference, the expert shall be responsible for: (i) reviewing and commenting on the adequacy of Shimen Dam's remedial works and mitigation measures being carried out according to the "Preliminary Design Report for Shimen Reservoir Dam Strengthening" prepared by the Liaoning Provincial Design Institute of Water Resources and Hydropower in 1999; and (ii) monitoring and evaluating the safety of Shimen Dam during Project implementation; and thereafter providing to the Bank reports of said monitoring and evaluation, together with any recommendations for remedial works required to be carried out.

(b) The Project Implementing Entity shall cause Gaizhou, by June 1, 2009: (i) to complete the dam safety remedial works according to the "Preliminary Design Report for Shimen Reservoir Dam Strengthening" prepared by the Liaoning Provincial Design Institute of Water Resources and Hydropower in 1999 and taking into account the recommendations made by said independent dam safety expert; and (ii) update the existing operation and maintenance manual and the existing emergency preparedness plan; all in a manner, satisfactory to the Project Implementing Entity and the Bank.

(c) The Project Implementing Entity shall, by June 1, 2009, update Dahuofang dam's existing operation and maintenance manual and emergency preparedness plan, in a manner satisfactory to the Bank.

### **Project Implementation**

6. The Project Implementing Entity shall cause each of Fushun, Panjin, and Yingkou ETZ: (i) by June 1, 2010, to prepare its respective comprehensive solid waste strategic sector plan, acceptable to the Bank, which shall include institutional, financial, and cost recovery arrangements, infrastructure planning, and a detailed action plan for implementation; (ii) by June 1, 2011, implement said solid waste strategic sector plan, in a manner satisfactory to the Bank.

7. The Project Implementing Entity shall cause Gaizhou, by June 1, 2009, to put in place arrangements, acceptable to the Project Implementing Entity and the Bank, for management of its wastewater facilities after studying good management models in the industry.

8. The Project Implementing Entity shall cause Fushun, by June 1, 2010, to: (i) formally transfer all its drainage assets to the Fushun Drainage Company for the purposes of managing all wastewater drainage and treatment facilities in Fushun in a comprehensive and integrated manner; and (ii) after completion of such transfer, take all necessary measures to enable Fushun Drainage Company to meet revenue requirements provided for in paragraphs 10, 11, 12, 13 of Annex A to this Schedule, including without limitation, adjustments of the levels of water supply tariffs and wastewater tariffs.

9. The Project Implementing Entity shall, through its Provincial Construction Department: (i) beginning June 1, 2009, and thereafter by June 1 each year, prepare and make public through the internet or in another manner acceptable to the Bank, an annual water and wastewater utility performance report, including operational and financial performance data for all the water supply and wastewater utilities in the Project Cities; (ii) by June 1, 2010, expand such report to include at least fifty percent (50%) of the water and wastewater utility companies in Liaoning Province; and (iii) by June 1, 2011, expand such report to include at least seventy five percent (75%) of the water and wastewater utility companies in Liaoning Province.

10. With respect to each Project Company's revenue requirements set forth in paragraphs 10, 11, 12, 13 of Annex A to this Schedule and its respective Financial Improvement Plan's requirements set forth in paragraph 15 of Annex A to this Schedule, the Project Implementing Entity shall cause each of the concerned Project Cities to take all necessary measures to enable its Respective Project Company to meet said requirements, including without limitation, adjustments of the levels of water supply tariffs and wastewater tariffs.

11. The Project Implementing Entity shall cause each of Fushun and Gaizhou to: (i) take all necessary measures to meet the requirements set forth in its Financial Improvement Plan, in a manner satisfactory to the Bank; (ii) by December 31 of each year commencing on December 31, 2008, update in accordance with the terms of reference satisfactory to the Bank, furnish to the Bank for review and comments, its rolling five (5) year Financial Improvement Plan (including, but not limited to, improved tariff collection efficiency, reduced operating costs, and adjusted utility tariffs); and (iii) take all necessary measures to carry out its Financial Improvement Plan as updated pursuant to the sub-paragraph (ii) in this paragraph taking into account the Bank's comments thereon.

12. For carrying out Part C of the Project in Fushun, prior to the selection of a consulting firm to prepare engineering design for said Part of the Project and in the event that the consulting firm contract is not financed by the Loan proceeds, the Borrower shall cause Fushun to furnish to the Bank the following documents for review and no-objection: (i) the terms of reference; (ii) a list of shortlisted consulting firms with their qualifications, experience, and contract cost estimates; and (iii) the negotiated and unsigned contract with the selected firm.

### **Financial Arrangements**

13. The Project Implementing Entity shall allocate to each Project City an amount of the Loan under arrangements satisfactory to the Bank, which shall include, without limitation, the following principal terms:

(a) the Project Implementing Entity shall make available the principal amount, which has been allocated to each Project City, in Dollars (determined on the



date, or respective dates, of withdrawal from the Loan Account) of the value of the currency or currencies so withdrawn on account of its Respective Parts of the Project;

(b) the Project Implementing Entity shall recover such principal amount so made available including the fee paid pursuant to Section 2.04 of the Loan Agreement, over a period of seventeen (17) years, inclusive of a grace period of five (5) years;

(c) the Project Implementing Entity shall charge interest on such principal amount, withdrawn and outstanding from time to time at a rate equal to the rate of interest applicable from time to time to the Loan pursuant to Section 2.05 of the Loan Agreement; and

(d) the Project Implementing Entity shall charge a commitment charge on such principal amount, not withdrawn from time to time at a rate equal to three-fourths of one percent (3/4 of 1%) per annum.

### **Subsidiary Loan Agreements**

14. The Project Implementing Entity shall cause each of Anshan, Haicheng, Panjin, Xincheng, Yingkou and Fushun to relend the portions of the proceeds of the Loan, which was allocated to it pursuant to paragraph 13 of Section I of this Schedule for the purposes of carrying out its Respective Project Companies' Respective Parts of the Project, to its Respective Project Companies under a subsidiary loan agreement to be entered into between said Project City and its Respective Project Companies: (i) on the principal terms set forth in paragraphs 1 through 4 of Annex A to this Schedule; and (ii) under conditions which shall have been approved by the Bank, and which shall include, without limitation, those set forth in paragraphs 5 through 15 of Annex A to this Schedule.

## **Section II. Project Monitoring, Reporting, Evaluation**

### **A. Project Reports.**

1. The Project Implementing Entity shall monitor and evaluate the progress of the Project and prepare Project Reports for the Project in accordance with the provisions of Section 5.08(b) of the General Conditions and on the basis of the indicators set forth in Annex B to this Schedule. Each such Project Report shall cover the period of one (1) calendar semester, and shall be furnished to the Bank not later than two (2) months after the end of the period covered by such report.

2. The Project Implementing Entity shall provide to the Borrower not later than six (6) months after the Closing Date, for incorporation in the report referred to in Section 5.08(c) of the General Conditions all such information as the Borrower or the Bank shall reasonably request for the purposes of that Section.

**B. Financial Management, Financial Reports; and Audits.**

1. The Project Implementing Entity shall and shall also cause each of the Project Cities to maintain a financial management system and prepare financial statements in accordance with consistently applied accounting standards acceptable to the Bank, both in a manner adequate to reflect the operations and financial condition of the Project Implementing Entity and each of the Project Cities, including the operations, resources and expenditures related to its Respective Parts of the Project.

2. The Project Implementing Entity shall and shall also cause each of the Project Cities to have its financial statements referred to above audited by independent auditors acceptable to the Bank, in accordance with consistently applied auditing standards acceptable to the Bank. Each audit of these financial statements shall cover the period of one (1) fiscal year of the Project Implementing Entity and the Project Cities. The Project Implementing Entity shall furnish the audited financial statements for each period after consolidating the audited financial statements provided by each of the Project Cities to the Borrower and the Bank not later than six (6) months after the end of the period.

**Section III. Procurement**

All goods, works and services required for the Project and to be financed out of the proceeds of the Loan shall be procured in accordance with the provisions of Schedule 2 to the Loan Agreement.

**ANNEX A  
to  
the SCHEDULE**

**Principal Terms and Conditions of the  
Subsidiary Loan Agreements**

For the purposes of paragraph 13 of Section I of the Schedule to this Agreement: (a) the terms of availability of the Loan proceeds shall be those set forth in paragraphs 1 through 4 of this Annex; and (b) the Subsidiary Loan Agreements shall be entered into on the conditions set forth in paragraphs 5 through 15 of this Annex.

**Terms of Availability**

1. The principal amount of the Subsidiary Loan made by each of Anshan, Haicheng, Panjin, Xincheng, Yingkou, and Fushun to each of its Respective Project Companies, shall be the amount equivalent in Dollars (on the respective dates of withdrawal from the Loan Account) of the value of the currency or currencies so withdrawn on account of its Project Company's Respective Part of the Project.
2. Each Project Company shall repay: such principal amount including an amount equal to one percent (1%), or such other percentage as may be determined by the Bank from time to time pursuant to Section 2.04 of the Loan Agreement, of such principal amount, over a period of not more than seventeen (17) years, inclusive of a grace period of five (5) years.
3. Each Project Company shall pay interest on the principal amount thereof withdrawn and outstanding from time to time at a rate not less than the rate of interest applicable from time to time to the Loan pursuant to Section 2.05 of the Loan Agreement.
4. Each Project Company shall pay a commitment charge on such principal amount, not withdrawn from time to time at a rate equal to three-fourths of one percent (3/4 of 1%) per annum.

**Conditions**

The Subsidiary Loan Agreements shall include the following principal conditions:

5. Each Project Company shall undertake to: (a) carry out its Respective Parts of the Project with due diligence and efficiency and in accordance with appropriate management, financial, engineering and public utility practices and social and environmental standards acceptable to the Bank, and provide, promptly as needed, the funds, facilities and other resources required for the purpose; and (b) without limitation on the foregoing, take all measures necessary to ensure that its Respective Parts of the

Project shall be implemented in accordance with its respective Resettlement Action Plan and the Environmental Management Plan.

6. Each Project Company shall undertake to procure the goods, works and consultants' services to be financed out of the proceeds of the Loan in accordance with the provisions of Section III of Schedule 2 to the Loan Agreement, and utilize such goods, works and consultants' services exclusively in the carrying out of its Respective Part of the Project.

7. Each Project Company shall undertake to enable the Bank, the Project Implementing Entity and the Project City concerned to inspect such goods and the sites and works included in the Respective Parts of the Project, the operation thereof, and any relevant records and documents.

8. Each Project Company shall undertake to take out and maintain with responsible insurers such insurance, against such risks and in such amounts, as shall be consistent with sound business practice, including, without limitation, such insurance to cover hazards incident to the acquisition, transportation and delivery of goods financed out of the proceeds of the Loan to the place of use or installation, any indemnity thereunder to be made payable in a currency freely usable to replace or repair such goods.

9. Each Project Company shall undertake to:

(a) Maintain records and accounts adequate to reflect in accordance with sound accounting practices its operations and financial condition.

(b) Have its financial statements (balance sheets, statements of income and expenses and related statements) for each fiscal year audited, in accordance with appropriate auditing principles consistently applied, by independent auditors acceptable to the Bank.

(c) Furnish to the Bank, the Project Implementing Entity and the Project Municipality or Project County concerned, as soon as available, but in any case not later than six (6) months after the end of each such year: (i) certified copies of said financial statements and accounts for such year as so audited; and (ii) an opinion on such statements by said auditors in such scope and detail as the Bank, the Project Implementing Entity and the Project Municipality or Project County concerned shall have reasonably requested.

(d) Prepare and furnish to the Bank, the Project Implementing Entity and the Project City, all such other information concerning said records, accounts and financial statements, as well as the audit thereof, as the Bank, Project Implementing Entity, and Project City concerned shall reasonably request.

(e) Each Respective Project Company shall undertake to:

- (i) maintain policies and procedures adequate to enable it to monitor and evaluate on an ongoing basis, in accordance with indicators set forth in Annex B of the Schedule to this Agreement the carrying out of its Respective Parts of the Project and the achievement of the objectives thereof; and
- (ii) prepare, under terms of reference satisfactory to the Bank, and furnish to the Project Implementing Entity for its review, consolidation in the Project Reports and submission to the Bank, semi-annual reports integrating the results of the monitoring and evaluation activities performed pursuant to clause (i) of this subparagraph (e) on the progress achieved in the carrying out of its Respective Parts of the Project during the period preceding the date of each such report.

10. Each of the Project Companies shall for each Fiscal Year, starting Fiscal Year 2008, undertake to produce:

- (a) total revenues, equivalent to not less than the sum of:
  - (i) its total operating expenses; and
  - (ii) the amount by which debt service requirements exceeds the provision for depreciation;

(b) review, before March 1 in each year starting Fiscal Year 2009, and on the basis of forecasts prepared by it and satisfactory to the Bank, whether it would meet the requirements set forth in subparagraph (a) hereof, in respect of such year and the next following fiscal year and furnish to the Bank the results of such review upon its completion; and

(c) if any such review shows that it would not meet the requirements set forth in subparagraph (a) hereof for the fiscal years covered by such review, promptly take all necessary measures (including, without limitation, adjustments of the structure or levels of its tariffs) in order to meet such requirements.

11. Each of the Project Companies shall undertake not to incur any debt unless a reasonable forecast of its revenues and expenditures shows that its estimated net revenues for each fiscal year during the term of the debt to be incurred shall be at least 1.3 times its estimated debt service requirements in such year on all of its debt including the debt to be incurred.

12. For purposes of this Schedule:

(a) The term “total revenues” means the terms of total operating revenues and net non-operating income.

(b) The term “total operating revenues” means revenues from all sources related to operations.

(c) The term “total operating expenses” means all expenses related to operations, including administration, adequate maintenance, taxes and payments in lieu of taxes, and provision for depreciation on a straight line basis at a rate of not less than 3.3% per annum of the average current gross value of the Project Company’s fixed assets in operation, or other basis acceptable to the Bank, but excluding interest and other charges on debt.

(d) The average current gross value of the Project Company’s fixed assets in operation shall be calculated as one half of the sum of the gross value of its fixed assets in operation at the beginning and at the end of the fiscal year, as valued from time to time in accordance with sound and consistently maintained methods of valuation satisfactory to the Bank.

(e) The term “debt service requirements” means the aggregate amount of repayments (including sinking fund payments, if any) of, and interest and other charges on, debt.

(f) The term “debt” means any indebtedness of the Project Company maturing by its terms more than one (1) year after the date on which it is originally incurred.

(g) Debt shall be deemed to be incurred:

(i) under a loan contract or agreement or other instrument providing for such debt or for the modification of its terms of payment on the date of such contract, agreement or instrument; and

(ii) under a guarantee agreement, on the date the agreement providing for such guarantee has been entered into.

(h) The term “net revenues” means the difference between:

(i) the sum of revenues from all sources related to operations and net non-operating income; and

- (ii) the sum of all expenses related to operations including administration, adequate maintenance, taxes and payments in lieu of taxes, but excluding provision for depreciation, other non-cash operating charges and interest and other charges on debt.
- (i) The term “net non-operating income” means the difference between:
  - (i) revenues from all sources other than those related to operations; and
  - (ii) expenses, including taxes and payments in lieu of taxes, incurred in the generation of revenues in (i) above.
- (j) The term “reasonable forecast” means a forecast prepared by the Project Company not earlier than twelve (12) months prior to the incurrence of the debt in question, which both the Bank and said Project Company accept as reasonable and as to which the Bank has notified said Project Company of its acceptability, provided that no event has occurred since such notification which has, or may reasonably be expected in the future to have, a material adverse effect on the financial condition or future operating results of said Project Company.

13. Whenever, for the purposes of this Schedule, it shall be necessary to value, in terms of the currency of the Borrower, debt payable in another currency, such valuation shall be made on the basis of the prevailing lawful rate of exchange at which such other currency is, at the time of such valuation, obtainable for the purposes of servicing such debt, or, in the absence of such rate, on the basis of a rate of exchange acceptable to the Bank.

14. Each of Anshan, Haicheng, Panjin, Xincheng, Yingkou, and Fushun shall have the right to suspend or terminate the right of its Respective Project Company to the use of the proceeds of the loan made available under the Subsidiary Loan Agreement with said Project Company upon failure by such Project Company to perform its obligations under the agreement.

15. Each of the Project Companies shall: (i) take all necessary measures to meet the requirements set forth in its Financial Improvement Plan, in a manner satisfactory to the Bank; (ii) by June 1 of each year commencing on June 1, 2008, update in accordance with the terms of reference satisfactory to the Bank, furnish to the Bank for review and comments, its rolling five (5) year Financial Improvement Plan (including, but not limited to, improved tariff collection efficiency, reduced operating costs, and adjusted utility tariffs); and (iii) take all necessary measures to carry out its Financial Improvement Plan as updated pursuant to the sub-paragraph (ii) in this paragraph taking into account the Bank’s comments thereon.

**ANNEX B to the SCHEDULE**

**Performance Indicators**

Outcome Indicators	1. Yingkou	2. Yingkou ETZ	3. Panjin	4. Fushun	5. Anshan	6. Haicheng	7. Gaizhou	8. Xingcheng
<b>Key Institutional Indicators</b>								
<b>1. Wastewater Utility Cost Recovery Ratio</b>		N/A			N/A	N/A		N/A
2006 Baseline	1.0		0.6	0.5			0.0	
2010	1.0		1.0	1.0			1.0	
2012	1.1		1.1	1.1			1.1	
<b>2. Water Supply Utility Cost Recovery Ratio</b>		N/A		N/A			N/A	
2005 Baseline	0.9		0.8		1.0	0.8		0.9
2010	1.0		1.0		1.1	1.1		1.0
2012	1.2		1.2		1.2	1.2		1.2
<b>3. Solid Waste Institutional Indicators</b>	Comprehensive City-Wide Cost Accounting Systems and Functional Management Information System (MIS)							
<b>Key Operational Indicators</b>								
<b>4. WWTP Pollution Reduction</b>		N/A			N/A	N/A		N/A
2005 WWTP Capacity (m3/day)	100,000		100,000	250,000			0	
2012 WWTP Capacity (m3/day)	200,000		150,000	250,000			50,000	
2012 BOD Removal From LMC-2 (tons/yr)	2,300		1,150	1,150			1,150	
2012 Total-N Removal From LMC 2 (tons/yr)	613		164	164			164	
2012 Total P Removal From LMC-2 (tons/yr)	77		44	44			44	
<b>5. Percent Decrease in Non-Revenue Water</b>		N/A		N/A			N/A	
2005 Baseline	45%		46%		37%	47%		55%
2010	41%		41%		33%	42%		50%
2012	36%		37%		30%	38%		44%
<b>6. Solid Waste Disposed (tons/day) in Landfill</b>	N/A				N/A	N/A	N/A	N/A
2005 Baseline		0	0	0				
Landfill Capacity		820	750	600				
2012		492	450	360				

**Notes:**

1. Panjin BOD removal will come from increased wastewater collection (75,000 m3/d) due to an expanded collection system
2. Modified Cost Recovery Ratio: Cash From Operations/(Operating Costs + (Greater of Debt Service and Depreciation)-does not include non-operating revenue
3. Key Assumptions

Percent Decrease in Non-Revenue Water = 20%

Percent Initial Utilization of Landfill Capacity = 60%

Percent Initial Utilization of WWTP Capacity = 60%  
WWTP BOD Influent = 125



### Performance Indicators

Intermediate Results	1. Yingkou	2. Yingkou ETZ	3. Panjin	4. Fushun	5. Anshan	6. Haicheng	7. Gaizhou	8. Xingcheng
<b>A. Wastewater</b>		N/A			N/A	N/A		N/A
i) New Wastewater Treatment Plant Capacity Under LMC-2	100,000		50,000	0			50,000	
ii) Kms of new or rehabilitated drainage pipelines-2012	68		19	37.8			21	
<b>B. Water Supply</b>		N/A		N/A			N/A	
i) Kms of new or rehabilitated pipelines-2012	59-Distribution; Transmission 31. (70,000 m3/day WTP)		133		122 (Upgrade WTP)	74		24
ii) Number of water meters installed under LMC-2-2012	0		93,000		65,000	25,000		2,200
<b>C. Solid Waste</b>	N/A				N/A	N/A	N/A	N/A
Constructed Landfill Capacity (tons/day)		820	750	600				
<b>D. Institutional Development</b>	<b>2008</b>		<b>2010</b>		<b>2012</b>			
i) Cumulative Number of Training Man-Days for Public Utility Program	100		400					
ii) Annual Provincial Utility Benchmarking Program	Covering All LMC-2 Cities		Covering All LMC-2 Cities and 50% of Other Cities		Covering All Cities in Liaoning			
iii) Solid Waste Master Plan			Master Plans in Fushun, Panjin, and Yingkou					
iv) Wastewater Master Plan			Master Plans in Fushun, Huludao, and Gaizhou					

