

Facility Administration Memorandum

MFF Project Number: 39653
Loan Number: 2426
March 2009

People's Republic of China: Guangdong Energy Efficiency and Environment Improvement Investment Program, Tranche 1

Important Note: This Facility administration manual is an active document. It will be updated and revised progressively as and when necessary during each review mission and following any changes in project investment costs, scope, or implementation arrangements. The contents herein are intended to assist and facilitate project management and implementation. If there is any conflict with any other legal agreements related to this Investment Program, the provisions in the legal agreements will prevail.

CURRENCY EQUIVALENTS

(as of 09 March 2009)

Currency Unit	–	Chinese yuan (CNY)
CNY1.00	=	\$0.133
\$1.00	=	CNY6.84

ABBREVIATIONS

ADB	–	Asian Development Bank
CDM	–	clean development mechanism
CEF	–	clean energy fund
CER	–	certified emission reduction
CMI	–	carbon market initiative
CO ₂	–	carbon dioxide
COD	–	chemical oxygen demand
CPP	–	conventional power plant
EA	–	executing agency
EARF	–	environmental assessment and review framework
EIA	–	environmental impact assessment
EPP	–	efficiency power plant
EPP-PMO	–	EPP project management office
ESCO	–	energy service company
FFA	–	framework financing agreement
FI	–	financial intermediary
FIL	–	financial intermediation loan
GPG	–	Guangdong Provincial Government
GDECC	–	Guangdong Energy Conservation and Monitoring Center
GDRC	–	Guangdong Provincial Development and Reform Commission
GETC	–	Guangdong Provincial Economic and Trade Commission
GFB	–	Guangdong Provincial Finance Bureau
GFTC	–	Guangdong Finance Trust Company Limited
HVAC	–	heating, ventilation, and air conditioning
LIBOR	–	London interbank offered rate
MFF	–	multitranches financing facility
MOF	–	Ministry of Finance
NO _x	–	nitrogen oxide
OCR	–	ordinary capital resources
PFR	–	periodic financing request
PPMS	–	project performance management system
PPTA	–	project preparation technical assistance
PRC	–	People's Republic of China
SEIA	–	summary environmental impact assessment
SIEE	–	summary initial environmental examination
SO ₂	–	sulfur dioxide

WEIGHTS AND MEASURES

GW (gigawatt)	–	1,000 MW
TWh (terawatt-hour)	–	10 ¹² watt-hour (Wh)
GWh (gigawatt-hour)	–	10 ⁹ Wh
MWh (megawatt-hour)	–	10 ⁶ Wh

1 KWh (kilowatt-hour)	–	10^3 Wh
t (ton)	–	1,000 kilogram (kg)

NOTE

In this report, "\$" refers to US dollars and "ton" refers to metric ton.

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MULTITRANCHE FINANCING FACILITY

- Guangdong Energy Efficiency and Environment Improvement Investment Program

Facility Processing History

	Milestone Event	Date
a.	Approval of PPTA (TA 4819-PRC)	19 July 2006
b.	Fact-finding	3-21 September 2007
c.	Management Review Meeting (MRM)	16 October 2007
d.	Appraisal Mission	Waived
e.	Staff review committee (SRC)	Waived
f.	Loan negotiations	2 April 2008
g.	Board circulation	2 May 2008
h.	Board consideration and approval	4 June 2008
i.	Loan and Project Agreements signed	29 September 2008
j.	Loan effectiveness, including conditions (include available dates)	9 January 2009

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impact Improvement of energy security and environmental conditions in Guangdong province</p>	<p>Guangdong's overall energy efficiency improved by 16% and emissions of SO₂ reduced by 15% by 2012</p>	<p>Project implementation reports, including monitoring and verification data</p> <p>Statistical yearbook of Guangdong</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • The PRC remains committed to improving energy efficiency and environmental protection • Sound macroeconomic and financial conditions in the PRC and Guangdong
<p>Outcomes Improvement in energy efficiency in industry and commercial sectors in Guangdong province</p>	<p>Energy savings of 532,767 MWh/yr</p> <p>Electricity bills for subprojects reduced by \$15.1 million by end of tranche 1 and \$42.6 million by end of Investment Program</p> <p>Substitution for 175,813 t/yr coal including emission reduction of 415,560 t/yr CO₂, 1,785 t/yr TSP, 4,795 t/yr SO₂, and 1,066 t/year of NO_x by 2012</p>	<p>Project implementation reports</p> <p>Statistical yearbook of Guangdong</p> <p>Subproject completion reports</p> <p>Multitranche financing facility (MFF) completion reports</p> <p>Investment program reports</p> <p>Postinstallation monitoring and verification results</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Energy efficiency continues to be a priority for the PRC and Guangdong • The proposed loan terms and procurement guidelines are attractive to ESCOs and direct energy users <p>Risk</p> <ul style="list-style-type: none"> • Insufficient capacity to implement the Investment Program
<p>Outputs EPP model established</p> <p>ESCO sector developed in Guangdong</p> <p>Capacity developed for promotion and assessment of energy efficiency projects</p> <p>Replication of the EPP model</p>	<p>Development of 107 MW EPP by 2011</p> <p>Subloans amounting to \$200 million extended within 15 years</p> <p>Financial support provided for at least six ESCOs</p> <p>Two workshops held on EPP, 20 end users trained on CDM, public education program implemented by 2012</p> <p>Similar programs for reducing power demand introduced to two other provinces by 2009</p>	<p>Project implementation reports, including monitoring and verification data</p> <p>Project financial reports</p> <p>Subproject completion reports</p> <p>MFF completion reports</p> <p>Investment Program reports</p> <p>Postinstallation monitoring and verification results</p>	<p>Assumptions</p> <ul style="list-style-type: none"> • Approval of tranche 1 of EPP subprojects by first half of 2008 and subsequent tranches by late 2008 and 2009 • Project is implemented as planned without delay <p>Risks</p> <ul style="list-style-type: none"> • Energy savings are less than calculated • Subborrowers are not creditworthy • The EPP-PMO may not be able to identify new subprojects

Activities with Milestones	Inputs
<p>Activity 1: Tranche 1</p> <ol style="list-style-type: none"> 1.1 ADB approves tranche 1 by mid-2008 1.2 GFTC and the EPP-PMO establish an investment program performance and monitoring system within 6 months of the effective date of the first loan agreement 1.3 Conduct workshops on EPP and CDM (June 2008–June 2009) 1.4 Dialogue with the PRC and provincial governments by end of 2008 <p>Activity 2: Tranche 2</p> <ol style="list-style-type: none"> 2.1 ADB approves tranche 2 by end of 2008 <p>Activity 3: Tranche 3</p> <ol style="list-style-type: none"> 3.1 ADB approves tranche 3 by end of 2009 3.2 Finalization of Investment Program by end of 2024 <p>(Note: Tranches 2 and 3 are indicative as the time, number, and amount of the tranches may change).</p> <p>Activity 4: Guangdong Energy Efficiency Fund</p> <ol style="list-style-type: none"> 4.1 GPG establishes Guangdong energy efficiency fund by the end of 2008 <p>Activity 5: Reporting</p> <ol style="list-style-type: none"> 5.1 GFTC submits quarterly financial subproject reports within 45 days of the end of each quarter 5.2 GFTC and the EPP-PMO submit quarterly progress reports on investment program implementation within 45 days of the end of each quarter 5.3 GFTC submits audited annual financial reports within 6 months after the fiscal year-end 5.4 GFTC and the EPP-PMO submit a project completion report within 6 months from physical completion of the first batch of subprojects financed under each financing tranche 5.5 GFTC and EPP-PMO submit an MFF completion report within 6 months from physical completion of all subprojects under the MFF 	<p>Program Investment: \$142 million</p> <ul style="list-style-type: none"> • ADB: \$100 million • Subborrowers: \$28 million • GPG: \$14 million <p>Tranche 1</p> <ul style="list-style-type: none"> • ADB: \$35 million • Subborrowers: \$10 million • GPG: \$5 million <p>Tranche 2</p> <ul style="list-style-type: none"> • ADB: \$35 million • Subborrowers: \$10 million • GPG: \$5 million <p>Tranche 3</p> <ul style="list-style-type: none"> • ADB: \$30 million • Subborrowers: \$8 million • GPG: \$4 million <p>Grant for Capacity Building for Energy Efficiency Implementation from Clean Energy Fund under the Clean Energy Financing Partnership Facility</p> <ul style="list-style-type: none"> • ADB: \$800,000 in phase I and \$1,200,000 in phase II <p>Additional capacity building assistance will be sought, as necessary, for implementation of the Investment Program</p>

I. PROGRAM DESCRIPTION

A. Project Area and Location

1. The Investment Program is to finance an efficiency power plant in Guangdong Province.

B. Impact and Outcome

2. The impact of the Investment Program will be an improvement of energy security and environmental conditions in Guangdong Province. The outcome will be an improvement in energy efficiency in industrial and commercial sectors in the province.

C. Outputs

3. The outputs include (i) establishment of an onlending model that will enable an EPP to be developed with annual 532 gigawatt-hours of energy savings and an equivalent 107 MW capacity, (ii) development of the ESCO sector in Guangdong, (iii) development of capacity for promoting and assessing energy efficiency projects, and (iv) replication of the EPP model in other provinces. Implementation of the EPP will avoid consumption of 175,813 tons/year (t/y) of coal, resulting in emission reductions of 415,560 t/y of CO₂, 1,785 t/y of total suspended particulates, 4,795 t/y of SO₂, and 1,066 t/y of NO₂. Post installation verification and monitoring will be carried out by a third party to ensure energy savings are achieved.

D. Special Features

1. Environmental Benefits and Impacts

4. An environmental assessment and review framework prepared for the Investment Program concludes that the Investment Program will provide an overall benefit to the environmental conditions in Guangdong. Regional air quality will improve and greenhouse gas emissions will be reduced as the need for coal-fired power will be reduced.

2. Social Benefits and Poverty Reduction

5. By including only retrofits of existing electricity consuming facilities, the Investment Program will not involve any land acquisition or resettlement. Therefore, no land acquisition or resettlement plan is needed. Negative social impacts resulting from worker layoffs are unlikely. The improvement in energy security and environmental quality under the Investment Program will benefit the poor more than the general population, as the poor are generally more vulnerable under adverse circumstances. The Investment Program will create a number of jobs in the energy efficiency service sector.

II. COST ESTIMATES AND FINANCING PLAN

A. Program Investment Plan

6. The Investment Program cost is estimated at \$142 million (Table 1). The total cost includes physical and price contingencies, and interest and other charges during implementation. Details of the subproject investment costs are in **Appendix 1**.

**Table 1: Program Investment Plan
(\$ million)**

Item	Amount
A. First Tranche	
Base Cost ^a	
a. Three End-User EPP Subprojects	5.6
b. Six Middle-User EPP Subprojects	38.6
Subtotal (A1)	44.2
Subtotal (A)	44.2
Total (A+B+C)	83.8
B. Subsequent Tranches	14.0
C. Implementation Cost ^b	142.0
Total	

^a In mid 2007 prices; includes physical and price contingencies, interest, and commitment charges.

^b Includes trust management fees, independent measurement and evaluation costs, clean development mechanism preparation and registration cost, provisions for loan defaults, EPP-Project Management Office administrative cost, and other implementation costs.

Sources: Guangdong provincial government and Asian Development Bank estimates.

B. Financing Plan

7. The Government has requested financing of up to an equivalent of \$100,000,000 from ADB's ordinary capital resources to help finance the Investment Program. Financing will be provided in accordance with ADB policy.¹ The MFF will extend multiple loans² to finance energy efficiency subprojects under the Investment Program, subject to the submission of a related periodic financing request (PFR) by the Government and execution of the related loan and project agreements. The Government has entered into a framework financing agreement (FFA) with ADB, and is required to comply with its requirements.³ The minimum amount of a PFR will be \$20,000,000. Each PFR will be accompanied by a list of EPP subprojects identified for financing. All provisions of the ordinary operations loan regulations applicable to loans based on the London interbank offered rate (LIBOR)⁴ will apply to each loan, subject to any modifications that may be included under the individual loan agreement. The Government has the option to choose between eligible currencies and the interest rate regime for each loan. The specific terms for each loan will be based on the related PFR with interest rate to be determined in accordance with ADB's LIBOR-based lending facility and the applicable commitment charge, and such other terms and conditions set forth in the draft loan and project agreements.

8. The first PFR for tranche 1 is for \$35,000,000 and is approved as a financial intermediation loan (FIL). It will have a term of 15 years. Subsequent tranches could support similar FIL or project loans.

9. Financing for each EPP subproject is inclusive of 20% equity by each subloan borrower. The GPG's contribution, about 10% of the Investment Program, will be used to cover fees for trust account administration, independent measurement of energy savings, financial incentives to attract more EPP contributors, and other implementation-related costs. The financing plan for the Investment Program is in Table 2.

¹ ADB. 2005. *Innovation and Efficiency Initiative: Pilot Financing Instruments and Modalities*. Manila.

² The number of tranches is anticipated to be between two and four depending on the readiness of subborrowers.

³ The draft framework financing agreement (FFA) formed part of the Memorandum of Agreement of the Fact-Finding Mission which was signed Guangdong Provincial Government (GPG) and endorsed by Ministry of Finance (MOF). The Framework Financing Agreement was signed on 2 April 2008.

⁴ ADB. 2001. *Ordinary Operations Loan Regulations Applicable to LIBOR-Based Loans Made from ADB's Ordinary Capital Resources*. Manila.

Table 2: Financing Plan (\$million)

Source	Total
A. Asian Development Bank	
1. Tranche 1	35.00
2. Subsequent Tranches	65.00
Total (A)	100.00
B. Guangdong Provincial Government	
1. Tranche 1	5.00
2. Subsequent Tranches	9.00
Total (B)	14.00
C. Subproject Entities	
1. Tranche 1	10.00
2. Subsequent Tranches	18.00
Total (C)	28.00
Total (A+B+C)	142.00

Sources: Executing Agency and Asian Development Bank estimates.

10. The borrower of each loan under the Investment Program will be the PRC, and the loan proceeds will be re-lent from the Government to GPG on the same terms and conditions as the ADB loan. GPG, through GFB, will entrust the loan proceeds to GFTC for onlending to EPP subborrowers. The interest rate will be set within the allowable band of the 6-month interest rate set by the People's Republic of China for lending by commercial banks. GFTC will set up a trust account specifically for this purpose. GPG will bear the foreign exchange risk as it is best suited to manage the risk because of its larger portfolio of foreign-funded investments, and its willingness to support the Investment Program as it relates to public goods, namely, energy security and environmental improvement. As subloans are repaid, the repayments, net of debt service payments to ADB, will be used to finance further batches of EPP subprojects.

III. IMPLEMENTATION ARRANGEMENTS

A. Investment Program Management

11. GPG will be the Executing Agency responsible for overall implementation of the Investment Program. GPG has established the EPP-PMO to implement the energy efficiency subprojects and will entrust GFTC as the financial intermediary for the purpose of lending to the subborrowers. The EPP Steering Committee (steering committee) is also in place comprising senior officials from Guangdong Province Economic and Trade Commission, Guangdong Development and Reform Commission, Guangdong Finance Bureau, and State Assets Supervision and Administration Commission. The Committee will be responsible for nonfinancial and technical assessment of applications and supervision of EPP subproject implementation. A diagram of the implementation and onlending model is in [Appendix 2](#).

12. GFTC, under the terms of a trust agreement with Guangdong Finance Bureau (representing GPG), will establish a separate unit to administer the trust. Its onlending responsibilities will include assessing the financial viability of the subprojects, disbursing funds and managing the subloan portfolio, including subloan collateral and guarantees, and preparing financial statements. For internal control purposes, GFTC maintains segregation of duties for the various functions of administration, financial accounting, and legal matters. It currently has adequate staff for managing the tranche 1 subloan portfolio. Additional staff will be engaged, as necessary, when the number of subloans increases. In the event that GFTC does not meet

performance standards to the satisfaction of ADB and GFB, or its financial health deteriorates significantly, GPG may, in consultation with ADB, propose a new financial intermediary.

B. Subproject Selection Criteria

13. The Investment Program will consider only retrofits of proven energy efficiency technologies in the following areas: (i) motors and motor-driven systems; (ii) transformers and reactive power compensators; (iii) lighting; (iv) heating, ventilation, and air conditioning; (v) air compressors and pumping systems; (vi) recovery of waste energy from industry; (vii) industrial boilers and industrial cogeneration; and (viii) other related energy efficiency improvement projects.

14. The EPP subprojects have been selected according to the criteria set out in **Appendix 3**. The EPP-PMO will apply the same criteria in the selection of subsequent subprojects. Subprojects that involve land acquisition or resettlement issues will not be considered. In subsequent batches of onlending, individual subloans that exceed \$10 million (the free limit) will be subject to prior review by and approval from ADB. For individual subloans below the free limit, ADB reserves the right to review subproject proposals and refuse financing for any subproject that does not meet the eligibility criteria or comply with ADB guidelines.

IV. IMPLEMENTATION PERIOD

15. The Investment Program will be implemented over 5 years between 2008 and 2012. The PFRs for the subsequent tranches are expected in 2009. The disbursement of the last tranche will be completed not later than 31 December 2012. Onlending to EPP subborrowers will take place according to the implementation schedule set forth in the subproject agreement signed by the EPP-PMO and the subborrowers.

V. PROCUREMENT

16. Procurement will be done in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time). Subborrowers will be required to follow the relevant procurement rules in ADB's *Procurement Guidelines* for financial intermediaries, and adopt appropriate procedures including (i) payment of reasonable prices; and (ii) fair canvassing when selecting suppliers. Procurement must be from ADB member countries. Subborrowers will be encouraged to procure goods through competitive bidding or shopping when such procedures are most appropriate in the interest of economy and efficiency. In case of noncompliance, GFTC will exercise the right to recall the subloan. The procurement plan is in **Appendix 4**.

A. Advance Contracting and Retroactive Financing

17. ADB has approved advance contracting and retroactive financing for the first loan. For each loan under the MFF, GPG may request advance contracting for the required energy efficient equipment, and retroactive financing of up to 20% of the first loan provided such expenses were incurred in accordance with procurement practices acceptable to ADB. For subsequent tranches, retroactive financing of otherwise eligible expenditures may be considered and allowed by ADB Management when included in a PFR. Total retroactive financing will not exceed an amount equivalent to 20% of the individual loan and must have been incurred not more than 12 months before the signing of the related legal agreements.

VI. DISBURSEMENT PROCEDURES

18. Disbursements under each PFR will be in accordance with ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). The loan proceeds will be paid through GFB to a trust account that will be set up upon loan effectiveness of the first loan at a commercial bank acceptable to ADB. The transfer of such loan proceeds from GFB to the trust account should take place promptly within 5 working days from approval by the State Administration of Foreign Exchange Guangdong Branch. The trust account will be managed by GFTC.

19. Disbursement arrangements for Tranche 1 are summarized below. The Disbursement Letter issued by the ADB Controller's department will provide the details.

- (i) **Subloans less than \$10,000,000.** Withdrawal requests for these subloans must be supported by the simultaneous application for subloan approval and withdrawal application (sample attached as **Appendix 5**), and certification from the GFB that the subloan and subproject agreements for the subproject have been executed between GFTC, EPP-PMO, and the subborrower.
- (ii) **Subloans greater than \$10,000,000.** Copies of the subloan and subproject agreements will be submitted together with the subloan approval and withdrawal statements.

20. The loan proceeds will be paid through GFB to a trust account that will be set up upon loan effectiveness of the first loan at a commercial bank acceptable to ADB. The transfer of such loan proceeds from GFB to the trust account should take place promptly within 5 working days from approval by the State Administration of Foreign Exchange Guangdong Branch

VII. PROJECT MONITORING AND EVALUATION

A. Monitoring

21. The investment program performance and monitoring system indicators and their relevance were discussed with GPG, EPP-PMO, and GFTC during project preparation. The indicators are included in the design and monitoring framework. The EPP-PMO, in cooperation with GFTC, will ensure that within 6 months of the effective date of the first loan agreement under the Investment Program, a performance and monitoring system is established. The system should also include a detailed plan for measuring and verifying actual energy savings of the implemented subprojects. The EPP-PMO and GFTC will undertake periodic project performance review under each subloan, in accordance with the performance and monitoring system to evaluate the scope, implementation arrangements, progress, achievements of the claimed energy savings, and other benefits of the projects and the overall Investment Program.

B. Accounting, Auditing, and Reporting Requirements

22. GFTC, the EPP-PMO, and each EPP subborrower will ensure that proper accounts and records are maintained and audited in a timely manner to adequately identify the use of loan proceeds. The following reports should be submitted to ADB:

From EPP-PMO:

- Quarterly Progress Reports (Deadlines: 45 days from the end of 31 March, 30 June, 30 September, and 31 December)
 - Progress made during the review period

- Physical progress of subprojects
 - Subprojects financed
 - Energy saving of each subproject
 - Problems encountered and remedial actions taken
 - Subsequent activities to be undertaken
- Investment Program Completion Report
 - To be prepared in cooperation with GFTC
 - To be submitted to ADB within 6 months of physical completion of all ADB-supported activities and subprojects under the Investment Program, i.e., after all the subloans extended under the Investment Program are repaid.

From GFTC:

- Quarterly Financial Reports (Deadlines: 45 days from the end of 31 March, 30 June, 30 September, and 31 December)
 - Transactions during the quarter
 - Loan defaults, if any
 - Use of loan proceeds
- Audited Annual Financial Statements (Deadline: 6 months after the fiscal year-end.)

VIII. MAJOR LOAN COVENANTS

23. The major loan covenants which have been agreed among the Government, the Executing Agency, the Implementing Agencies and ADB, to be complied with are in **Appendix 6**.

IX. IMPLEMENTATION OF THE ACCOMPANYING GRANT

24. ADB has approved a grant of \$2,000,000 for capacity building for energy efficiency implementation from the Clean Energy Fund under the Clean Energy Financing Partnership Facility, and the Climate Change Fund. The Government's counterpart funds, equivalent to \$1,493,000, will be through in-kind contributions (in the form of office space and facilities and salaries for counterpart staff).

25. Consultants under the Grant will be recruited by GPG according to ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). Consulting firms will be selected through international competition using the quality- and cost-based selection method. Full technical proposals will be required and be evaluated based on the quality-cost ratio of 80:20. Grant proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2007, as amended from time to time); direct payment and reimbursement procedures will be used.

26. Advertisement seeking expression of interests for the consulting services has been advertised in the ADB website.

X. KEY PERSONS INVOLVED IN THE PROJECT

27. The following are the key persons responsible for the implementation/administration of the Project.

Asian Development Bank

Name	Position/Office	Contact
(vacant)	Director Energy Division East Asia Department	Tel. No.: +63-2 6326659 Fax No.: +63-2 6362302 Email:
Siew Fing Wong	Sr. Financial Analysis Specialist Principal Project Officer	Tel. No.: +63-2 6326165 Fax No.: +63-2 6362302 Email: sfwong@adb.org
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Consuelo Javier	Assistant Project Analyst (Alternate to Sheila Bulanhagui)	Tel. No.: +63-2 6366820 Fax No.: +63-2 6362302 Email: cjavier@adb.org

Executing Agency

Name	Position/Office	Contact
Mr. Li Shuyuan	Director, Government Debt Management Division	Tel. No.: +8620 83336260 Fax No.: +8620 83330007 Email: li136376@yahoo.com.cn
Ms. Cao Yuying	Deputy Director, Guangdong Finance Bureau	Tel. No.: +8620 83332479 Fax No.: +8620 83330007 Email: cyy@gdwbo.gov.cn
Mr. Chen Jian	Director, Guangdong Energy Conservation & Monitoring Center (also PMO)	Tel. No.: +8620 83351728 Fax No.: +8620 83352049 Email: jianchen@163.net
Mr. Ling Zhichao	Deputy Director, Guangdong Energy Conservation & Monitoring Center	Tel. No.: +8620 83353285 Fax No.: +8620 83352049 Email: lzclzc@gdecc.cn

XI. ANTICORRUPTION

28. ADB's *Anticorruption Policy* (1998, as amended to date) was explained to and discussed with the Government, GPG, EPP-PMO, and GFTC. Consistent with its commitment to good governance, accountability and transparency, ADB reserves the right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Investment Program. To suppose these efforts, relevant provisions of ADB's *Anticorruption*

Policy (1998) are included in the loan regulations and bidding documents under the Investment Program.

29. The ADB Office of the Auditor General is the point of contact to report allegations of fraud and corruption among ADB-financed projects or its staff. Within that office, the Anticorruption Unit is responsible for dealing with all matters related to allegations of fraud and corruption. ADB's Anticorruption Policy Handbook has been provided separately to the EA and is also available on ADB's website at <http://www.adb.org/anticorruption>.

DETAILED COST ESTIMATES

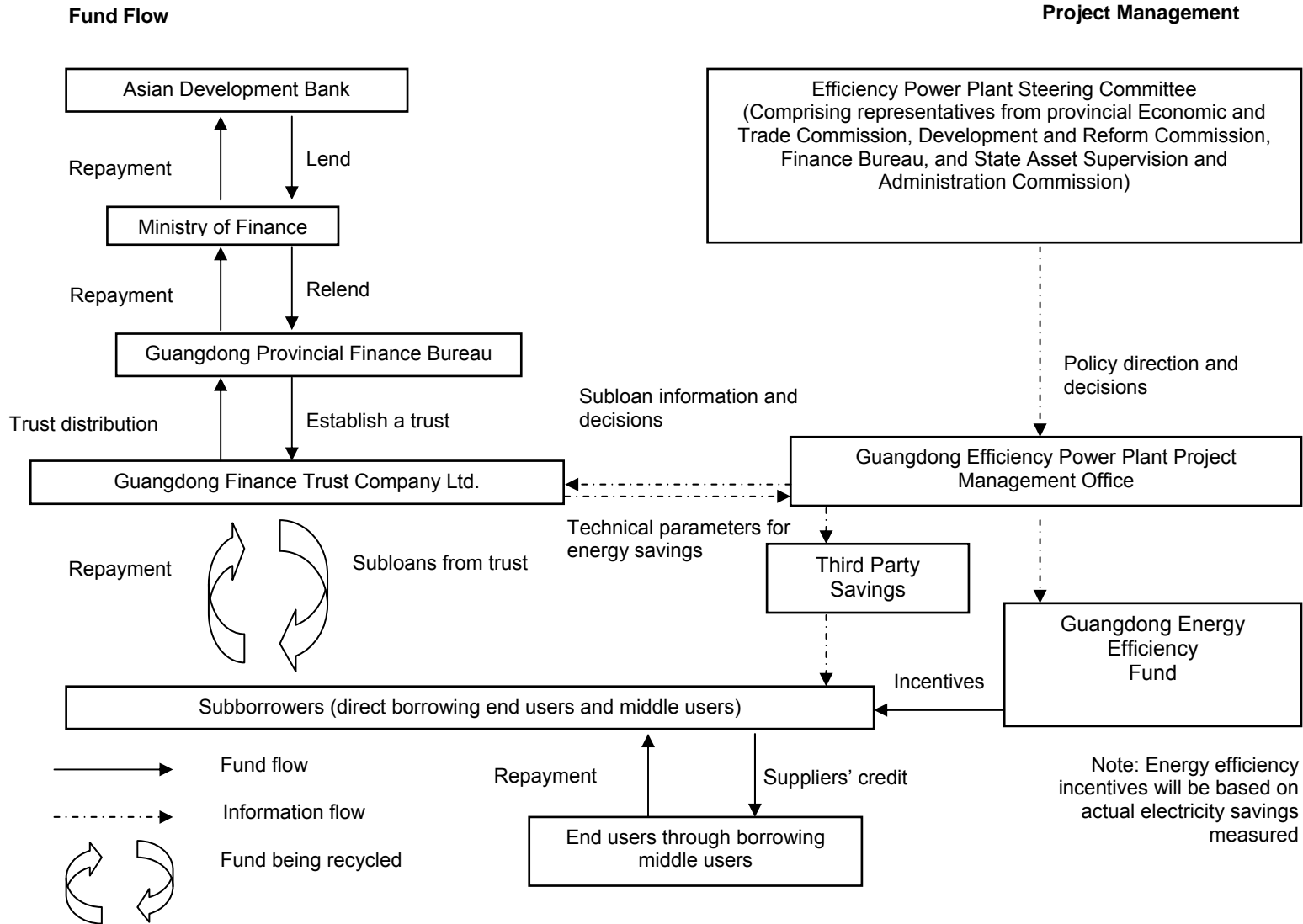
(\$ million)

A. Tranche 1 Retrofits	Total Cost
1. End Users	
a. Fenghua Advanced Technology Co.	
Heating, ventilation, and air conditioning	0.82
Air compression system	0.19
Lighting	0.24
Industrial gas treatment	0.91
Transformers/voltage control	0.51
Subtotal (A1a)	2.68
b. Guangzhou Iron and Steel Co.	
Electric equipment	0.54
Lighting	0.08
Power factor improvement	0.20
Industrial process	0.09
Subtotal (A1b)	0.91
c. Huizhou S.E. Thermo-Electricity Co.	
CHP boiler	1.60
Lighting	0.02
Electric equipment	0.40
Subtotal (A1c)	2.02
Subtotal (1)	5.60
2. Middle Users (ESCOs/manufacturers)	
a. HongTai Trade Co.	
Zhaoqing street lighting control system	0.58
Donguan street lighting control system	0.50
China Mobile stations HVAC	1.67
Subtotal (A2a)	2.75
b. Guangzhou Jinguan (G.K.) Co.	
Commercial bldg HVAC	1.05
Precision HVAC management system	0.45
Industrial motor-drive (LV)	1.00
Industrial motor-drive (HV)	0.83
Subtotal (A2b)	3.33
c. Haihong Co.	
Efficient transformer retrofit	8.33
d. Guangzhou Zhiguang Electric Co.	
Motor-drive system retrofit	12.53
e. Laifu Electric Co.	
Power factor correction equipment	10.00
f. Zhuhai Secopower Transformer Co.	
Efficient transformer retrofits	1.67
Subtotal (2)	38.62
3. Implementation Cost	5.78
Tranche 1 Total (1 + 2 + 3)	50.00
B. Subsequent Tranches	83.78
C. Implementation Cost	8.22
Total	142.00

CHP = combined heat and power; Co = company; ESCO = energy service company; HV = high voltage; HVAC = heating, ventilation, and air conditioning; LV = low voltage.

Note: (i) On average, less than 5% contingencies and less than 2% interest during implementation are included in the total cost. (ii) Implementation costs, i.e., item 3, will be financed by Guangdong provincial government and the subborrowers. (iii) ADB will finance 100% of the amount claimed up to the maximum amount available under the loan. Sources: Guangdong provincial government and Asian Development Bank estimates.

GUANGDONG EFFICIENCY POWER PLANT ONLENDING MODEL



SUBPROJECT SELECTION CRITERIA AND PERIODIC FINANCING APPLICATION PROCEDURE FOR GUANGDONG

A. Subproject Selection Criteria

1. The following criteria will apply to efficiency power plant (EPP) subprojects that are financed in various batches under the Guangdong Energy Efficiency and Environment Improvement Investment Program (Investment Program):

2. Technical Criteria. The criteria include the following:

- (i) The EPP subproject must use proven high efficiency technologies with reliable, measurable, and verifiable energy savings that will contribute to the achievement of the energy conservation goals set forth in Guangdong's Mid- and Long-Term Energy Conservation Plan, and the 11th Five-Year Plan of the People's Republic of China.
- (ii) The estimated EPP subproject cost and energy saving are reasonable and consistent with the energy savings claimed by the equipment manufacturers and/or general engineering principles.
- (iii) The simple payback period (total investment cost by annual savings in electricity bill) is less than 5 years in the case of end-users.

3. Subproject Economic and Financial Criteria. The criteria include the following:

- (i) The total economic benefits must exceed the total economic costs of the proposed subproject.
- (ii) The economic internal rate of return of the EPP subproject must be greater than the discount rate of 12%.
- (iii) The economic internal rates of return are viable under adverse sensitivity scenarios.
- (iv) Savings in electricity bills are adequate to cover the loan repayments in the case of end-users.
- (v) The financial internal rate of return will be greater than the weighted average cost of capital.
- (vi) The financial internal rates of return are viable under various sensitivity scenarios.

4. Subborrower Financial Criteria. The criteria include the following:

- (i) The subborrower does not have a bad credit record, based on the People's Bank of China credit history database.
- (ii) The subborrower should meet the following financial performance indicators: (a) total debt/equity ratio: less than 75%, (b) debt service ratio: greater than 1.2, and (c) current ratio: at least 1.2. In the event a subborrower does not meet these indicators but the projected energy savings are considerably higher than average, it should provide acceptable collateral and/or loan guarantee for the amount of the subloan or as agreed with GFTC.
- (iii) The subborrower must contribute a minimum of 20% of the total EPP subproject investment cost as counterpart financing.

5. Subproject Social and Environmental Criteria. The criteria include the following:

- (i) The proposed subprojects will be energy efficiency projects located within Guangdong province.
- (ii) The subprojects do not involve land acquisition, or involuntary resettlement or have adverse impacts on indigenous people.
- (iii) The subprojects will not be located in any designated environmental protection zone.
- (iv) Each subproject must be designed, constructed, and operated in accordance with relevant national and provincial social and environmental laws and regulations.

6. In the event that a subproject has good energy savings potential, but does not meet some of these criteria, then such subproject will be submitted to the EPP Steering Committee for consideration.

B. Periodic Financing Application Procedures for Guangdong

7. Approval of EPP subprojects intended for financing under the Investment Program will follow the applicable provincial and national procedures. Subproject applicants should complete the EPP application forms provided by the EPP-PMO.

8. The EPP subprojects of the first tranche under the Investment Program have been assessed and prepared under ADB project preparatory technical assistance.⁵ They are included in the first periodic financing request submission. For subprojects to be included in the subsequent financing tranches and for subsequent batches of subloans, the procedures will be as follows:

- (i) GFTC and the EPP-PMO will review the subproject applications and assess project feasibility against established criteria. GFTC and the EPP-PMO will be responsible for the financial and technical assessment of the subprojects, respectively.
- (ii) GFTC and the EPP-PMO will submit an appraisal report on the subprojects to the steering committee for review.
- (iii) The EPP-PMO will submit information on individual subprojects that exceed \$10 million to ADB for review and prior approval.
- (iv) Upon review of the subprojects by the steering committee, the EPP-PMO will prepare and submit the necessary documents and information to the Guangdong Development and Reform Commission (GDRC) for approval.
- (v) The GDRC will submit the foreign capital utilization report to the National Development and Reform Commission for approval.
- (vi) GPG, through the Ministry of Finance, will formally submit the periodic financing request to ADB.

⁵ ADB. 2006. *Technical Assistance to the People's Republic of China for Preparing Energy Conservation and Resource Management Project*, Manila (TA 4819-PRC, for \$300,000, approved on 19 July).

PROCUREMENT PLAN

Table A10.1: Investment Program Information

Investment Program Information	The Investment Program is to finance an efficiency power plant (EPP) in Guangdong province, equivalent to 107 megawatts (MW), using the financial intermediation loan (FIL) modality. Nine subprojects have been selected for tranche 1. Subprojects for subsequent tranches have not yet been identified. The energy savings will result from retrofitting existing equipment with more efficient equipment, which in aggregate, will reduce the need to construct and operate a conventional coal-fired power plant. It will consider only retrofits of proven energy efficiency technologies in the following areas: (i) motors and motor-drive systems; (ii) transformers and reactive power compensators; (iii) lighting; (iv) ventilation, heating, and air conditioning; (v) air compressors and pumping systems; (vi) recovery of waste energy from industry; (vii) industrial boilers and industrial cogeneration; and (viii) other related energy efficiency improvement projects.
Country	People's Republic of China
Name of Borrower	People's Republic of China
Investment Program Name	Guangdong Energy Efficiency and Environment Improvement Investment Program
Loan Reference No.	TBD
Date of Effectiveness	TBD
Amount \$:	Tranche 1: \$35 million
Of which Committed, \$	20% has been requested to be eligible for retroactive financing
Executing Agency:	Guangdong provincial government
Approval Date of Original Procurement Plan	
Approval of Most Recent Procurement Plan	
Publication for Local Advertisements	Procurement notices in China Daily (ICB), and China bidding website (NCB and shopping)
Period Covered by this Plan	18 months from loan effectiveness

A. Centralized Procurement

1. For centralized procurement by the EPP Project Management Office, the following thresholds outlined in Table A10.2 and Table A10.3 will apply.

Table A10.2: Procurement Thresholds, Goods and Related Services, Works, and Supply and Installation

Procurement Method	Amount (\$)
ICB Works	≥10,000,000
ICB Goods	≥1,000,000
NCB Works	≥100,000
NCB Goods	≥100,000
Shopping Works	<100,000
Shopping Goods	<100,000

ICB = international competitive bidding, NCB = national competitive bidding.

Table A10.3: Procurement Thresholds, Consulting Services

Procurement Method	Amount (\$)
QCBS	>200,000
CQS	≤200,000
LCS	≤100,000

CQS = consultants qualifications selection, LCS = least-cost selection, QCBS = quality- and cost-based selection.

B. Procurement by Subborrowers

2. All procurement must be from ADB member countries.
3. For procurement of goods, works, and services by subborrowers that are state-owned enterprises, procedures applicable to state-owned enterprises will be followed.
4. For subborrowers that are from the private sector, goods, works, and services will be procured according to appropriate procedures, including
 - (i) reasonable prices being paid, and
 - (ii) fair canvassing when selecting suppliers.
5. Procurement procedures will be in accordance with the procurement manual prepared by GPG, acceptable in form and substance to ADB, and approved by the EPP Steering Committee.

**Table A10.4: List of Contract Packages in Excess of \$100,000
for Tranche 1 Consulting Services**

Contract Description	Estimated Cost (\$ million)	Procurement Mode	Estimated Date for Advertisement	Prior Review (Y/N)
Capacity Building Consultant (Technical)	1.0	QCBS	May 2008	Y
Capacity Building Consultant (Financial)	0.5	QCBS	May 2008	Y
Capacity Building Consultant (Policy and implementation research)	0.5	QCBS	May 2008	Y

QCBS = quality- and cost-based selection.

Source: Asian Development Bank assessment.

**Simultaneous Application for Subloan Approval and Withdrawal (SAW)
Summary Sheet**

Asian Development Bank



Asian Development Bank

Subloan No.	Sub-Borrower	Industry Sector/ ISIC Code	Nature of Enterprise/ Location	Project Description	Subloan Purpose ^a	Project Cost	Loans Approved Total FG ^b	Claim %	Sub-loan Amount	Date Paid	Country of Origin	Remarks ^c
1	2	3	4	5	6	7	8	9	10	11	12	13

ISIC - International Standard Industrial Classification Code

Notes:

- a Please indicate whether the project is new (N) or involves expansion (E), balancing (B), modernization (M), and replacement (R).
- b Should relate to item 6.
- c Specify maturity (grace period), interest rate, security taken, and any other relevant data.

MAJOR COVENANTS

Project Specific Covenants	Reference	Due Date	Status/Action to be Taken
Sector			
<p>1. Selection and Approval of Subprojects GPG shall cause GFTC and the EPP-PMO to, (i) select and approve subprojects in accordance with the criteria and procedures stipulated in Schedule 4 to the FFA; and (ii) execute each Subloan Agreement on terms and conditions referred to in Section 3.02(c) of the Loan Agreement and Sections 2.03 and 2.04 of this Project Agreement.</p>	PA, Schedule, para. 8		Seven subloans and subproject agreements have been signed. Discussions with the potential subborrower are ongoing for the utilization of the remaining funds under Tranche 1.
Environmental			
<p>2. Guangdong Energy Efficiency Fund. GPG shall establish Guangdong Energy Efficiency Fund to provide support for: (i) direct financial incentives for EPP subprojects based on actual energy savings; (ii) capacity building and information dissemination activities; (iii) promotion of clean development mechanism (iv) expenses related to the EPP-PMO and GFTC for the Investment Program Implementation; and (v) other activities designed to promote energy conservation.</p>	PA, Schedule, para. 1.		Guangdong EE fund has been established.
<p>3. Energy Efficiency Policy Framework GPG shall establish an energy efficiency policy framework to expand and accelerate participation of end uses in energy efficiency improvement. At a maximum, GPG shall establish by (a) maximum per unit energy consumption for selected energy intensive industries such as cement, iron and steel, metals, electricity generation, transmission and distribution, petrochemical, chemicals, papers, construction materials, and other industries, and related energy auditing and enforcement regulations, and (b) incentives (such as direct financial incentives funded by GPG budget to end users based on achieved energy savings) to overcome financial barriers to end users' participation in energy efficiency improvement projects.</p>	PA, Schedule, para. 2		Ongoing

Economic			
4. Policy Change GPG shall inform ADB in due course of any changes in its energy efficiency regulations, power pricing, power dispatch and similar other policies that may adversely affect the financial viability of the Project.	PA, Schedule, para. 3		Not yet due
5. Investment Program Performance and Monitoring System (PPMS) GPG shall ensure that within 6 (six) months of the Effective Date, the EPP-PMO shall establish an IPPMS. The IPPMS shall be in a form and substance acceptable to ADB in accordance with the Investment Program performance indicators. The IPPMS shall include, among others, a detailed plan for measuring the verifying actual energy savings of the implemented subprojects. GPG shall ensure that the EPP-PMO and GFTC undertake periodic performance review under each subloan, in accordance with the IPPMS to evaluate the scope , implementation arrangements, progress, and achievement of the claimed energy savings and other benefits of subprojects.	PA, Schedule, para. 10		Ongoing
6. Development of EPP Market GPG shall ensure that (i) the EPP-PMO undertakes all necessary measures to promote energy efficiency; and (ii) adequate staff are trained and deployed to fully implement the Project.	PA, Schedule, para. 6		Not yet due
Social			
7. Compliance with national labor laws GPG will ensure that any new employment generated by the subprojects financed by ADB will comply with national labor laws.	PA, Schedule, para. 7		Complied
Financial			
8. GPG shall, and shall cause GFTC to, have its accounts (including GFB account and the trust account) and financial statements audited annually, in accordance with appropriate auditing standards, by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, and shall, promptly after their preparation but in any event not later than 6 months after the close of the fiscal year to which they relate, furnish to ADB (i) certified copies of such audited accounts and financial statements and (ii) the report of	PA, Article III, Section 3.07	FY ends 31 December, due date, therefore, is every June.	Not yet due

the auditors relating thereto (including the auditor's opinion on the GFB account and the trust account, the use of Loan proceeds, and compliance with the financial covenants of the Loan Agreement), all in the English language.			
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