



Report and Recommendation of the President to the Board of Directors

Project Number: 39928
July 2006

Proposed Loans Republic of Indonesia: PT Perusahaan Gas Negara (Persero) Tbk for the South Sumatra to West Java Phase II Gas Pipeline Project

In accordance with ADB's public communications policy (PCP, 2005), this abbreviated version of the RRP excludes confidential information and ADB's assessment of project or transaction risk as well as other information referred to in paragraph 126 of the PCP.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 1 June 2006)

Currency Unit	–	rupiah (Rp)
Rp1.00	=	\$0.000107
\$1.00	=	Rp9310

ABBREVIATIONS

ADB	–	Asian Development Bank
AMDAL	–	analisis mengenai dampak lingkungan (environmental and social impact assessment)
BP Migas	–	Badan Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi (Indonesian upstream oil and gas regulatory body)
BPH Migas	–	Badan Pengatur Kegiatan Usaha Hilir Minyak dan Gas (Indonesian downstream oil and gas regulatory body)
BOC	–	board of commissioners
BOD	–	board of directors
CFS	–	complementary financing scheme
DSCR	–	debt service coverage ratio
EBITDA	–	earnings before interest, tax, depreciation, and amortization
EIRR	–	economic internal rate of return
EIB	–	European Investment Bank
FIRR	–	financial internal rate of return
IDB	–	Islamic Development Bank
IEE	–	initial environmental examination
IEI	–	innovation and efficiency initiative
IPO	–	initial public offering
IRP	–	infrastructure reform program
JBIC	–	Japan Bank for International Cooperation
KfW	–	Kreditanstalt für Wiederaufbau (German development financing institution)
LARP	–	land acquisition and resettlement plan
LIBOR	–	London interbank offered rate
LNG	–	liquified natural gas
MOF	–	Ministry of Finance
OCR	–	ordinary capital resources
PERTAMINA	–	Perusahaan Pertambangan Minyak dan Gas Bumi Negara (national oil and gas company of Indonesia)
PGN	–	PT Perusahaan Gas Negara (Persero) Tbk
RKL	–	environmental and social impact management plan
RPL	–	environmental and social impact monitoring plan
SCADA	–	supervisory control and data acquisition
SOE	–	state-owned enterprise
TA	–	technical assistance

WEIGHTS AND MEASURES

bcf	–	billion cubic feet
ha	–	hectare
km	–	kilometer
m	–	meter
m ³	–	cubic meter
mmbtu	–	million British thermal units
mmscfd	–	million standard cubic feet per day
tcf	–	trillion cubic feet

NOTE

- (i) In this report, “\$” refers to US dollars

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SUPPLEMENTARY APPENDIXES (available on request)

- A. Full Environmental Documentation
- B. Report of Lenders' Technical Consultant
- C. Land Acquisition and Resettlement Plan



I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed unsecured corporate loan without government guarantee of up to \$75 million to PT Perusahaan Gas Negara (Persero) Tbk (PGN); (ii) a proposed complementary loan of up to \$75 million to PGN provided by one or more international commercial banks under ADB's complementary financing scheme (CFS); and (iii) a proposed complementary loan of up to \$50 million to PGN provided by Kreditanstalt für Wiederaufbau (KfW) under ADB's CFS, for the South Sumatra to West Java Phase II Gas Pipeline Project (the Project) in the Republic of Indonesia. If approved, this will be the first ADB loan without government guarantee to a partially privatized state-owned enterprise (SOE) in Indonesia.

II. INTRODUCTION

2. Indonesia has abundant gas reserves and supplies approximately one fifth of the world's liquefied natural gas (LNG). Nevertheless, development of the country's natural gas resources for domestic use has been slow, primarily because of the Government's policy of subsidizing domestic petroleum product prices, which has historically caused gas prices to be relatively uncompetitive. In addition, the legal and regulatory framework governing exploration and production of gas for domestic consumption has been unclear, and the commercial terms offered to investors have been relatively unattractive. As a result, the share of natural gas in the domestic energy mix has remained below 30%. In 2005, as a result of steadily declining oil production and increased consumption, Indonesia became the only OPEC member country to be a net importer of oil and oil products.

3. The Government is now keen to reduce the country's reliance on oil and petroleum products and at the same time reduce the burden of fuel subsidies on the national budget, which would allow savings to be diverted to essential education, health, and infrastructure spending. To this end the Government took the bold step of increasing domestic oil prices by 29% in March 2005 and by a further 126% in October 2005. These price increases are expected to lead to savings of about \$10 billion in 2006 and have also provided a strong incentive for energy consumers to switch to gas in order to mitigate the price increase. In parallel, the Government is supporting the development of the domestic gas market and is aiming to increase gas to at least 30% of the national energy mix by 2025.¹

4. PGN is Indonesia's leading provider of gas transmission services and the country's dominant gas distributor. As part of its expansion plans PGN is developing two major transmission pipelines that will link major gas fields in South Sumatra with major gas-consuming areas in West Java. One of these pipelines is the 661 km South Sumatra to West Java Phase II Gas Pipeline Project.

5. In April 2005, the Indonesian Ministry of Finance requested that ADB consider a loan to PGN on a stand-alone corporate basis without sovereign guarantee, to fund the Project. PGN subsequently made the same request to ADB in early July 2005. In late July 2005, ING Bank submitted a letter to PGN, copied to ADB, proposing its role to underwrite and lend under ADB's CFS and arrange a debt tranche from one or more European bilateral institutions. In January 2006, ADB and ING were mandated by PGN to structure an overall loan package in which the German development financing institution, KfW, and the Islamic Development Bank (IDB) have been invited to participate. Due diligence was carried out from January to May 2006.

¹ Ministry of Energy and Mineral Resources. 2005. *National Energy Management Blueprint 2005–2025*. Jakarta. Presidential Regulation No. 5/2006 (Perpres 5/2006) on National Energy Policy, 25 January 2006.

III. BACKGROUND

A. The Oil and Gas Sector

1. Sector Background

6. Information on the oil and gas sector is in Appendix 2. Indonesia has significant reserves of oil, natural gas, and coal. The country is particularly well-endowed with natural gas resources, with more than 90 trillion cubic feet (tcf) of proven reserves, the 13th largest gas reserves in the world and the largest gas reserves of any country in Asia and Pacific region. Indonesia's proven gas reserves are three times the country's oil reserves on an energy-equivalent basis. Most of Indonesia's gas production is converted to LNG and exported to Japan; the Republic of Korea; and Taipei, China. Indonesia supplies about one fifth of the world's LNG from its gas fields in Aceh and Kalimantan. Gas is also exported via pipeline to Singapore, including from Sumatra through the Grissik to Singapore pipeline, which was financed by the ADB. Indonesia is the world's 6th largest gas producer.

7. Energy consumption in Indonesia is dominated by oil and gas, which together account for 80% of the primary energy mix (Table 1). Since 2000, domestic oil production has declined because of the maturation of producing fields combined with a slower reserve replacement. Over the same period, the consumption of oil and oil products increased steadily. As a result in 2005 Indonesia became a net importer of oil.

Table 1: Share of Different Energy Sources
(%)

Energy Type	1990	1995	2000	2001	2002	2003
Crude Oil and Oil Fuels	60.13	53.36	57.79	53.34	53.35	54.28
Coal	5.60	6.53	10.18	13.80	14.32	14.25
Natural Gas, LPG, and LNG	29.44	34.62	27.64	27.98	28.05	26.46
Hydropower	4.38	3.82	3.22	3.48	2.87	3.58
Geothermal	0.44	0.61	1.18	1.40	1.40	1.44

LNG = liquefied natural gas, LPG = liquid petroleum gas.
Source: Government of Indonesia.

8. Since 2000, the share of natural gas in the domestic energy mix has remained below 30%. However, recent developments have set the stage for natural gas to play a more important role. First, Indonesia has become a net oil importer. Second, the oil subsidy reductions in March and October 2005 have made natural gas prices more competitive. Third, the legal and regulatory framework for gas exploration and production has been strengthened. As a result, private investors are poised to develop large new gas fields, and the national electric utility, PT PLN Persero, is keen to increase the share of natural gas in its generation mix. The main market for energy is in Java, which has fewer gas reserves than Kalimantan, Irian Jaya, and Sumatra, and is dependent on natural gas from these islands. Major pipeline projects/LNG terminals are therefore needed to bring natural gas to the Java market.

9. The outlook for the oil and gas industry will depend on the Government's policies and actions. These include (i) elimination of energy subsidies, (ii) incentives to encourage

exploration and production in difficult areas, (iii) clear regulations and their implementation without prejudice, and (iv) promotion of the efficient use of natural gas as a domestic fuel and the export any surplus oil.

2. Sector Regulation

10. In November 2001, a new oil and gas law was passed.² It recognizes the importance of a certain and transparent legal environment in which to conduct business and contemplates the establishment of separate regulators for the upstream and downstream sectors, thus ending PERTAMINA's supervisory role for the upstream sector. The law also removed PERTAMINA's downstream monopoly, requires transmission and distribution pipelines to be regulated, and requires that third parties have open access to excess pipeline capacity.

11. To execute the new oil and gas law, the Government has prepared a series of implementing regulations³ and established regulatory bodies. BP Migas, a nonprofit state-owned legal entity, was established as the contracting authority for the upstream part of the sector. In this role BP Migas has replaced PERTAMINA in existing production sharing contracts and will enter into cooperation contracts with entities undertaking exploration and exploitation of oil and gas in Indonesia. The downstream regulatory body-cum-contracting agency, BPH Migas, is authorized to determine and regulate rates for natural gas transmission and distribution through pipelines, to determine and regulate prices to residential and small-scale commercial consumers, to resolve disputes among participants in natural gas transportation activities and to grant access and tender rights to participate in the natural gas master plan. Gas prices charged to industrial and other customers not classified as small will remain unregulated and will continue to be determined bilaterally between the customer and the provider of gas.

12. The Ministry of Energy and Mineral Resources has prepared and will update a natural gas master plan. The master plan is intended to focus on tendering, development, and construction of new projects to develop the national gas transportation network. Before the development of the master plan, licenses to develop some projects had already been granted, and for such projects existing licenses remain valid. PGN has already been granted a license for phases I and II of the South Sumatra to West Java gas pipeline project.

B. ADB's Operations

1. ADB's Country Strategy for Indonesia

13. ADB's new country strategy for Indonesia, currently under preparation, states that ADB will be guided by the Government's five priority areas to achieve sustainable economic growth, which is needed to absorb the large number of new entrants to the labor market and to reduce poverty. The five priority areas are (i) job creation and poverty reduction; (ii) macroeconomic stability; (iii) increase of investments, exports, and tourism; (iv) improved access to and quality of education and health; and (v) infrastructure development by improving the efficiency of existing services and increasing private sector participation. To support the Government's goal and drawing on lessons learned, ADB will focus on (i) development of infrastructure, (ii) financial sector deepening, (iii) decentralization, (iv) millennium development goal acceleration, and (v)

² Law of the Republic of Indonesia (Number 22 of 2001) Concerning Natural Oil and Gas.

³ The Government Regulations on Implementing Agency (BP Migas), Regulatory Agency (BPH Migas), Corporatization of PERTAMINA, Upstream Businesses, Downstream Businesses, and Appointment of the Head of Implementing Agency, as well as the Presidential Decree on the Establishment of Regulatory Agency, issued in 2002–2004.

environment and natural resource management. This Project is in line with ADB's focus on points (i) and (v).

14. ADB is proposing a major contribution to the development of infrastructure through the infrastructure reform program (IRP), currently being processed. The IRP is proposed as a program cluster comprising three sub-programs, to be implemented from 2006 to 2009. The objective of the IRP is to strengthen the investment climate to accelerate infrastructure development through private sector participation and additional public sector resources.⁴ The policy framework for the IRP is based on ongoing reforms (for sub-program 1) and the Government's own medium-term reform agenda, with the actions for sub-programs 2 and 3 defined in an indicative manner. The policy framework for the IRP includes an assessment of possible further reforms of the oil and gas sector regulatory framework.

2. ADB's Energy Sector Strategy for Indonesia

15. ADB's energy sector strategy supports, as operational priorities, (i) poverty reduction, including by creating energy infrastructure for sustainable economic growth; (ii) promotion of private sector involvement by restructuring the energy sector, and creating an enabling environment for the private sector; (iii) addressing regional and global environment impacts by supporting measures to address acid rain problems and use of clean energy; and (iv) promotion of regional cooperation. This Project assists points (i) through (iii) of this strategy.

16. ADB has played a significant role in the development of gas transmission infrastructure in Indonesia and in developing the country's regulatory capacity for the oil and gas sector. ADB's Loan 1357-INO⁵ supported the construction of the trans-Sumatra gas pipeline that not only enhanced domestic use of natural gas but also established an important segment of the trans-ASEAN gas grid promoting regional energy cooperation. An important policy covenant under the loan required the conversion of PGN from a state corporation to a limited liability company and this conversion was completed in 1996. ADB also conducted extensive and high-level policy dialogue on the participation of the private sector and, as a result, PGN created a subsidiary with a 40% private sector participation to own and operate the transmission system comprising the Grissik–Duri line completed in 1998, the Grissik–Sakernan–Batam–Singapore pipelines completed in 2004 and the Batam distribution network completed in 2005. ADB has provided several technical assistance (TA) projects⁶ to support the establishment of the regulatory framework and restructuring of the gas sector, development of the gas sector master plan, and for gas distribution and use. An ongoing TA supports the development of the least-cost option for gas supply to meet growing energy demand in Java.⁷

⁴ The sector coverage of IRP includes: transportation (roads, ports, airports, and railways); power; oil and gas; telecommunication; and water supply and sanitation.

⁵ ADB. 1995. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Indonesia for Gas Transmission and Distribution Project*. Manila (Loan 1357-INO).

⁶ ADB. 1988. *Technical Assistance to the Republic of Indonesia for Natural Gas Rehabilitation and Expansion*. Manila (TA 990-INO); ADB. 1993. *Technical Assistance to the Republic of Indonesia for Gas Utilization Study*. Manila (TA 1906-INO); ADB. 1995. *Technical Assistance to the Republic of Indonesia for A Study to Establish the Gas Regulatory Framework*. Manila (TA 2344-INO); ADB. 1996. *Technical Assistance to the Republic of Indonesia for South Sulawesi Gas Transmission and Distribution*. Manila (TA 2572-INO); ADB. 1997. *Technical Assistance to the Republic of Indonesia for the Study for Development of Gas Infrastructure in Java*. Manila (TA 2783-INO); ADB. 1997, 2002. *Technical Assistance to the Republic of Indonesia for Implementing a Regulatory Framework for the Gas Industry*. Manila. (TA 2933-INO); and ADB. 2001. *Technical Assistance for the Gas Sector Development Plan*. Manila (TA 3671-INO).

⁷ ADB. 2004. *Technical Assistance to the Republic of Indonesia for Gas Transportation Project Through Public-Private Partnership (TA 4360-INO)*. Manila.

3. ADB's Private Sector Operations in Indonesia

17. ADB commenced private sector operations in Indonesia in 1985. Before 2005, ADB had approved financial assistance for 16 projects in the general industry and financial sectors totaling \$197.5 million. The performance of some of these projects, particularly in the manufacturing sector, was less than satisfactory, primarily because of issues of sector and partner selection. The private sector portfolio was badly affected by the Asian financial crisis. Because of concerns surrounding concession awards, infrastructure projects have rarely been considered by ADB. However, recently there have been significant changes in the Government's attitude towards business, with increasing support for transparency and governance. To support the Government in its efforts, ADB proposes to revitalize its private sector operations to catalyze the return of private sector investments in infrastructure, especially in the energy and transport sectors. This process began with the approval in December 2005 of a \$350 million loan to the Tangguh LNG project,⁸ and this Project is seen as a continuation of this process in line with the strategy.

IV. THE BORROWER

A. Background

18. Background information on PGN is in Appendix 3. PGN is an Indonesian gas utility involved in the transmission, distribution, wholesaling, and retailing of natural gas. PGN owns and operates four transmission pipelines totaling 1,074 km and seven distribution networks serving eight cities and consisting of 3,172 km of pipelines. The company's main business is selling natural gas to industrial customers, and PGN is the dominant gas distributor in Indonesia, accounting for more than 90% of gas sales by volume. Gas distribution accounted for 79% of PGN's revenues in 2005. PGN also receives revenue from its transmission assets by charging a toll fee for transportation services and this business contributed 21% of revenues during the same period. Following its IPO in December 2003 PGN is listed on the Jakarta and Surabaya stock exchanges. PGN is 61% owned by the Government.

19. In calendar year 2005 PGN's distribution business had gas sales volume of 303 mmscfd. PGN sells gas primarily to industrial customers in eight urban markets⁹ and over the next few years the company plans to open gas distribution networks in four new urban markets.¹⁰ PGN estimates that its current core customer base of 670 industrial clients requires a further 500 mmscfd of gas supply and that there are another 180 potential customers with a total potential demand of 450 mmscfd. As of 1 June 2006, PGN had entered into preliminary agreements for gas sales with 309 of these potential customers.

20. PGN's transmission network comprises (i) the Grissik–Duri transmission pipeline in Sumatra through which ConocoPhillips ships gas to Caltex under a long-term gas transportation agreement; (ii) the Grissik–Singapore transmission pipeline through which PERTAMINA ships gas to PowerGas of Singapore, also under a long-term gas transportation agreement, both of which are owned and operated through PGN's 59.75%-owned subsidiary, Transgasindo; and (iii) two small transmission operations in Medan and Jakarta used by PERTAMINA to supply gas to power stations and CNG filling stations. The Grissik–Duri, Grissik–Singapore and Medan transmission systems consist of 1074 km of pipelines with a combined capacity of 807 mmscfd, while the Jakarta transmission system uses the existing distribution pipelines. PGN's

⁸ The loan to the Tangguh LNG project was ADB's first PSOD loan to Indonesia since 1994 and is also the largest single tranche loan by PSOD to date.

⁹ Jakarta, Surabaya, Medan, Bogor, Cirebon, Palembang, Batam Island, and Pekanbaru

¹⁰ Semarang, Banten, Lampung, and Jambi.

transmission network transported an average of 676 mmscfd of natural gas in the first quarter of 2006.

21. PGN has begun building two pipelines between South Sumatra and West Java, phases I and II of the South Sumatra West Java gas pipeline project, and has received approval for the construction of a 509 km transmission pipeline from Duri to Medan. PGN also intends to tender for the right to develop other gas transmission pipeline projects, which are put out to public tender by BPH Migas as part of the Government's master plan to develop Indonesia's integrated gas transmission and distribution network.

B. Corporate Governance

22. PGN's management team comprises a five-member board of directors (BOD) whose activities are monitored by a six-member board of commissioners (BOC). All current members of PGN's BOD and BOC have extensive experience in the Indonesian oil and gas industry. Members of PGN's BOD have long records of service with the company, ranging from 12 to 23 years. Members of PGN's BOC come from a variety of backgrounds, including the Ministry of Energy and Mineral Resources, the Ministry of Finance, PERTAMINA, and the National Development Planning Agency (Bapenas).

23. In December 2003, PGN listed its shares on the Jakarta and Surabaya stock exchanges in an IPO that reduced the Government's shareholding in PGN to 61%.¹¹ Although the Government retains a special share and has the power to direct PGN activities, it has allowed the company to operate as an independent, commercial entity. PGN's listing has subjected it to company law and other laws that apply to private sector companies. Listing has also meant that PGN's commercial performance is subject to monitoring by shareholders other than the Government. The significant rise in PGN's share price since the IPO, from the listing price of Rp1,500 to Rp12,600 on 1 June 2006, may be seen as a reflection of market confidence and is to a large extent supported by PGN's reputation for good corporate governance. PGN was awarded the top performing listed company 2006 by *Investor*, a local business magazine, in April 2006.

24. Following its listing PGN complies with the Jakarta Stock Exchange requirements regarding financial reporting, which stipulate that PGN must submit its (i) audited annual financial statements for the year ending December 31 by June 30 of the following year, and (ii) unaudited interim financial results for the first 6 months of the financial year by 31 August the same year. PGN's auditors are appointed at a shareholders' meeting each year and are required to be one of the private audit firms licensed by the Ministry of Finance and accredited by the Indonesian Capital Markets Supervisory Agency (Bapepam). As a publicly listed company, PGN is also subject to the Bapepam requirements regarding independent board members and an independent audit committee, which is not to be chaired by the chair of the board. PGN has two independent commissioners on its BOC whose task is to monitor the operations of the business on behalf of public investors. PGN has also formed an independent audit committee, chaired by one of the independent commissioners, which is responsible for reporting to the BOC on the financial condition of the company and business management and for increasing the effectiveness of internal and external audit functions.

¹¹ ADB has been involved in corporate governance and privatization reforms through the SOE Governance and Privatization Program between 1998 and 2005. As part of this program, PGN has prepared Statements of Corporate Intent outlining its corporate vision and operational plans on an annual basis. The Government has also included further privatization of PGN in its annual plans since 2004. However, Parliamentary approval has not been obtained to date.

25. PGN received an ISO 9001:2000 certificate from Lloyd's Register Quality Assurance in 2003, and in 2005 PGN recommitted itself to implementing good corporate governance principles of transparency, independence, accountability and fairness. As part of its corporate governance policy PGN requires its staff to adhere to its standard operating procedures for safety in emergency situations for transmission and distribution pipelines; operation and maintenance of distribution pipelines; and pipeline design standards, which have all been developed following international codes of practice.

C. Financial Performance

26. A review of financial information on PGN is included in Appendix 4 and key financial information is summarized in Table 2. PGN is rated by the international credit rating agencies Moody's and Standard & Poor's. On 19 May 2006 PGN's foreign currency debt rating was upgraded from B1 to Ba3 by Moody's. PGN is therefore rated higher than the Indonesian sovereign rating of B1 by Moody's. Both PGN and the Indonesian sovereign are rated B+ by Standard and Poor's.

Table 2: Summary of PGN Financial Performance 2003-2005
(Rp billion)

Item	2003	2004	2005
Revenue	3,596	4,458	5,434
Transmission	627	849	1,153
Distribution	2,969	3,609	4,280
EBITDA	1,278	1,460	2,204
Pretax Profit	740	683	1,364
Net Profit	510	474	862
Cash and Equivalents	1,927	3,347	3,972
Total Assets	9,127	11,040	12,575
Total Debt	4,329	6,174	6,383
Total Liabilities	5,865	7,862	8,376
Shareholders' Equity	3,262	3,178	4,198
Current Ratio (Current Assets Divided by Current Liabilities)	4.01	3.76	3.59
EBITDA Margin (%)	35.5	32.8	40.6
Net Margin (%)	14.2	10.6	15.9
Debt to Equity (Debt Percentage) (%)	57	66	60
Debt Service Coverage Ratio – EBITDA Divided by Total Debt Service (times)	3.32	2.95	3.74
Debt Divided by EBITDA	3.39	4.23	2.90

EBITDA = earnings before interest, tax, depreciation, and amortization

Source: PGN Consolidated Financial Statements with Independent Auditors' Report 2003–2005.

27. In 2005, PGN generated total revenues of Rp5.4 trillion (equivalent to \$584 million), 79% from distribution and 21% from transmission. Pre-tax income in 2005 was Rp1.4 trillion (equivalent to \$147 million), which represented a 100% increase compared with the prior year. PGN had strong cash flow from operating activities of Rp1.6 trillion (equivalent to \$172 million) in 2005. EBITDA for the year was Rp2.2 trillion (equivalent to \$237 million) and with total debt

service amounting to Rp589 billion (equivalent to \$63 million) the debt service coverage ratio was a comfortable 3.74x. The company's unrestricted cash position remained healthy at the end of 2005 at Rp4 trillion (equivalent to \$427 million). PGN's total borrowings as at 31 December 2005 were Rp6.4 trillion (equivalent to \$686 million), including loans owed to the Government of Rp2.9 trillion (equivalent to \$315 million) and amounts due under the two Eurobond issues totaling Rp2.6 trillion (equivalent to \$282 million). The loans due to Government were funded by Japan Bank for International Cooperation, European Investment Bank, World Bank and ADB. The Eurobonds, which were issued in 2003 and 2004, have a 10-year final maturity with a put option after 7 years and are unsecured. An analysis of PGN's borrowings as at 31 December 2005 shows that (i) most of the borrowings were long-term (only 5.3% of total debts were repayable within 12 months) and (ii) the company's total debt–equity ratio was 60:40, which is comfortably inside the level covenanted to ADB under the existing loan agreement of 70:30. PGN's total equity at the end of 2005 was Rp4.2 trillion (equivalent to \$451 million). As of 1 June 2006, the company's stock market capitalization was Rp57 trillion (equivalent to \$6.1 billion).

D. Special Features

1. SOE Lending under IEI Pilot Financing Instruments

28. As outlined in ADB's *Innovation and Efficiency Initiative: Pilot Financing Instruments and Modalities*¹², there are numerous SOEs that are creditworthy and have the long-term financial viability to borrow without government guarantees. They constitute a “third generation” of potential clients, increasingly important as borrowers separate from the sovereign. These entities play an important role in creating jobs and providing infrastructure and basic public services. Giving them access to affordable long-term credit is critical to promoting economic growth. Starting in 2003, PGN has borrowed from the international debt capital markets without Government assistance. ADB's objective in processing this transaction is to lend, and to facilitate further lending through cofinancing, in each case without government guarantee to PGN so as to ensure that environmentally friendly indigenous energy can be delivered to West Java on an economic basis.

2. Supporting the Sector Reform Program

29. As indicated in the IEI Board paper, ADB lending to SOEs should be accompanied by corporate/sector reforms. ADB has played a significant role in developing the regulatory capacity for the oil and gas sector and the Government is now fundamentally reforming the sector pursuant to the new oil and gas law. In particular, the Government has initiated the unbundling of the sector into its upstream and downstream components and has mandated a clear separation of the regulatory function from business entities. New regulators have been established for the upstream and downstream subsectors, and competition has been introduced by, for example, calling for tenders for the development and construction of pipelines that form part of the natural gas master plan developed by BPH Migas and by removing PERTAMINA's downstream monopoly. To complement its various sector reforms the Government has asked that ADB consider increasing its non-sovereign guaranteed lending to eligible borrowers especially in the infrastructure sector and the proposed loan to PGN is responsive to this request.

¹² ADB. 2005. *Innovation and Efficiency Initiative: Pilot Financing Instruments and Modalities*. Manila

3. Supporting PGN's development

30. As noted above, PGN is a long-standing borrower from ADB and an important policy covenant under ADB's previous loan required the conversion of PGN from a state corporation to a limited liability company. This conversion was completed in 1996. In addition, PGN has undertaken numerous corporate governance reforms to improve performance, transparency, and efficiency, leading to its partial privatization via IPO in late 2003. PGN is now 61%-owned by the Government. Subsequent to its IPO, PGN has issued debt in the international debt capital markets with a 10-year maturity on an unsecured basis and without government guarantee. As a publicly listed company with debt ratings from the international credit rating agencies PGN is now subject to substantial scrutiny and market discipline and can be regarded as having successfully graduated from being an SOE to being a company that is governed and managed with a high degree of autonomy and which operates on a fully commercial basis. It is anticipated that any future ADB support to PGN will be provided without a Government guarantee, either on a corporate or on a project finance basis. PGN is seen as a governance model for SOEs and may be regarded as a successful model for the reform and commercialization of SOEs.

V. THE PROJECT

A. Project Description

31. The Project consists of the construction of 661 km of gas pipeline for the transportation of natural gas from major gas fields in South Sumatra to the major gas-consuming markets of West Java. The pipeline will be constructed in four linked sections between Grissik in South Sumatra and Rawa Maju in West Java. Section 1 of the pipeline will comprise 196 km of 36-inch-diameter pipeline running from the Corridor Block gas field operated by ConocoPhillips at Grissik in South Sumatra to Pagardewa, also in South Sumatra. Sections 2, 3, and 4 of the pipeline will comprise linked 32-inch-diameter pipelines running (i) 270 km from Pagardewa to the coast of South Sumatra at Labuhan Maringgai; (ii) 161 km offshore beneath the Java Sea from Labuhan Maringgai to the coast of West Java at Muara Bekasi, and (iii) 34 km from Muara Bekasi to Rawa Maju in West Java. Section 2 of the Project will follow the same alignment between Pagardewa and Labuhan Maringgai as the South Sumatra to West Java phase I gas pipeline project under construction by PGN using official development aid funding provided by Japan Bank for International Cooperation (JBIC).

32. The Project is the second component of an overall PGN transmission pipeline system expansion designed to address a shortage of natural gas in West Java through the linkage of gas supply sources in South Sumatra with West Java. The Project has been designed with the capacity to transport 460 million standard cubic feet per day (mmscfd) of natural gas from the Corridor Block operated by ConocoPhillips. Gas users will be primarily industrial customers located in West Java. The construction of the Project will make available much-needed gas supply for PGN's West Java distribution business, which in recent years has been operating substantially below capacity because of insufficient supplies of gas.

33. In parallel with the implementation of the Project, PGN is investing in its West Java gas distribution network in Greater Jakarta and the Banten area (funded by World Bank), the Cilegon area (funded by JBIC) and in the Rawa Maju area (funded from internal resources). From 2005 to 2008, PGN plans to invest over \$200 million in its West Java gas distribution network.

B. Key Implementation Arrangements

1. Design and Land Acquisition

34. The pipeline design has been completed. The design of the pipeline as well as its supporting facilities has been carried out in accordance with international as well as national standards.¹³ The pipeline will be coated externally for corrosion prevention and has been designed for an operational period of at least 20 years. With respect to project design, the lenders' technical consultant¹⁴ has concluded that the pipeline facilities in the Project are typical of that expected in projects of this nature. As of May 2006, PGN had acquired about 85% of land for the pipeline corridor and PGN expects to complete the land acquisition by October 2006.

2. Contracting Strategy and Costs

35. An overview of the construction contracts awarded for construction of the Project is in Appendix 5. For the purposes of construction, the Project has been divided into 17 contract packages, all of which have been awarded on a fixed-price basis. PGN has advised that there have been no variation orders issued under any of the contracts and that the company expects the Project to be completed within the original budget and that the physical contingency will not be used.

3. Procurement

36. The lenders' technical consultant has reviewed the procurement arrangements for the Project and has concluded that PGN has used a well-established transparent and competitive tendering process. In particular, to ensure transparency the tender opening process is a public event and PGN allows unsuccessful bidders to lodge objections.

4. Construction Progress and Schedule

37. As of the end of April 2006, construction of the Project was 42% complete and PGN was working toward the following milestone dates for the Project: (i) 1 November 2006: gas turn on from PERTAMINA at the receiving station at Pagardewa, South Sumatra, and delivery to Rawa Maju in West Java; and (ii) 1 February 2007: completion of the Grissik–Pagardewa section and connection with the ConocoPhillips gas supply. As of May 2006, the onshore construction contractor for the Pagardewa to Labuhan Maringgai section of the Project was about 5 weeks behind schedule because of inclement weather in early 2006. The contractor has submitted a recovery plan which would allow completion to occur by 1 November 2006, and the lenders' technical consultant has advised that this plan is ambitious but may be achievable under ideal weather conditions. PGN receives monthly progress reports on construction progress from its contractors and the lenders will discuss with PGN the possibility of these being made available to lenders.

¹³ International standards refer to the (i) American Petroleum Institute, (ii) American Society for Testing Material, (iii) American Standard for Mechanical Engineering (ASME) (ASME B-31.8 Gas Transmission and Distribution Piping Systems, ASME Boiler and Pressure Vessel Code), and (iv) Det Norske Veritas (DNV-OS-F101 and DNV 2000 [Submarine Pipeline Systems]). National standards refer to SNI (Standar Nasional Indonesia or National Standard of Indonesia) 13-3474-2002 and Decree of the Minister for Mining and Energy of the Republic of Indonesia no. 300.K/38/MPE/1997 on Safety for Natural Gas Transmission Pipeline.

¹⁴ As part of the due diligence process, ADB and ING appointed a consortium led by Schlumberger Business Consulting and including JP Kenny, ERM and other divisions of Schlumberger to conduct a review of PGN that encompassed market, commercial, supply, regulatory, design, construction, environmental, health and safety, and social and stakeholder issues.

5. Construction Management and Operations

38. PGN is responsible for overall management of the Project, including construction management and operation and maintenance of the pipeline. For the construction phase, PGN has awarded two construction management contracts, one for the onshore portion of the works and one for the offshore portion. For the operations phase, PGN will create an operation and maintenance team comprising staff members selected from Transgasindo, who have experience of operating PGN's existing Grissik–Singapore and Batam–Grissik–Duri pipelines. PGN's pipeline operations and maintenance procedures are designed to international standards.¹⁵ The lenders' technical consultant has concluded that PGN's existing operation and maintenance procedures are comprehensive and practical.

6. Gas Supply Agreements

39. PGN has signed two anchor gas supply contracts for gas supply from South Sumatra to West Java. The first was signed in June 2003 with PERTAMINA for the supply of at least 1 tcf of gas over 12 years. Gas deliveries are scheduled begin in the last quarter 2006 at a rate of 150 mmscfd, will reach a plateau of 250 mmscfd from 2008 to 2017, and thereafter will be subject to actual availability and deliverability of the field. The second major agreement for the supply of gas from South Sumatra was signed in August 2004 with ConocoPhillips and is for the supply of 2.3 tcf of gas over 17 years. Gas deliveries will begin in the first quarter 2007 at a rate of 175 mmscfd and will rise to 412 mmscfd from 2012 until contract termination in 2023. The gas purchase price under the contract is fixed for the full tenor of the contract.

7. Gas Sales Arrangements

40. Industrial customers accounted for 98% of PGN's sales in 2005. PGN's industrial customers typically sign 3-year gas purchase contracts. Key industrial sectors include glass and ceramics, chemicals, and paper, which together accounted for 62% of total gas sales in 2005. The typical profile of PGN's largest customers are domestic export-oriented manufacturers and Indonesian subsidiaries of international companies. Given current oil prices, there is substantial financial benefit to consumers in switching to gas from oil-based fuels. The lenders' technical consultant has concluded that there is likely to be sufficient demand for all of the gas transported by the Project and that PGN's sales volumes are more likely to be constrained by the availability of gas supplies than by a shortfall in demand by end users.

C. Environmental Aspects and Social Dimensions

1. Environment

41. The Project has been classified under environmental category B. A summary of the initial environmental examination for the Project is included as Appendix 6. The proposed 466 km Project pipeline corridor in South Sumatra traverses through agricultural land, degraded and fragmented forests, rural settlements, and roads. The terrain is mostly low-lying plains. The 34 km pipeline corridor between Muara Bekasi and Rawa Maju in West Java passes through terrain similar to that of South Sumatra. The mangrove on the coast around Labuhan Maringgai and Muara Bekasi is either fragmented or used for fishponds, which is no longer environmentally sensitive. Despite the fact that the Project will not pass through environmentally sensitive areas, PGN is committed to rehabilitate and improve the ecosystem in an area of 1 ha of lost mangrove habitat at the coastlines at Labuhan Maringgai and Muara Bekasi, the two

¹⁵ ASME B-31.8 - Gas Transmission and Distribution Piping Systems.

points where the pipeline meets the sea.¹⁶ The offshore pipeline alignment avoids the coral reefs around the Seribu Islands. The sea around Labuhan Maringgai and Muara Bekasi has no coral reef or marine mammals of ecological importance.

42. During construction, the Project will create transient disturbances to environmental quality. However, the disturbances common to all civil work construction would not create significant impacts considering the short construction period over a section of the corridor before the construction progresses to other sections of the narrow construction area. The construction will not have significant impacts on wildlife and forest. The corridor will be covered with grass and shallow-root vegetation to minimize soil erosion. During operation, the pipeline will not pollute the environment as it does not generate wastes. The only issues of note will be noise and safety. To ensure system performance and integrity, a supervisory control and data acquisition system will be installed to manage the operations of the pipeline, including leak detection. An information-sharing and education program for communities near the onshore pipeline routes will also be developed to prepare the communities for emergency response and evacuation in the event of accidents.

43. PGN has prepared an environmental management plan, which contains mitigation measures for all identified major impacts, and monitoring activities to be carried out during construction and operation. PGN has incorporated within each construction contract environmental management requirements to be complied with by the contractors.

44. The Project will create environmental benefits by replacing more polluting fuels such as high speed diesel and coal, with natural gas. Based on the estimates of natural gas use, the net present value of the environmental benefits is estimated at about \$74.52 million for the operating life of 20 years and a discount rate of 8% per annum.

45. All environmental plans relating to the Project have been scrutinized by ADB's environmental specialists and the lenders' technical consultant and have been found to be satisfactory.

2. Land Acquisition and Resettlement, Indigenous Peoples

46. The Project has been classified under involuntary resettlement category A and a full land acquisition and resettlement plan (LARP) has been prepared. A summary of the LARP is included as Appendix 7. The onshore pipeline alignment was selected because it minimizes the number of structures and persons affected. In South Sumatra and Lampung provinces, PGN is acquiring 1,137.76 ha of land for the Project including 951.42 ha of privately owned land. In all, 4,791 land parcels belonging to 4,315 users (both legal owners and non-titled users) are affected. The land acquired is mainly agricultural land such as rice fields, traditional plantations, drylands, and arable homesteads. A total of 28 structures in South Sumatra and 12 in Lampung with an average area of 50.5 m² are also affected. The structures affected are semi-permanent wooden houses, huts, and farm field shelters. No community structures and common property resources nor social facility structures are directly affected by the Project. Since all affected persons in South Sumatra and Lampung have opted for cash compensation, no resettlement is required. Land used for the Project in West Java will be leased from Perum Jasa Tirta II and runs adjacent to an existing drainage canal. No structures or persons in West Java are affected by the Project. The land acquisition and resettlement arrangements for the Project have been

¹⁶ In its Grissik to Singapore via Batam island transmission and distribution project (Loan-1357-INO), PGN rehabilitated mangroves at its Panaran station on Batam island, involving a local community and the surrounding local community in replanting and monitoring growth of the mangrove trees there.

reviewed and have been found to be acceptable, subject to certain requirements set out in paragraph 47

47. PGN will be required to (i) ensure that the resettlement plan is implemented in accordance with ADB's policy on involuntary resettlement;¹⁷ (ii) submit updated and final information on the number and different categories of affected persons; (iii) ensure that internal and external monitoring reports on resettlement are submitted to ADB; (iv) provide a report immediately following completion of implementation of the LARP; (v) appoint an external consultant to carry out an updated socioeconomic survey and to review and report to ADB on implementation of the LARP; and (vi) if outstanding resettlement issues are identified, prepare and submit to ADB a comprehensive plan to address such issues with supporting budget.

48. Due diligence has confirmed that the project area will not pass through any communities of indigenous people.

D. Development Impact

49. The Project supports the Government's objective of achieving sustainable economic growth to reduce poverty through infrastructure development with private sector participation. The Project will increase the supply of economic and clean energy to West Java, which includes the third largest concentration of poor in Indonesia, and thereby support economic growth and help reduce air pollution. The Project will also decrease imports of oil and petroleum products thereby increasing energy self-sufficiency and insulating energy consumers from any sharp increase in fuel prices that would result from future subsidy reductions. The proposed ADB assistance will also further the aim of graduating PGN from a Government-guaranteed borrower to a stand-alone borrower and will support PGN as a model of SOE reform and commercialization in Indonesia.

E. Cost Estimates and Financing Plan

50. The Project's total investment cost is estimated at \$652.5 million, which includes the cost of land acquisition, the cost of the 17 fixed-price contract packages that have been awarded, and an allowance for physical contingencies. Detailed project cost estimates are in Appendix 8. Table 3 shows a summary breakdown of the estimated investment cost.

¹⁷ ADB. 1995. *Policy on Involuntary Resettlement*. Manila.

Table 3: Project Investment Plan
(\$ million)

Components	Cost
A. Base Cost	
1. Land Acquisition	9.7
2. Construction and Civil Works	248.5
3. Materials and Equipment	330.7
4. Others	32.4
Subtotal (A)	621.4
B. Physical Contingency	31.1
Total	652.5

Notes: Taxes and duties of \$59.4 million are included in goods and services costs.

No price contingency has been included since all contract packages have already been awarded on a fixed-price basis.

Source: PT Perusahaan Gas Negara (Persero) Tbk.

51. Table 4 presents the proposed financing plan for the Project.

Table 4: Financing Plan
(\$ million)

Source	Total	% of Total Financing
ADB Direct Loan	75.0	11.5
ADB CFS Loan		
- International Commercial Banks	50.0–75.0	7.7–11.5
- KfW	25.0–50.0	3.8–7.7
IDB Loan	50.0–75.0	7.7–11.5
PGN's Own Resources ^a	427.5	65.5
Total	652.5	100.0

ADB = Asian Development Bank, CFS = complementary financing scheme, KfW = Kreditanstalt für Wiederaufbau, IDB = Islamic Development Bank.

^a PGN's own resources include proceeds of the company's initial public offering (IPO) in December 2003, two bond issues carried out in 2003 and 2004, and cash flow generated from operations.

Sources: PT Perusahaan Gas Negara (Persero) Tbk, and Asian Development Bank estimates.

52. PGN has requested a loan of up to \$75 million from ADB's ordinary capital resources to help finance the Project. The loan will have a 15-year term including a grace period of 3 years. In addition, ADB has been asked to provide two complementary loans: (i) up to \$75 million to be funded by one or more international commercial banks under ADB's CFS, and (ii) up to \$50 million to be funded by KfW under ADB's CFS.

53. In its role as lead arranger of the financing for PGN, ADB has introduced the Project to the Islamic Development Bank (IDB), which is expected to provide a direct loan to PGN of up to \$75 million with a term of up to 15 years. The balance of the funding required for the implementation of the Project will come from PGN's own resources, which include proceeds of the company's IPO in December 2003, two bond issues carried out in 2003 and 2004 and cash flow generated from operations. As of 31 December 2005, PGN had cash and cash equivalents (including restricted cash) of Rp4.15 trillion (equivalent to \$445 million) and therefore is in a position to fund its portion of the Project cost with relative ease.

VI. THE PROPOSED ADB ASSISTANCE

A. ADB Loans

1. Nature and Amount

54. The proposed ADB assistance to PGN will comprise three loans:

- (i) A direct loan of up to \$75 million from ADB's ordinary capital resources, with an amortization period of 15 years, including a grace period of 3 years, and semiannual repayments. Interest will be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility and PGN will consider the option of either a floating or a fixed interest rate. Front-end fees, commitment fees, and the interest margin will be determined by ADB's Interest Rate Committee;
- (ii) A complementary loan of up to \$75 million to be funded by one or more international commercial banks under ADB's CFS, with a term of 6 years, including a grace period of 1.5 years, with interest at LIBOR plus an agreed margin. ADB will charge an arrangement fee as a percentage of the CFS loan and also an annual administration fee in line with ADB policy; and
- (iii) A complementary loan of up to \$50 million to be funded by KfW under ADB's CFS, with a term of 12 years, including a grace period of 3 years, with interest at LIBOR plus an agreed margin. ADB will charge an arrangement fee as a percentage of the CFS loan and also an annual administration fee in line with ADB policy.

2. Main Terms and Conditions

55. The proposed direct and CFS loans will each be documented in a loan agreement, which will contain standard terms and conditions that apply to loans to private sector borrowers without government guarantees and CFS, respectively. ADB will also enter into the following: (i) a participation agreement with the participating cofinancing banks, and (ii) related and ancillary documentation. The proposed loans are structured as a corporate finance transaction and since PGN has no secured obligations the loans will have recourse to all the assets of PGN. During the tenor of the loan, PGN will be bound by financial and operational covenants as well as covenants related to ADB's policies pursuant to the ADB loan agreement.¹⁸

¹⁸ These covenants include (i) compliance with ADB's environmental and social safeguard policies; (ii) compliance with ADB's anti-money laundering, anti-terrorism, and anti-fraud policies; (iii) the maintenance of adequate debt service coverage ratio and debt to equity ratio; and (iv) negative pledge on PGN's existing assets.

B. Justification for ADB Assistance

56. The Project merits ADB's support for the following reasons:

- (i) The Project helps achieve the Government's objective of increasing the proportion of indigenous natural gas in the domestic energy mix by substituting expensive and polluting oil products with more economic and environmentally friendly natural gas.
- (ii) The substitution of oil products with natural gas will reduce the requirement for oil imports, thus increasing Indonesia's energy self-reliance.
- (iii) The Project will reduce the burden of oil subsidies on the national budget when oil prices are high.
- (iv) The Project will encourage growth in economic activity in West Java.
- (v) The financing is responsive to MOF's request to ADB to lend to PGN without sovereign guarantees, thereby furthering the objective of graduating PGN from sovereign guaranteed borrowing.
- (vi) If PGN opts for fixed-rate financing, then the financing will provide PGN access to fixed-rate financing over longer tenors than may be available from commercial sources.
- (vii) The financing is consistent with ADB's policy of supporting mixed (i.e., joint private and public sector) enterprises or commercially run state-owned enterprises with management autonomy and high standards of corporate governance under its IEI policy.
- (viii) The Project is consistent with the ADB energy policy¹⁹ and its promotion of clean energy and also with ADB's country strategy and program for Indonesia, which emphasizes infrastructure development, environment and natural resources management, and the encouragement of private sector participation.

C. Percentage Investment

57. The proposed loan, which is ADB's first assistance to PGN without a Government guarantee since it was partially privatized will, if approved by the Board, represent 4.16% of ADB's non-sovereign exposure. ADB's non-sovereign exposure to Indonesia will be 5.05% of ADB's aggregate non-sovereign exposure. ADB's non-sovereign exposure to transmission and distribution will rise to 7.87% of ADB's aggregate non-sovereign exposure.

D. Anticorruption Policy, Combating Money Laundering, and Financing of Terrorism

58. As a publicly listed company, PGN is subject to monitoring by Bapepam and by institutional and individual shareholders. PGN must also comply with the financial reporting requirements of the Jakarta Stock Exchange, which require the company's financial reports to be audited by licensed independent auditors, and is closely monitored by the international credit rating agencies in connection with its international public market debt issuance. The lenders' technical consultant has reviewed PGN's procurement processes for the Project and has found that PGN's procurement processes are well established and transparent. Tenders are well advertised, with appropriate oversight to reduce the risk of collusion. Safeguards are included in the procurement process such as formal prequalification or technical prequalification of bidders. PGN also ensures that tender opening is a public event, allows unsuccessful bidders to lodge objections, and will declare a tender void in the case of an insufficient number of bidders. PGN has systems in place to ensure that project-related documents are properly filed and is setting

¹⁹ ADB. 2000. *Review of the Energy Policy of the Asian Development Bank*. Manila.

up a database, which will enable PGN to monitor complaints, the response to complaints, and follow-up actions.

59. PGN was advised of ADB's anticorruption policy and policy relating to the combating of money laundering and the financing of terrorism. Consistent with its commitment to good governance, accountability, and transparency, ADB will require PGN to institute, maintain, and comply with internal procedures and controls following international best practice standards for the purpose of preventing corruption or money laundering or the financing of terrorism, and covenant with ADB to refrain from engaging in such activities. The loan documentation between ADB and PGN will further allow ADB to investigate any violation or potential violation of these undertakings.

E. Assurances

60. A framework agreement relating to ADB's status, privileges, and immunities with respect to its equity investments and lending operations in the private sector is in effect between the Government and ADB. Consistent with the Agreement Establishing the Asian Development Bank, the Government will be requested to confirm that it has no objection to the proposed assistance to PGN. No funding will be disbursed until ADB receives such confirmation. In addition no funding will be disbursed until PGN has completed to ADB's satisfaction the requirements in relation to land acquisition and resettlement set out in paragraph 48 above.

VII. RECOMMENDATION

61. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and, acting in the absence of the President, under the provisions of Article 35.1 of the Articles of Agreement of ADB, I recommend that the Board approve

- (i) the loan of up to \$75,000,000 to PT Perusahaan Gas Negara (Persero) Tbk for the South Sumatra to West Java Phase II Gas Pipeline Project from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's LIBOR-based lending facility; a term of 15 years, including a grace period of 3 years; and such other terms and conditions as are substantially in accordance with those set forth in this report and as may be reported to the Board;
- (ii) the complementary loan of up to \$75,000,000 to PT Perusahaan Gas Negara (Persero) Tbk, to be funded by one or more international commercial banks under ADB's complementary financing scheme, with a term of 6 years, including a grace period of 1.5 years, with interest at LIBOR plus an agreed margin, and on such other terms and conditions as are substantially in accordance with those set forth in this report, and as may be reported to the Board; and
- (iii) the complementary loan of up to \$50,000,000 to PT Perusahaan Gas Negara (Persero) Tbk, to be funded by KfW under ADB's complementary financing scheme, with a term of 12 years including a grace period of 3 years, with interest at LIBOR plus an agreed margin, and on such other terms and conditions as are substantially in accordance with those set forth in this report, and as may be reported to the Board.

Liqun Jin
Vice President

19 July 2006

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms
<p>Impact</p> <p>The Indonesian economy is increasingly able to rely on indigenous and environmentally friendly energy sources, thereby reducing the need for oil imports and contributing to an improved environment.</p>	<p>Increased indigenous energy use as a proportion of Indonesia's energy mix Increased use of gas as a proportion of Indonesia's energy mix Reduction of air pollution in Java.</p>	<p>Statistics/yearbook from:</p> <ul style="list-style-type: none"> a. Ministry of Energy b. DG Migas c. PLN d. PGN <p>Air quality measurements</p>
<p>Outcome</p> <p>Reliable and economic supply of natural gas to industrial, commercial and domestic consumers in West Java.</p>	<p>Sales of 400 mmscfd of gas from South Sumatra to customers in West Java by 2010</p>	<p>PGN company reports</p>
<p>Outputs</p> <p>Fully operational gas transmission pipeline, adhering to international standards, running from South Sumatra to West Java with a throughput capacity of 460 mmscfd</p>	<p>ISO certification achieved Safety certification achieved Environmental management plan implemented</p>	<p>Company reports covering technical and safety aspects Environmental monitoring reports</p>
<p>Activities with Milestones</p> <ol style="list-style-type: none"> 1. Project Feasibility Study – completed July 2004, PGN 2. Detailed design – completed 2005 3. Financing for the project arranged – IPO completed December 2003, Eurobond issues completed September 2003 and February 2004, ADB loan and cofinancing to be completed end August 2006 4. Contract packages awarded – completed during 2005 5. Construction of pipeline – construction completion of Pagardewa to Rawa Maju section scheduled for completion by 1 November 2006. Construction of Grissik to Pagardewa section scheduled for completion by 1 February 2007 		<p>Inputs</p> <p>ADB Direct loan \$75 million</p> <p>Cofinancing CFS loans up to \$125 million Other cofinancing up to \$75 million</p> <p>PGN Balance of \$427.5 million</p>

ADB = Asian Development Bank, CFS = complementary financing scheme, IPO = initial public offering, ISO = International Organization for Standardization, PGN = PT Perusahaan Gas Negara (Persero) Tbk, PLN = PT PLN Persero.

BACKGROUND ON THE OIL AND GAS SECTOR

1. Indonesia has 45 tertiary sedimentary basins with oil and gas prospects, 15 of which are producing oil and gas, eight that have oil and gas discoveries but are yet to be developed, and 22 basins which are unexplored. Foreign companies have an active history in the exploration and production of oil and gas in Indonesia. However, of late there has been limited new investment in exploration and production activities.

2. The country is well endowed with energy resources and has significant reserves of oil, natural gas and coal. It has 94.7 trillion cubic feet (ft³) of “proven” natural gas reserves (Table A2.1), the 13th largest in the world and the largest in Asia and the Pacific. The proven gas reserves are three times Indonesia’s oil reserves in energy equivalent terms, and can supply the country for 35 years at current production rates. If the “possible” gas reserves are included, future supply could be longer than 50 years. However, not all of these reserves are commercially viable and not all of their gas is exportable, due to gas quality and distance to market.

Table A2.1: Energy Reserves
(2004)

Energy Type	Units	Quantity	Reserves/ Production Ratio
Oil	Billion barrels	4.72	11.5
Gas	Trillion cubic feet	94.7	34.9
Coal	Million tonnes	4968	38.0
Anthracite	Million tonnes	740	
Sub-bituminous and Lignite	Million tonnes	4228	

Source: BP Energy Statistics 2005, Migas.

3. A majority of Indonesia’s natural gas is produced for the manufacture of LNG, which is currently exported to Japan, Korea and Taiwan. Due to the decline in natural gas production in Arun, natural gas and LNG production have declined. However, new LNG projects are under development, including the BP-operated Tangguh LNG project in Irian Jaya, as well as the Pertamina led Donggi LNG project in Sulawesi. Natural gas is also exported via pipelines to Singapore from the Natuna gas fields, and from Sumatra through the Grissik to Singapore pipeline financed by ADB.

4. Energy consumption in Indonesia is dominated by oil and gas, which account for 80 percent of the total energy (Table 2). Since 2000, the domestic oil production has declined, due to natural maturation of producing fields combined with a slower reserve replacement rate. The consumption of oil and oil products has increasing steadily. As a result in 2004, Indonesian oil production and consumption was just about even, and in 2005 Indonesia became a net importer of oil.

Table A2.2: Share of Different Energy Sources
(% share)

Energy Source	1990	1995	2000	2001	2002	2003
Crude Oil and Oil Fuels	60.13	53.36	57.79	53.34	53.35	54.28
Coal	5.60	6.53	10.18	13.80	14.32	14.25
Natural Gas, LPG, and LNG	29.44	44.62	27.64	27.98	28.05	26.46
Hydropower	4.38	3.82	3.22	3.48	2.87	3.58
Geothermal	0.44	0.61	1.18	1.40	1.40	1.44

LNG = liquefied natural gas, LPG = liquid petroleum gas.
Source: Government of Indonesia.

5. Although Indonesia is the world's sixth largest natural gas producer and supplies about a quarter of the world's LNG from its fields in Aceh and Kalimantan, until recently the abundance of cheap oil limited the domestic use of natural gas. Moreover, lack of clarity regarding the legal and regulatory environment and poor incentives in terms of return on investment hampered expansion in current production sharing contracts and new gas field exploration.¹ Share of natural gas in the domestic energy mix has remained below 30% due to an inadequate gas supply infrastructure. Several recent developments have set the stage for natural gas playing a much more important role. First, Indonesia has been on the verge of becoming a net oil importer. Second, the fuel subsidy reductions in March and October 2005 have made natural gas competitive. Third, the legal and regulatory framework has been strengthened. As a result, private investors are poised to develop new large gas fields, and PLN is keen to substantially increase the share of natural gas in its generation mix. The main market for energy is in the island of Java which has fewer gas reserves than Kalimantan, Irian Jaya, and Sumatra, and is dependent on natural gas from these islands. Major pipeline projects and/or LNG terminals need to be implemented to bring natural gas to the Java market.

6. Indonesia's natural gas production reached 73,300 million m³ in 2004, 8th largest in the world and largest in Asia and the Pacific. The country's gas exports have grown 60-fold from 661 million m³ in 1977, when LNG exports started, to 39,600 million m³ in 2004. Natural gas is a large revenue generator for the country. Indonesia's natural gas exports have traditionally been in the form of LNG. Indonesia presently is the largest LNG producer in the world with nearly a 20% market share. LNG exports are the country's main energy export, and thus a principle source of revenue. LNG exports averaged 9.5% of the country's total exports during 1998–2004. During the same period, the contribution of LNG to the country's gross domestic product averaged 3.5%. Since 1998 the share of LNG has declined and domestic consumption of natural gas has increased. This rate of growth in consumption is expected to increase further with the Government's decree prioritizing the domestic use of indigenous fuels to reduce dependence on the volatile international oil market.

¹ Gas contracts signed before 1971 still account for almost 60% of Indonesia's commercial reserves, and large gas fields have remained unexplored.

F. Sector Regulations

7. As part of a wider program for deregulation, the Government announced reforms in the oil and gas and in November 2001 a new oil and gas law providing a new framework for the oil and gas industry: Law of the Republic of Indonesia (Number 22 of 2001) Concerning Natural Oil and Gas (the new oil and gas law) was approved. It recognizes the importance of a certain and transparent legal environment in which to conduct business activities, and contemplates the establishment of upstream and downstream environments with an appropriate regulatory framework for each. Though similar in its philosophy to the annulled Electricity Law No. 20/2002, the Oil and Gas Law No. 22/2001 was upheld by the Constitutional Court in December 2005, except for provisions related to domestic market obligation, and oil and gas pricing. The Constitutional Court ruled that a minimum allocation for the domestic market should be stipulated for oil and gas producers, and that gas prices should be set administratively rather than being determined by competition.

8. To execute the new oil and gas law the Government has prepared a series of implementing regulations and established regulatory bodies. The upstream regulator, BP Migas controls upstream activities on behalf of the Government through cooperation contracts with entities undertaking exploration and exploitation of oil and gas in Indonesia, and has replaced Pertamina in the existing production sharing contracts. The downstream regulator, BPH Migas, is authorized to determine and regulate rates for gas transmission and distribution through pipelines, and prices for residential and small-scale commercial consumers. BPH Migas is also entrusted to resolve disputes among participants in natural gas transportation activities and to grant access and tender rights to participate in the natural gas master plan. Gas prices charged to industrial and other customers not classified as small-scale will be unregulated and will be determined bilaterally between the customer and the provider of gas and the margin on the gas price will not be subject to regulation.

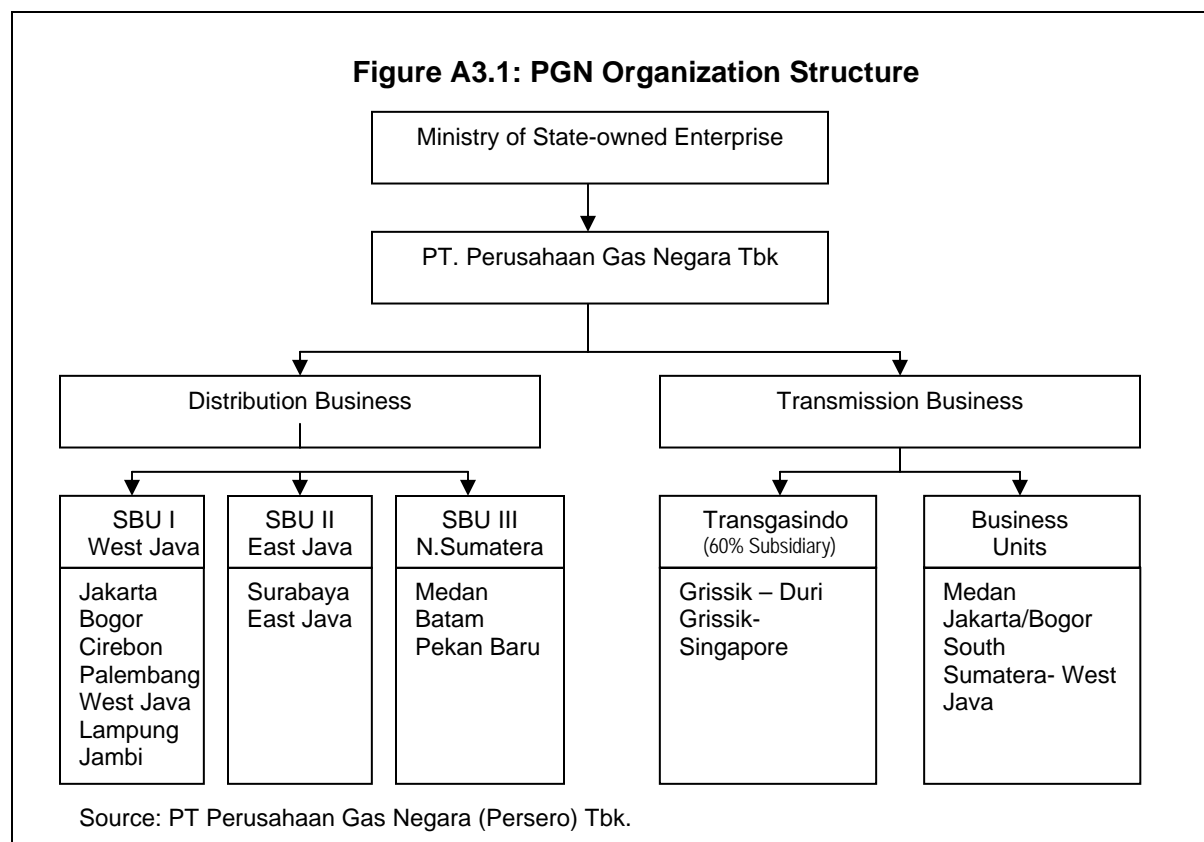
9. BPH Migas has undergone capacity building to fully operationalize its downstream regulatory functions. Under the current arrangements, the Ministry of Energy and Mineral Resources (MEMR) is responsible for policy making, regulation of the upstream part, and – together with BPH Migas – regulation of the downstream part.² BP Migas acts as the contracting authority in the upstream part, and BPH Migas in the downstream part. The dual role of regulator and contracting authority played by BPH Migas may raise concerns among operators about its objectivity in the case of contractual disputes. The subdivision of the contracting authority for the upstream and downstream business between BP Migas and BPH Migas may lead to inconsistencies in the planning and implementation of upstream and downstream projects. Consequently, the current arrangements should be reviewed in the medium term, with a view to creating a single regulatory body and a single contracting agency, and ensuring that the former has no links to the latter and is fully independent.³

² The regulatory role within MEMR is exercised by its Directorate General of Oil and Gas (DG Migas).

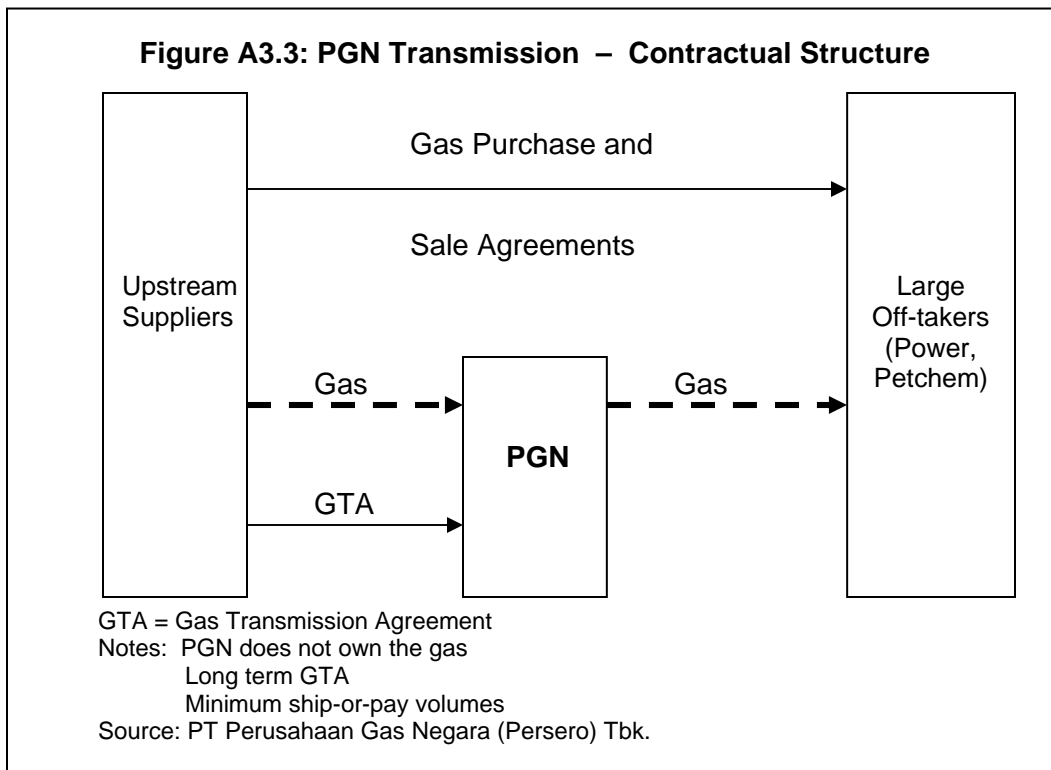
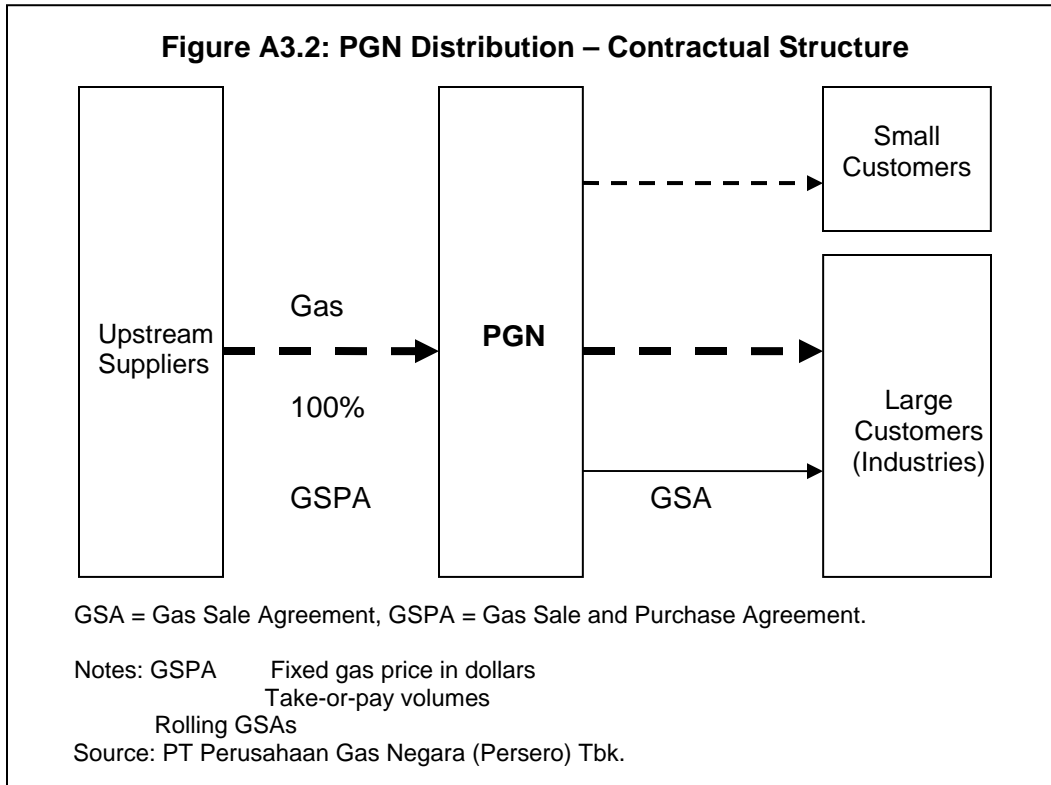
³ Such independence can be achieved by giving the new regulatory body a statutory authority and ensuring that it (i) has adequate technical expertise, (ii) reports to the President of Indonesia, (iii) has no financial stake in any sector operator, (iv) is financially autonomous through funding from levies on the regulated industry, (v) is headed by commissioners appointed for fixed terms and on the basis of transparent selection criteria, and (vi) has an appropriate stakeholder representation. Apart from managing tariffs not prescribed by contract or determined by the market, the new body should take over some other regulatory functions currently exercised by MEMR, such as issuing licenses and setting service standards.

BACKGROUND ON PGN

1. PT Perusahaan Gas Negara (Persero) Tbk (PGN) is Indonesia's leading natural gas utility, dominating the gas distribution market while also serving as the leading provider of gas transmission services.
2. PGN started operations as a private Dutch company, Firma L.J.N. Eindhoven & Co. Gravenhage, in 1859. This Dutch entity was the first to introduce manufactured gas made from coal to Indonesia. In 1958, the Indonesian Government assumed control of the entity and changed its name to Badan Pengambil Alih Perusahaan-Perusahaan Listrik dan Gas, becoming Badan Pimpinan Usaha – Perusahaan Listrik Negara (BPU-PLN) in 1961. On May 13, 1965, BPU-PLN was established as a state company and became known as Perusahaan Negara Gas (PN Gas). Pursuant to subsequent Government Regulations No. 27 of 1984 PN Gas was converted into a public service enterprise under the name Perusahaan Umum Gas Negara. PGN became a limited liability company and adopted its current name in 1996 and the company was given an exclusive license to develop and distribute natural gas and manufactured gas in Indonesia. Pursuant to the New Oil and Gas Law passed in 2001, PGN is deemed to have a license to continue its existing distribution and transmission business. PGN's 59.75%-owned subsidiary, Transgasindo, has a license to conduct its transmission business which was issued on February 26, 2002. As at 1 June 2006, PGN has a total of 1,274 permanent employees, at the parent level and in Transgasindo, its subsidiary.
3. PGN operates its business through various strategic business units based on regions and through one subsidiary. Three strategic business units have been formed for the distribution business: SBU I, covering West Java and South Sumatra area, SBU II covering East Java and Central Java, and SBU III covering North Sumatra. Figures A3.1 shows PGN's organizational structure.



4. The commercial structure of PGN's distribution and transmission structures are represented graphically in Figures A3.2 and A3.3 respectively.



5. PGN has distribution district networks in Jakarta, Surabaya, Medan, Bogor, Cirebon, Palembang, Batam Island and Pekanbaru with a combined 3,172 km of pipelines and a capacity of 1,066 mmscfd as at 31 March 2006. PGN's distribution business in these seven districts in the three months ended 31 March 2006 distributed an average of 337 mmscfd of natural gas, principally to industrial customers. Demand for natural gas in Indonesia has been increasing, in part as a result of the progressive reduction of fuel oil subsidies which began in 2001 and which has made natural gas an attractive alternative fuel. In order to meet this increasing demand, PGN has plans to expand its distribution business to include networks in two districts, Lampung and Semarang which are strategically located in close proximity to the proposed new transmission pipelines, as well as to expand its existing networks.

6. Most of PGN's distribution networks have operated below full capacity in recent years due to supply constraints. Demand generally has exceeded the volume of natural gas which could be transported to the company's distribution networks due to the limitations of the existing gas transmission infrastructure in Indonesia. PGN expects that the construction of planned new transmission pipelines, including the Project, will assist in reducing existing gas supply constraints and will allow PGN to increase utilization of its distribution networks, as well as constraining upward pressure on gas supply prices.

7. PGN's transmission network currently comprises (i) the Grissik-to-Duri transmission pipeline in Sumatra through which ConocoPhillips ships gas under a gas transportation agreement to Caltex; and (ii) the Grissik-to-Singapore transmission pipeline through which Pertamina ships gas under a gas transportation agreement to PowerGas of Singapore, both of which are owned and operated through PGN's 59.75%-owned subsidiary, Transgasindo; and (iii) two small transmission operations in Medan and Jakarta used by Pertamina to supply gas to power stations and CNG filling stations. The Grissik-to-Duri, Grissik-to-Singapore and Medan transmission systems consist of 1,074 km of pipelines with a combined capacity of 869 mmscfd while the Jakarta transmission system utilizes the existing distribution pipelines. PGN's transmission network transported an average of 676 mmscfd of natural gas in the 3 months ended 31 March 2006.

8. In addition to its existing transmission network, PGN has begun the construction of Phases I and II of the South Sumatra-to-West Java transmission pipeline project and has received approval for a transmission pipeline from Duri to Medan. PGN also intends to tender for the right to develop other gas transmission pipeline projects which are put out to public tender by BPH Migas as part of the Government's plan to develop Indonesia's integrated gas transmission and distribution network.¹ These projects are namely: the East-Kalimantan to Java and Sengkang to Makassar transmission pipelines.

A. Corporate Governance

9. PGN can be cited as a model for SOE reform. In December 2003 PGN listed its shares on the Jakarta and Surabaya stock exchanges with an Initial Public Offering which saw the Government reduce its shareholding in PGN to 61%. Although the Government retains a

¹ To promote the use of natural gas and to ensure that existing demand can be satisfied, the Government has indicated its plans to establish a national integrated transmission and distribution network for piped natural gas. This integrated network is expected to comprise pipelines that will connect gas fields and customers from North Sumatra through Java to East Kalimantan. In order to plan for and develop this network, the Government has prepared a natural gas Master Plan, which includes the development of new transmission and distribution projects. All new projects under the Master Plan are subject to an open tender process and PGN intends to compete for the rights to develop, own and operate selected new projects under the Master Plan.

Special Share and has the power to direct PGN's activities, it has allowed the company to operate as an independent, commercial entity.

10. PGN's listing has subjected it to company law and other laws that apply to private sector companies. Listing has also subjected PGN's commercial performance to monitoring by shareholders other than the Government because shareholders have a residual rather than prior claim on the firm's asset. The significant rise in PGN's share price since the IPO, from the listing price of Rp1,500 to Rp12,600 at 1 June 2006 may be seen as a reflection of market confidence and is to a large extent supported by PGN's reputation for good corporate governance. PGN was awarded the top performing listed company 2006 by Investor, a local business magazine, in April 2006.

11. As a publicly listed company, PGN is also subject to the requirements of the Indonesian Capital Markets Supervisory Agency (Bapepam) regarding independent board members, and an independent audit committee which is not to be chaired by chairman of the board. PGN has two independent commissioners on its board of commissioners (BOC) whose task is to monitor the operations of the business on behalf of the public investors. PGN has also formed an independent audit committee, currently chaired by one of the independent commissioners, which is responsible to report to the BOC on the financial condition of the company, business management and to increase the effectiveness of internal and external audit functions.

12. PGN received an ISO 9001:2000 certificate from Lloyd's Register Quality Assurance in 2003, and in 2005, PGN committed itself to implement good corporate governance principles of transparency, independence, accountability and fairness. As part of its corporate governance, PGN requires its staff to adhere to its Standard Operating Procedures for safety in emergency situations for transmission and distribution pipelines; operations and maintenance of distribution pipelines; and pipeline design standards, which have all been developed following international codes of practice.

13. As part of its SOE reforms, PGN is required to borrow from private lenders without the benefit of a government guarantee, subjecting it to scrutiny by commercial lenders and international credit rating agencies. In 2003, the company issued its first \$150 million unsecured Eurobond and in 2004, PGN raised its second Eurobond amounting \$125 million. Both its bonds were rated B by Moody's. In mid 2005 PGN started discussions with international commercial banks to raise debt financing for its South Sumatra – West Java Phase II project, on corporate basis, without government guarantee.

14. In implementing the SSWJ Phase II project, PGN's commitment to rehabilitate an area of lost mangrove habitat at the coast lines of Labuhan Maringgai and Muara Bekasi the two points where the pipeline meets the sea, demonstrates PGN's appreciation of environmental mitigation efforts. In managing its land acquisition for the project, a formal grievance mechanism is in place and communicated to affected people. As of 1 June 2006, land acquisition has reached 99.9% for the Pagardewa to Labuhan Maringgai section, 71% for the Grissik to Pagardewa section and 40% for the Muara Bekasi to Rawa section. To date, no formal complaint has been filed.

B. Management Team

15. PGN's management team comprises a five member board of directors (BOD) whose activities are monitored by the six members of the BOC. In compliance with Jakarta Stock Exchange regulations on annual general meetings (AGMs), PGN's next AGM is scheduled to be held on 8 June 2006.

16. All current members of PGN's BOD and BOC have extensive experience in the Indonesian oil and gas industry. Members of its BOD have served the company for long period of service, ranging from 12 to 23 years. PGN's BOC come from a variety of backgrounds including the Ministry of Energy and Mineral Resources, the Ministry of Finance, PERTAMINA and the National Development Planning Agency (Bapenas). Tables A3.1 and A3.2 show PGN's BOD and BOC.

Table A3.1: PGN's Board of Commissioners

Members	Current Position	Professional Background	Educational Background	Serving Since
Sumarno Surono	President Comissioner	Head of Monetary Bureau, Ministry of Finance	PhD in Economics University of Hawaii, US	Oct 2003
Bemby Uripto	Comissioner	National Development Planning Agency	Masters in Finance, Colorado School of Mines, Denver, US	Oct 2003
Pudja Sunasa	Comissioner	Head of General Bureau Directorate of Energy and Natural Resources, Ministry of Energy and Mineral Resources	Petroleum Engineering degree, Bandung Institute of Technology	Jun 2002
Sahal Lumban Gaol	Comissioner	Director of Oil Income and Non-Tax , Ministry of Finance	PhD in Economics, Iowa State University, US	Jun 2002
Nenny Miryani Saptaji	Independent Comissioner	Advisor to Pertamina's Commissioners for downstream business	PhD in Engineering, University of Auckland, New Zealand.	Oct 2003
Rudy Tavinós	Independent Comissioner	Several oil and gas private companies including Medco, Badak LNG and Arun LNG	Bachelor's in Chemical Engineering degree, Bandung Institute of Technology	May 2004

PGN = PT Perusahaan Gas Negara (Persero) Tbk, US = United States.
Source: PT Perusahaan Gas Negara (Persero) Tbk.

Table A3.2: PGN's Board of Directors

Members	Current Position	Professional Background	Educational Background	Serving Since
WMP SImandjuntak	President Director	Head of Administration at oil and gas research in 1984	Accountancy degree from University of Indonesia	2001
Djoko Pramono	Director of Finance	PGN	Accountancy degree from University of Pajajaran	2001
Adil Abbas	Director of Business Development	Head of Planning Programs at oil and gas research	Civil engineering from University of Gajahmada	2001
Nursubagjo Prijono	Director of Operations	Head of exploitation project studies at oil and gas research	Degree in Petroleum Engineering, Bandung Institute of Technology. Post graduate, University of Tulsa, US	2001
Sutikno	Director of General Affairs	PGN	Post graduate from University of Indonesia	2001

PGN = PT Perusahaan Gas Negara (Persero) Tbk, US = United States.
 Source: PT Perusahaan Gas Negara (Persero) Tbk.

SUMMARY OF FINANCIAL INFORMATION ON PGN

1. The consolidated financial statements of PT Perusahaan Gas Negara (Persero) Tbk (PGN) for the years ended 31 December 2004 and 2005 have been prepared in accordance with Indonesia accounting standards. The statements have been audited by independent auditors Prasetio, Sarwoko & Sandjaja (a member firm of Ernst & Young) who have been given an unqualified audit opinion. The statements consolidate PGN's 59.75% owned subsidiary, PT Transportasi Gas Indonesia (Transgasindo) which accounted for 21% of revenues and 39% of total assets in 2005. Transgasindo's financial statements were audited by other auditors who have provided an unqualified report on these statements to PGN's auditors

A. Income Statement and Profitability

2. PGN's total revenues have increased steadily over the past three years, reflecting the expansion of the company's distribution and transmission business. In 2005 PGN generated total revenues of Rp5.4 trillion (equivalent to \$584 million) comprising (a) Rp4.3 trillion (equivalent to \$460 million) from distribution, and (b) Rp 1.1 trillion (equivalent to \$124 million) from transmission. Cost of goods sold in 2005 was Rp2.6 trillion (equivalent to \$285 million), representing 49% of revenues. Total operating expenses (transmission, distribution and, general and administration) were Rp1.2 trillion (equivalent to \$132 million) or 23% of total revenue. PGN's income from operations was Rp1.6 trillion (equivalent to \$167 million) and the company's total pretax profit was Rp1.4 trillion (equivalent to \$147 million).

3. Revenues were generated from (i) selling 112,304 million standard cubic feet (mmscf) of gas through seven distribution networks in West Java, East Java and Sumatra; (ii) transporting an average of 219,890 mmscf through three transmission lines. Revenues from operations, year on year, grew 24% in 2004 and 22% in 2005, reflecting higher gas volume sales and higher gas sales prices. Operating income grew 22% in 2004 and 56% in 2005. Net income in 2004 was negatively affected by large forex losses of Rp242 billion (equivalent to \$26 million) while in 2005, forex losses were significantly lower, at Rp91 billion (equivalent to \$ 10 million). The increase in revenue, together with better cost control and substantially lower forex losses, led to net income of Rp862 billion (equivalent to \$93 million) for 2005, which represented an 82% increase compared to the prior year's net income. PGN's net profit margin improved from 10.6% in 2004 to 15.9% in 2005.

Table A4.1: Income Statement
(Rp billion)

Item	2003	2004	2005
Revenue	3,596	4,458	5,434
Transmission	627	849	1,153
Distribution	2,969	3,609	4,280
Cost of Goods Sold	(1,954)	(2,379)	(2,652)
Gross Profit	1,642	2,079	2,781
Operating Expenses	(824)	(1,081)	(1,229)
Distribution and Transmission	(534)	(729)	(782)
General and Administration	(290)	(352)	(447)
Operating Profit	818	998	1,552
Interest Income	25	68	73
Interest Expense	(152)	(225)	(251)
FX Gain (loss)	52	(242)	(91)
Other income (expense)	(2)	84	80
Pretax profit	740	683	1,364
Depreciation and Amortization	(386)	(552)	(588)
EBITDA	1,278	1,460	2,204
EBITDA Margin (%)	35.5	32.8	40.6
Income tax	(226)	(202)	(479)
Minority Interest	(5)	(7)	(23)
Net Profit	510	474	862
Net Margin (%)	14.2	10.6	15.9

EBITDA = Earnings before interest, tax, depreciation and amortisation

Source: PGN Audited Financial Reports 2003-2005.

B. Cash Flow

4. PGN had strong cashflow from operating activities of Rp1.6 trillion (equivalent to \$172 million) in 2005. EBITDA for the year was Rp2.2 trillion (equivalent to \$237 million). Interest expense for the year was Rp251 billion (equivalent to \$27 million) while debt principal payments totaled Rp338 billion (equivalent to \$36 million). Total debt service of Rp 589 billion (equivalent to \$63 million) was therefore covered 3.74x by EBITDA. Overall, the company's cash position remained robust at the end of 2005 at Rp4.0 trillion (equivalent to \$427 million), showing a net increase of Rp 626 billion (equivalent to \$67 million) compared to 2004.

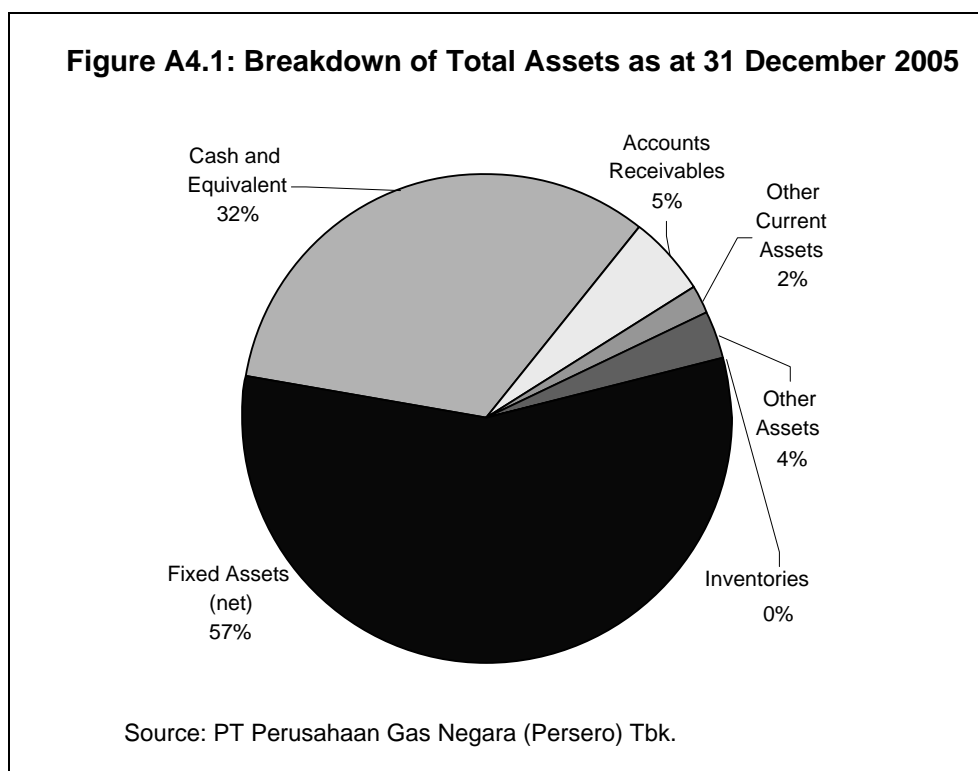
Table A4.2: Cash Flow Statement
(Rp billion)

Item	2003	2004	2005
Cash Flow from Operations	554	839	1,605
Cash Flow from Investments	(2,539)	(613)	(763)
Cash Flow from Financing	3,156	898	(296)
Net Cash Flow	1,171	1,123	546
Effect of Exchange Rate on Cash and Cash Equivalents	(37)	297	80
Cash at Beginning	792	1,927	3,347
Cash at End	1,927	3,347	3,972

Source: PGN Audited Financial Reports 2003-2005.

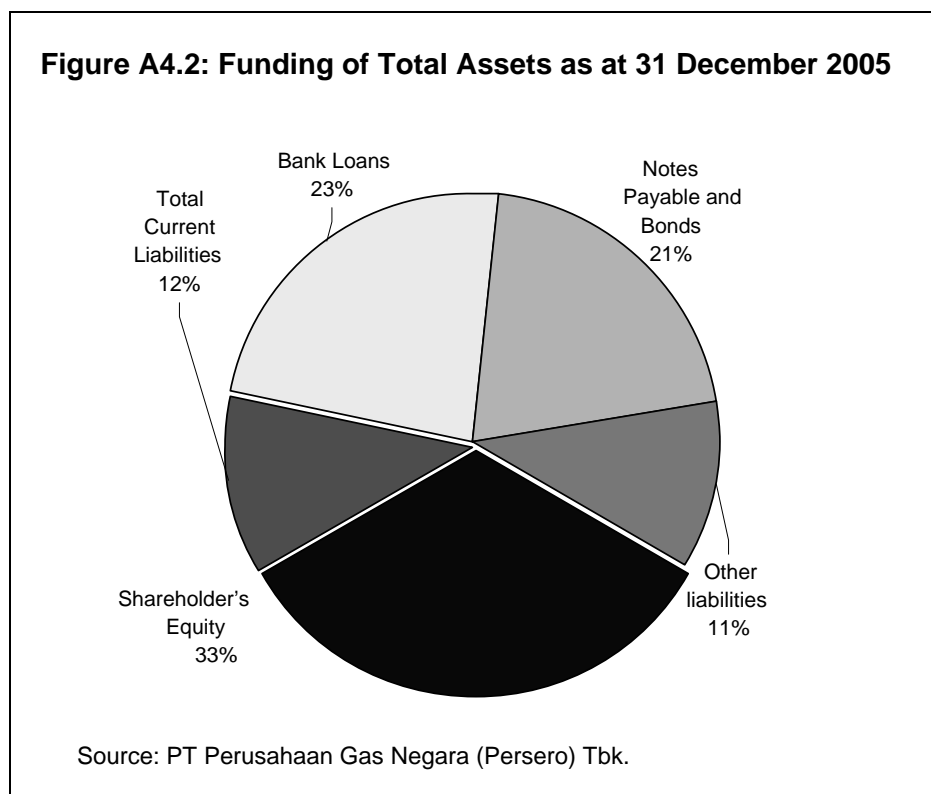
C. Balance Sheet

5. **Assets.** PGN had a healthy balance sheet as at 31 December 2005 with total assets amounting to Rp12.6 trillion (equivalent to \$1.35 billion), including current assets of Rp 5 trillion (equivalent to \$545 million). Unrestricted cash and equivalents amounted to Rp4 trillion (equivalent to \$427 million), accounting for 32% of total assets. The large cash balance represents proceeds from the company's IPO, proceeds from debt financings including two Eurobond issues carried out in 2003 and 2004 and internally generated cashflow.



6. **Borrowings.** PGN's total borrowings as at 31 December 2005 were Rp6.4 trillion (equivalent to \$686 million), with long-term debt comprising loans owed to the Government of Rp2.9 trillion (equivalent to \$315 million), amounts due under the two Eurobond issues totaling

Rp2.6 trillion (equivalent to \$282 million) and amounts due to shareholders of Transgasindo of Rp508 billion (equivalent to \$55 million). The loans due to Government were funded by JBIC, European Investment Bank (EIB), World Bank and ADB. The Eurobonds, which were issued in 2003 and 2004 have a 10 year final maturity with a put option after 7 years and are unsecured. The loans due to shareholders of Transgasindo have no fixed maturity. An analysis of PGN's borrowings as at 31 December 2005 shows that the majority of the borrowings are long term (only 5.3% of total debts were repayable within 12 months) and (ii) the company's total debt to equity ratio was 60:40, which are comfortably inside the level covenanted to ADB in the existing loan agreement of 70:30.



7. **Shareholders' Equity.** PGN's total equity at the end of 2005 was Rp 4.2 trillion (equivalent to \$ 451 million), representing 33% of total assets. Since December 2003 PGN's shares have been listed on the Jakarta and Surabaya Stock Exchanges and as at 1 June 2006 the company's market capitalization was Rp 57 trillion (equivalent to \$ 6.1 billion).

Table A4.3: Balance Sheet (December 31)
(Rp billion)

Item	2003	2004	2005
Cash and Equivalents	1,927	3,347	3,972
Restricted Cash and ST Investments	687	583	173
Accounts Receivables	776	752	818
Inventories	58	41	25
Other Current Assets	90	82	83
Total Current Assets	3,538	4,805	5,071
Fixed Assets – Net	5,467	6,068	7,109
Other	122	167	394
Total Assets	9,127	11,040	12,575
Accounts Payable	319	577	614
Current Maturities of Long-term Loans	283	320	317
Other Current Liabilities	281	380	482
Total Current Liabilities	883	1,277	1,413
Bank Loans	2,817	2,900	2,931
Notes Payable and Bonds	1,229	2,955	3,136
Other Liabilities	937	730	896
Total Liabilities	5,865	7,862	8,376
Shareholders' Equity	3,262	3,178	4,198
Total Liabilities and Equity	9,127	11,040	12,575
Balance Sheet Ratios	2003	2004	2005
Current Ratio (Current Assets Divided by Current Liabilities)	4.01	3.76	3.59
Working Capital (Current Assets minus Current Liabilities)	2,655	3,528	3,658
Total Debt	4,329	6,174	6,383
Leverage Ratio (Debt Divided by Equity) (times)	1.33	1.94	1.52
Debt to Equity (Debt Percentage) (%)	57	66	60
Debt Service Coverage Ratio – EBITDA Divided by Total Debt Service (times)	3.32	2.95	3.74
Debt Divided by EBITDA	3.39	4.23	2.90

EBITDA = earnings before interest, tax, depreciation, and amortization.

Source: PGN Consolidated Financial Statements with Independent Auditors' Report 2003–2005.

OVERVIEW OF CONSTRUCTION CONTRACTS

No.	Contract Package	Contractor/Supplier
GRISSIK - PAGARDEWA (196 km, 36 inch)		
1	Pipeline Construction Contract (PCC)	PT Citra Panji Manunggal - PT Remaja Bangun Kencana Kontraktor - PT Winatek Widita J O PT Citra Panji Manunggal, the lead company in the consortium, is one of the leading pipe constructors in Indonesia. Its past experience includes development of the 200km Trans Saudi Arabia pipeline; a 1,700 km pipe network in India; and PGN's Grissik –Duri Transmission pipeline.
2	Coated Pipe	Welspun Gujarat Stahl Rohren Ltd./PT Abadi Kuasa Karya Welspun Gujarat Stahl Rohren Ltd is one of India's leading pipe producers, exporting 70% of its products for projects across the globe including the deepest offshore project in the Gulf of Mexico.
PAGARDEWA - LABUHAN MARINGGAI (270 km, 32 inch)		
3	PCC	Punj Lloyd Ltd.- PT Punj Lloyd Indonesia Consortium Punj Lloyd Ltd is one of India's largest engineering and construction companies and is active in the energy and infrastructure sectors and experienced with laying 5,300km cross country pipelines, including in Indonesia.
4	Coated Pipe	PT KHI Pipe Industries & Consortium PT KHI Pipe Industries is a subsidiary of Krakatau Steel, the state owned steel company and also the largest steel producer in Indonesia. KHI previously supplied PGN with gas pipes for the Grissik – Duri pipeline.
LABUHAN MARINGGAI - MUARA BEKASI <i>offshore</i> (161 km, 32 inch)		
5	PCC	Likpin LLC - Paremba Construction Sdn.Bhd-PT Rekayasa Industri Joint Venture <ul style="list-style-type: none"> • Likpin LLC is a leading international offshore construction company, whose project experiences included Salman EPC 3 and QPD offshore projects. • Paremba Construction Sdn. Bhd, a Malaysian engineering and construction services company with over \$1 billion worth of projects. Paremba is responsible for the onshore portion of this contract package. • PT Rekayasa Industri is an Indonesian semi-government contractor experienced in EPC for pipeline projects.

No.	Contract Package	Contractor/Supplier
6	Linepipe	PT South East Asia Pipe Indonesia (SEAPI) - Welspun GRSL Consortium SEAPI is a subsidiary of Bakrie & Brothers, a local conglomerate. It is the only local pipe producer capable of producing undersea pipes.
7	Coating	PT Indojaya Pipe A local and Korean joint venture company specializing in high quality anti corrosion coating for onshore and offshore pipeline with experience of more than 300 km of pipe coating in Indonesia for PGN and PERTAMINA.
MUARA BEKASI - RAWA MAJU (34 km, 32 inch)		
8	PCC	PT Citra Panji Manunggal PT Citra Panji Manunggal is one of leading pipe constructors in Indonesia. Its past experience includes development of the 200km Trans Saudi Arabia pipeline; a 1,700 km pipe network in India; and PGN's Grissik –Duri Transmission pipeline.
9	Coated Pipe	PT KHI Pipe Industries PT KHI Pipe Industries is a subsidiary of Krakatau Steel, the state owned steel company and also the largest steel producer in Indonesia. KHI previously supplied PGN with gas pipes for the Grissik-Duri pipeline.
10	1st Ball Valve	PT Multi Superindo Manunggal PT Multi Superindo Manunggal is an agent for MSA Company, which is based in Czech Republic and is a producer of valves for the nuclear power industry and also oil and gas industry.
11	2nd Ball Valve	PT Multi Superindo Manunggal PT Multi Superindo Manunggal is an agent for MSA Company, which is based in Czech Republic and is a producer of valves for the nuclear power industry and also oil and gas industry.
12	Subsea Valve	PT Gamako Mandiri PT Gamako Mandiri is an agent for Velan Srl., a company based in Italy that produces industrial gate, globe, check, ball, butterfly, knife gate and engineered severe service valves
13	Station & Facilities	PT Rekayasa Industri PT Rekayasa Industri is an Indonesian semi-government contractor experienced in EPC for pipeline projects.
14	GMS/SCADA	PT Siemens Indonesia and Siemens Pte Ltd. Consortium PT Siemens Indonesia is a subsidiary of Siemens of Germany with over forty years of experience in Indonesia.

No.	Contract Package	Contractor/Supplier
Third Party for Technical Inspection Services		
15	Third Party Inspection Phase 2	<p>PT Germanischer Lloyd Nusantara</p> <p>PT Germanischer Lloyd Nusantara is a joint venture company between Germanischer Lloyd AG of Germany and PT Trihasco Utama of Indonesia. Germanischer Lloyd is a global player and market leader for inspections, tests and quality controls on materials and components provided for the fabrication, installation, commissioning and decommissioning of oil, gas and industrial installations.</p>
Project Management Consultancy Services		
16	Phase 2 Onshore	<p>PENSPEN Ltd. In association PT Petrotechindo Utama</p> <p>PENSPEN Ltd is a London based group of engineering and management services companies with past experience in transmission pipeline development in the UK, Nigeria, Qatar and Ireland.</p>
17	Phase 2 Offshore	<p>PT Tripatra Engineering</p> <p>PT Tripatra Engineering is a local engineering and management services company with extensive experience in the Indonesian oil and gas industry, including offshore projects. Project experience includes Arun, Bontang and PGN's Grissik-Duri transmission pipeline.</p>

Source: PT Perusahaan Gas Negara (Persero) Tbk.

SUMMARY OF THE INITIAL ENVIRONMENTAL EXAMINATION

A. Introduction

1. The proposed South Sumatra – West Java Gas Transmission Project (the Project) is one of two gas pipelines that PT Perusahaan Gas Negara (Persero) Tbk (PGN) has planned to transport natural gas from South Sumatra to West Java. The Project pipeline will run in the same corridor from Pagardewa to Labuhan Maringgai with the other gas pipeline (SSWJ-Phase I). The two projects require separate gas pipelines as the gas from the Pagardewa gas field is different in quality from that of the Grissik gas field.

2. In conformance with Indonesia's environmental impact analysis (AMDAL) regulation,¹ PGN prepared three AMDALs, respectively, for section 1-the onshore pipeline from Grissik to Pagardewa in South Sumatra; section 2-the onshore pipeline from Pagardewa to Labuhan Maringgai also in South Sumatra; and section 3-the undersea pipeline from Labuhan Maringgai to the shore at Muara Bekasi in West Java and the onshore pipeline from Muara Bekasi to Rawa Maju. This summary initial environmental examination (SIEE) summarizes major findings of the three AMDALs and updates of the original assessments based on latest available information on land use and forest along the proposed pipeline corridor.

B. Description of the Project

3. The Project will construct 196 kilometers (km) of steel pipelines of 36 inches, and 465 km of 32 inches. Major facilities along the Project corridor will include 2 receiving stations, 1 delivery station, 2 gas compressor stations, and a supervisory control and data acquisition (SCADA) system.

4. The pipeline will be laid in a 25 m wide corridor for both Phase I & II pipelines. Each pipe will be laid at about 9 m from the boundaries of the pipeline corridor right of way. The pipeline corridor will be cleared of vegetation and debris. The pipes will be buried in trenches at least 1.5 m deep below ground surface. Except for the top 0.25 m, excavated soil will be backfilled, leveled, and compacted in layers of 0.2 m to prevent subsidence and stress on the buried pipe. For the top 0.25 m, the excavated topsoil will be used for backfilling up to a height 0.1 m above the natural ground. The topsoil will not be compacted mechanically. After the pipeline is completed, markers will be placed along the pipeline at 1 km intervals.

5. Pipeline construction across small water courses will be done using an open cut method. At major river crossing, pipes will be laid using a horizontal directional drilling (HDD). At major road crossings, a thrust boring (TB) method will be used to avoid traffic disturbances. For small road crossings, an open cut method will be used.

6. The offshore pipeline will cross the Java Sea and the Jakarta Bay. Generally, the pipe will be laid on the sea bed for water depths greater than 13 m. For water depths less than 13 m, the pipe will be buried. In areas with heavy sea traffic, the pipe will be covered by rock armour to protect the pipeline from ship anchors. For crossing with other undersea facilities, such as fiber optic cables and other undersea pipes, the pipes will be laid on concrete mattress supports.

¹ Decree of the Minister for the Environment no. 17 of the year 2001.

7. Routine inspection and maintenance of the pipeline during the project operation will be done by foot patrols and the use of vehicles. For annual inspections, helicopters may be used.

8. The Project requires about 1,250 ha of land consisting of 1,165 ha in South Sumatra and 85 ha in West Java. As of February 2006, PGN has acquired about 77% and 80% of land for the pipeline corridors in South Sumatra and in West Java, respectively. PGN expects to complete the land acquisition by October 2006. The Project will affect 4,980 households along the 500 km land corridor due to the loss of income earned from crops and trees in the acquired land. Only 40 structures, including rudimentary farm field shelters and wooden houses, will be physically affected. After the pipeline is laid, cultivation and building construction on the corridor will be prohibited.

9. PGN will be responsible for overall management of the Project, including construction and operations. Project implementation will be under the responsibility of the director of development. After project completion, operations of the pipeline system will be under the responsibility of the director of operations. About 176 persons will be required for the operations of the gas pipeline system.

C. Description of the Environment

1. Physical Environment

10. The onshore pipeline sections in south Sumatra and in West Java will be constructed on relatively flat land with 0–3% slope and with elevations ranging from 10 to 38 m above mean sea level. The 466 km section from Grissik to Labuhan Maringgai in Sumatra will traverse plantations, areas designated as forests, farm lands, paddy fields and settlements.

11. Hydrocarbon levels in the air of West Java ranged from 23.2–105.2 $\mu\text{g}/\text{m}^3$, and those in South Sumatra 11.15–28.0 $\mu\text{g}/\text{m}^3$. The hydrocarbon levels were well below the safety threshold of 160 $\mu\text{g}/\text{m}^3$.

12. The pipeline in South Sumatra will cross 21 major rivers. The Muara Bekasi-Rawa Maju section in West Java will cross three major rivers. The major rivers in South Sumatra upstream and downstream of the pipeline crossings are mainly used for transportation. In West Java, the rivers are mainly used for irrigation.

13. The rivers in West Java are grossly polluted by industrial and domestic wastes. The rivers in South Sumatra are relatively less polluted and the quality meets the provincial water quality standard for raw water supply sources.

14. Sea water quality between Labuhan Maringgai and Muara Bekasi shows a slight degree of pollution against the standards for marine life, Decree No. 51/2004, Ministry of Environment. The coastal water around Muara Bekasi was found to be more polluted than that of Labuhan Maringgai due to higher densities of population, industrial and other economic activities.

2. Biological Environment

15. Forests in Sumatra have long been encroached upon by various development activities, particularly for large oil palm and rubber plantations. Most of the remaining forests in South Sumatra exist in small and isolated patches scattered in the region and provide no significant

ecological value to wildlife, especially the Sumatran tigers. Only 39.6 ha of land along the corridor in South Sumatra are designated as forest areas, consisting of 37.8 ha in South Sumatra Province and 1.8 ha in Lampung Province.² The forests in West Java are small and so degraded that they no longer serve an ecological function. The onshore pipeline corridor in West Java will not pass through any forests.

16. The coast around Labuhan Maringgai is mostly sandy. The mangrove forests along the coasts of Labuhan Maringgai and Muara Bekasi vary in density and expanse. They have been subjected to considerable stress by human activities and the width has been reduced to less than 20 m. In Muara Bekasi there is very little left of the mangrove forests as most of the areas are now being used for fishponds.

17. Most of the fish species where the pipeline will pass have economic value. There are also coral fish in the Kepulauan Seribu Area, which are not classified as rare species. The offshore pipeline alignment has been selected to avoid the coral reefs around the Seribu Islands. However, the sea areas around Labuhan Maringgai and Muara Bekasi have no coral reef or marine mammals of ecological importance.

3. Sociocultural Environment

18. There are 115 villages near the pipeline corridor between Grissik–Labuhan Maringgai in South Sumatra and Muara Bekasi–Rawa Maju in West Java. These villages have populations ranging from 508 to 27,297. The villages in West Java in general have higher population densities, ranging from 72 to 7,205 per km².

19. In South Sumatra, the villagers are mostly farmers and laborers employed in rubber and palm oil plantations, paddy fields, farm lands, fishponds and fishing activities. In West Java, the majority of the villagers work as farmers, fishermen, and fishpond farmers. Some are self-employed micro entrepreneurs in the informal economic sectors, such as vendors and small traders. Some are also employees of private sector enterprises.

20. Education infrastructure in South Sumatra is inadequate and schools are only available up to the elementary level. Health facilities are inadequate in South Sumatra. Most villages are served only by small health clinics providing only basic medical care. In West Java, health clinics at village level in Muara Bekasi are adequately equipped. Despite this, environmental sanitation in both areas is poor.

D. Anticipated Environmental Impacts and Mitigation Measures

21. Construction activities under the Project that could create adverse environmental impacts are: (i) movement of heavy equipment for trenching, transport of pipes and movement of personnel, (ii) clearing of vegetation within the corridor, (iii) trenching activities including storage of excavated materials, (iv) laying of pipes under the rivers, (v) laying of pipes under the sea, and (vi) construction of the gas receiving and compressor stations. The impacts would include (i) noise, (ii) dust, (iii) loss of vegetation in the corridor, (iv) emissions from vehicles and heavy equipment used in the construction, and (v) increased turbidity of the river and sea water during pipe laying. In general, the impacts would not be significant and they will be transient in nature since (i) the pipeline is a linear structure and the construction activities are confined to short sections along a narrow corridor for around 5–10 days, (ii) the onshore corridor is mostly

² PT Perusahaan Gas Negara (Persero) Tbk. 2006. *PGN Land Compensation Data* as of April 2006.

within sparsely populated areas, and (iii) the offshore section is within areas which are not ecologically sensitive. PGN will monitor the actual environmental impacts of the Project and ensure the mitigation plans from all the AMDAL monitoring and mitigation documents (RKL and RPL) are implemented.

22. To ensure the system performance and integrity, a supervisory control and data acquisition (SCADA) system will be installed to manage the operations of the gas pipeline, including leak detection. The SCADA system will be operated from the master control station at Bojonegara. In the event of emergency, the SCADA system will automatically isolate the affected pipe section by remotely operated valves.

23. PGN will ensure through contracts that the contractors will implement best environmental management practices in their construction to minimize normal environmental disturbances associated with civil works construction. In addition, the contractors will also be required to be responsible for providing basic facilities such as temporary housing, water supply, basic health care, and sanitation facilities for the work force. Heavy construction machinery and equipment will be moved only along the right of way.

24. The pipeline is designed to have an economic life of 20 years. However, technically the working life of the pipeline can be as long as 40 years. After its useful life, the pipeline will be decommissioned to make it free from fire hazard. The decommissioning of both the onshore and offshore sections of the pipeline will use the same procedure. The residual natural gas in the pipeline will be purged with nitrogen gas, followed by water. The abandoned pipes will stay buried filled with water.

E. Institutional Requirements and Environmental Monitoring Plan

25. The AMDALs include preparation of RKL (environmental management plan (EMP)) and RPL (environmental monitoring plan). The EMP contains mitigation measures for all identified major impacts during the construction and operations phases, and monitoring activities to be carried out during the construction and operations. PGN has incorporated within each construction contract environmental management requirements to be complied with by the contractor and subcontractors. In addition, the contractors will be briefed on the conditions imposed by the MOE on the Project, the potential problems and mitigation measures as outlined in the AMDAL reports, and their obligations in meeting those requirements. The EMP is summarized in an Appendix to the IEE.

26. The implementation of the RKL/RPL by PGN will involve the following activities (i) maintaining coordination with the environmental regulatory agencies and contractors for effective project environmental management, (ii) monitoring and inspection activities of the Project, including project sites and enforcing reporting requirements by the contractors as stipulated in the contracts, (iii) coordination with the local agencies and communities to ensure cooperation and effective execution of the RKL/RPL, and (iv) submission of semiannual environmental monitoring reports as required by MOE and the local governments during both construction and operation phases.³

27. In the operations phase, the gas pipeline performance will be monitored by the SCADA system supplemented by foot patrolling.

³ The reports would also be required by ADB.

28. During the construction, about 38 environmental staff under the manager of Quality Assurance and Health, Safety and Environment (HSE) will be responsible for regular monitoring and monthly evaluation of the environmental management results. During operations 83 HSE staff will be employed. Bapedalda (*Badan Pengendali Dampak Lingkungan Daerah*, Local Environmental Impact Assessment Agencies) and ESDM Department (*Energi dan Sumber Daya Mineral*, Energy and Mineral Resources) will monitor Project environmental performance. PGN will allocate approximately \$50,000 annually for environmental monitoring.

F. Public Consultation and Information Disclosure

29. PGN has carried out extensive public consultation and disclosure with the Project's stakeholders since the early stage of the AMDAL process, including (i) dissemination of project information through mass media including local broadcasting. Community members who wished to give input and opinions were given 30 days (after the announcements were broadcasted/published) to make submissions to the local BAPEDALDA or PGN; (ii) surveys of public attitudes towards the Project; and (iii) public meetings held in nine regencies and subdistricts along the entire Project area from November 2003 to August 2005 with an average of 100 people attending each meeting. These meetings provided information on the Project and its impacts on community members. The people consulted generally supported the Project but expressed some concerns regarding the adequacy of compensation for land acquisition.

30. A survey of the attitudes of local communities towards the project reveals the following; (i) of those interviewed along the Grissik–Pagardewa section, 78% expressed support for the project, 5% stated otherwise and 17% abstained; (ii) in West Java, attitudes towards the project show 47% expressed support, 39% stated otherwise and the balance abstained; and (iii) in Labuhan Maringgai, 40% expressed support, 45% stated otherwise and the balance abstained. The survey in Labuhan Maringgai was carried out before 1999 prior to any public consultations held to explain the benefits of the project. PGN will carry out further public consultations before October 2006 to gauge current attitudes for the Pagardewa-Labuhan Maringgai segment, and take proper measures to address local communities' concern about the project. PGN will continue public consultations including the disclosure of relevant information for the duration of the Project.

31. Based on field findings from community involvements activities, PGN has prepared a community development program (CDP) for local communities. The CDP will provide social infrastructure (including religious activities, medical equipment and supply, renovation of school buildings and supply of handbooks), consultation and counseling, and additional community services based on specific needs for the communities. The CDP budget is approximately Rp 5 billion and is included in the project cost.

G. Findings and Recommendations

32. The Project is the most practical way to increase the share of natural gas in the energy profile of West Java. Pipeline transport is the only viable option to bring natural gas from the onshore production fields in Sumatra to industrial and residential consumers in West Java.

33. During construction, the Project will create transient disturbances to environmental quality. However, the disturbances common to all civil work construction would not create significant impacts considering the short construction period over a section of the corridor before the construction progresses to other sections of the narrow construction area.

34. During the construction and operation phases, PGN will follow the mitigation measures and monitoring schedules identified in the three RKLs/RPLs that were approved by the MOE to avoid environmental impacts of the Project. PGN will establish the manager of Quality Assurance and HSE to conduct regular monitoring and evaluation of the environmental management results. PGN will submit semi-annually environmental monitoring reports to both MOE and ADB.

H. Conclusions

35. The Project will create environmental benefits by replacing more polluting fuels such as HSD and coal, with natural gas. Based on the estimates of natural gas use, the net present value of the environmental benefits is estimated at about \$74.52 million for the operating life of 20 years and a discount rate of 8% per annum. The Project can be justified on environmental grounds because its benefits exceed its Environmental costs.

SUMMARY OF THE LAND ACQUISITION AND RESETTLEMENT PLAN

A. Project Description

1. The South Sumatra to West Java Phase II Gas Pipeline Project (the Project) will transport gas from the Grissik gas field in South Sumatra to Rawa Maju in West Java. The Project consists of a 661 km pipeline and includes 500 km of onshore pipeline and 161 km of offshore pipeline. Construction began in January 2006 and is scheduled to be completed no later than February 2007.

B. Scope of Land Acquisition and Resettlement

2. The onshore pipeline alignment was selected because it minimizes the number of structures, persons, and the forest ecosystems affected. The pipeline right of way (RoW) requires the acquisition of land and other fixed assets. In South Sumatra and Lampung provinces, the Project will acquire 951.42 ha of privately owned land and 186.34 ha of land owned by corporations. In all, 4,791 land parcels belonging to 4,315 users (both legal owners and non-titled users) are affected. The land acquired is mainly agricultural land such as rice fields, traditional plantations, drylands, and arable homesteads. Affected persons (APs) inhabit 115 villages with a combined population of 393,426 and an average population density of 166 per km². A further 40 households will incur loss of structures, totaling 28 structures in South Sumatra and 12 in Lampung, with an average area of 50 m².¹ No community structures and common property resources nor social facility structures will be directly affected by the Project. The pipeline will have temporary impacts during construction on some public facilities such as irrigation canals and village roads. Since all APs in South Sumatra and Lampung have opted for cash compensation, no resettlement is required. Land used for the RoW in West Java will be leased from Perum Jasa Tirta II (PJT II). Additional data on levels of affectedness of non-titleholders, APs owning or using structures and number of sharecroppers is being gathered and the land acquisition and resettlement plan (LARP) will be updated to incorporate this data.

C. Socioeconomic Information on Affected Persons

3. A socio-economic survey conducted in 1997 indicates that 64% of the population in affected villages is in the productive age range (15–55 years). Average household size is about 5–8 members. Farming is the main occupation for both males and females. The secondary occupations of males are wage laboring, civil service, and trading while, for females, the main secondary occupation is the retailing of food crop products. The average levels of education are elementary and junior high school levels. Skill levels are limited, mostly carpentry, mechanics, driving, and handicrafts. The project area will not pass through any communities of indigenous people and none of the communities along the RoW are isolated communities with closed economic systems.

D. Information Dissemination, Consultation, Participatory Approaches, and Disclosure Requirements

4. Since the early stage of the land acquisition process in 2004, and prior to its acquisition negotiations, PGN carried out extensive and thorough information dissemination, consultation and disclosure with the Project's stakeholders including: (i) information dissemination regarding

¹ These structures comprise semipermanent wooden houses, huts, and farm field shelters.

rights to entitlements, (ii) public consultation meetings with APs, and (iii) the formation of Land Acquisition Committees (LACs) chaired by the vice governor or regent in each regency. APs have been able to participate in the LARP preparation through institutional channels, which are: village governments, village boards of resilience (LKMD), and district & regency level governments. PGN representatives have cooperated extensively with these institutions.

5. Public consultations have been carried out through various means, including; (i) dissemination of project information through the mass media. Community members were given 30 days after the announcement notifications to submit input and opinions to the local BAPEDALDA or to PGN; (ii) surveys of public attitudes towards the Project; and (iii) public meetings held in nine regencies and sub-districts along the entire Project area from November 2003 to August 2005 with an average of 100 people attending each meeting. Those meetings provided information on the Project and its impacts. They also solicited AP views on impact mitigation, and sought cooperation of communities and all related parties. PGN will continue public consultations, take proper measures to address local communities' concern about the Project and continue to disclose relevant information for the duration of the Project.

E. Grievance Redress Mechanisms

6. The grievance procedure, based on Presidential Decree No. 55/1993, is designed to mitigate disputes regarding compensation levels for land. Since the determination of the Project alignment and the land acquisition program is participatory in nature and carried out in consultation with the APs, the need for grievance redress procedures has been minimal. However, complaints and grievances can still occur in the course of project implementation. All grievances must be registered within a month from the announcement of the result of the measurement and inventory of the land, structures and assets and are addressed by the relevant LAC. If the LAC cannot resolve the problem specifically regarding financial compensation then the dispute sent to the district court (Pengadilan Negeri) for resolution. During the disputation settlement, the compensation is held in an escrow account by the district court. Grievance redress mechanism and procedures are publicized at meetings with stakeholders so that APs are aware of their rights and procedures for grievance redress.

F. Policy and Legal Framework

7. PGN's general policy for land acquisition, compensation and resettlement regarding gas transmission and distribution projects follows Presidential Decree (KEPPRES) No. 55/1993² on Land Acquisition which also specifies grievance procedures for landowners; defines "public interest" for development purposes; separates private projects which should use regular land purchase arrangements; places increased emphasis on community consultation and reaching agreement with people affected regarding the form and the amount of compensation; and which presents options for compensation including substitute land, resettlement and cash. The Regulation of the State Minister of Agrarian Affairs and National Land Agency No. 1 of 1994 specifies that each Provincial Governor addresses establishment of a Land Acquisition Committee or LAC³ (Panitia Pengadaan Tanah) in each kabupaten (regency/district) and kota

² Presidential Regulation (PERPRES) No. 36/2005 replaces Presidential Decree (KEPPRES) No. 55/1993, for only 21 different categories of public works, and does not include gas transmission pipelines.

³ Comprising: (i) Head of Kabupaten/Municipality (Bupati/Walikota) as Chairman; (ii) Head of Kabupaten/Municipality Agrarian/Land Office as Vice Chair; (iii) Head of Land and Building Tax Office; (iv) Head of local Public Works, Buildings Agency; (v) Head of local agriculture (Plantation & food Crops Agency); (vi) Head of District (Camat) where project will be build; (vii) Head of Village (Lurah); (viii) Secretary of Bupati/Walikota as First Secretary of Committee; and (ix) Head of Division in local Land Office as Second Secretary of the Committee.

(municipality) to be chaired by the Bupati or Walikota, and compensation is also given to persons using land without any titles (Art 20). The LAC includes representatives of the Level II Land Office, Tax Office, Public Works Agency, Agriculture Agency, the heads of the sub-district and villages where land acquisition will take place, and two additional members. Compensation is provided at the same replacement rates to all affected persons including holders of hak adat or ulayat (customary rights), and also to long-term squatters on government land.

8. The policy of the Asian Development Bank on Involuntary Resettlement is set out in the Involuntary Resettlement Policy (1995). PGN has also used the ADB *Handbook on Resettlement: A Guide to Good Practice* (1998) and ADB *Handbook on Poverty and Social Analysis* (2001) as guidelines. PGN's framework for land acquisition, compensation and resettlement regarding gas transmission and distribution project follows KEPPRES No. 55/1993, and specifies that compensation for APs will be negotiated based on the latest NJOP (Nilai Jual Objek Pajak, government land value) and current market value. The scope of PGN's land acquisition, compensation and resettlement framework covers compensation for loss of assets and restoration or enhancement of livelihood of all categories of APs (directly or indirectly affected, title holders and non-title holders) and provides that: (i) compensation and rehabilitation provided to APs will be sufficient to reestablish their pre-project standard of living, with the prospect of improvement; (ii) all APs will be adequately informed on eligibility, compensation rates and standards, livelihood and income restoration plans, and project timing; and (iii) no land acquisition will take place prior to satisfactory compensation and resettlement of the APs.

G. Eligibility and Entitlements

9. Payment of cash compensation, allowances and income rehabilitation will comply with KEPPRES 55/1993 and is witnessed by the relevant LAC and monitored by a provincial level monitoring team. The compensation value for land acquisition is determined by negotiation and agreement (musyawarah) on the basis of replacement values, in particular when the Tax Object Selling Price (NJOP) is below the market price. The compensation rates used vary for different regions, land types, and land productivity. The budgeted amount of cash compensation for land acquisition in South Sumatra and Lampung Provinces, as of 12 July 2006, totaled Rp62.8 billion. Compensation for the 40 structures affected by the Project is based on price estimates from PU (Ministry of Public Works) and estimated at Rp1.2 billion. Aside from receiving cash compensation for land, APs also received cash compensation for the standing crops on the project affected lands. Total estimated cash compensation for standing crops amounts to Rp47.9 billion. No social facility structures are affected by the Project. Entitlements are summarized in Table A7.

H. Relocation of Housing and Settlement

10. The selected onshore pipeline alignment minimizes the number of structures affected. PGN had offered APs the choice of replacement land and structures and/or cash compensation. This process was officially documented, and to date, all APs have chosen to accept the offer of cash compensation for loss of land and structures. Hence in the case of South Sumatra and Lampung Provinces there is no requirement for resettlement.

I. Income Restoration and Rehabilitation Strategy

11. The field survey, conducted in 2004, anticipated no significant loss of assets, income or livelihood, or displacement of people due to the Project. The survey found no vulnerable groups. The emphasis is on the provision of adequate compensation to ensure that the economic and social future of the APs is at least as favorable as it would have been in the absence of the Project. Separately, as part of its corporate responsibility program, PGN is implementing a community development program (CDP) with an NGO (PKBL) in the area impacted by the Project. The CDP comprises (i) a partnership program with small scale business enterprises; and (ii) a community empowerment program. Aside from PKBL, PGN has also implemented a CDP based on the need assessment⁴ of people in the affected villages. The ultimate goal of CDP activities is to contribute to the growth of the village economies. Funding for the programs is allocated from PGN's profit.⁵

J. Budget and Financing

12. The total budget for implementation of the LARP is estimated at Rp161 billion. Land purchase in South Sumatra (in Lampung and South Sumatra provinces) is the largest component, accounting for Rp62.8 billion while cash compensation for trees and crops is the second largest component, at Rp47.9 billion. The estimated cost of the acquisition of land in West Java is Rp17.7 billion. PGN will provide all funding for implementation of the LARP from its own cash resources.

K. Implementation Schedules

13. PGN will implement a control and monitoring process to ensure that the APs receive the compensation satisfactorily before pipeline construction activity starts in a particular area. Internal and external monitoring will be conducted by PGN and a third party consultant for the Project from March 2004 until December 2007. As of 30 June 2006, land acquisition and compensation activities in the Lampung⁶ province have been completed. Meanwhile for the province of South Sumatra, two out of a total of six affected⁷ regencies have been completed. The remaining four regencies which are located along the Grissik to Pagardewa segment of the pipeline are expected to be completed by August 2006.

L. Organizational Framework for Land Acquisition and Resettlement

14. The overall responsibility for the enforcement of the policy framework and the planning and implementation of the LARP lies with PGN. The Project Coordinator from PGN will maintain a close liaison with the local authorities, representatives of APs and NGOs. At the local level, the local authorities with PGN will have the responsibility for all LARP activities including surveys, consultation and negotiation with the APs and acting through the LAC. The Project Coordinator makes special efforts to maintain good community relationships, and resolve compensation problems and complaints including the active and effective participation of the APs in the preparation and implementation of LARP. The Project Coordinator monitors the Project activities and prepares reports for PGN's Director of Development and Director of Finance.

⁴ Need assessment is a survey conducted to identify potentials of the affected villages to ensure that CDP activities are efficient, on-target and enduring.

⁵ For 2006 total funding allocated for PKBL is 1.5% of previous year's profit.

⁶ Covering four affected regencies : Waykanan, TUBA, Lampung Tengah and Lampung Timur.

⁷ OKU Induk and OKI Timur are completed, MUBA, Banyuasin, Muaraenim and Prabumulih are expected to be completed in August 2006.

M. Monitoring and Evaluation

15. Monitoring and supervision of the LARP implementation involves internal monitoring and external monitoring. The third party consultants monitor and evaluate the LARP implementation. Monitoring will consist of (i) random review of documents on acquisition and compensation, to ensure full compliance with the policy's requirements; (ii) random site visits to ensure that compensation has been duly paid prior to the start up of construction works, its compliance to the principle of replacement cost and grievances; (iii) special studies about the adequacy of compensation paid for APs loss of assets compared to current market prices; (iv) periodic field visits and surveys to assess the public consultation concerning with project activities; and (v) periodic field visits to assess grievance procedures and the solution of land disputes, if any.

16. PGN progress activities report provides information in terms of internal/routine monitoring and reports on (i) status of payment of compensation on a timely basis and to the agreed amount; (ii) status of payment of compensation to all eligible APs, and only to eligible persons; (iii) planning and implementation of income and livelihood restoration measures that has been agreed in the entitlement matrix and as per budget; (iv) assessment of progress on income restoration and maintaining / improving on pre-project standards of living; and (v) inspection of the complaints registered and actions taken for resolution if there are conflicts.

17. The monitoring reports by third party consultants will be sent as (i) an Inception Report submitted to the project authorities within one month of beginning of the assignment, and (ii) six monthly reports to the project authorities and the lending institutions.

Table A7: Entitlement Matrix

Type of Loss	Entitled Person	Compensation Policy	Implementation Issues
Loss of agriculture land	Farmers who cultivate the land	Provide equivalent nearby Cash compensation at replacement cost If only partial land is affected but the remaining become economically unviable, the APs will be entitled to get cash compensation for entire land at full replacement cost.	A list of available land in each affected community is required Assistance to farmers to develop new crops and improve production Replacement cost will be determined by local government
Loss of residential land	Legal occupant of the land with certification from relevant authority	If remaining land is enough to absorb APs, replacement land will be provided within the community. If remaining area is not enough an alternative house plot or equivalent will be offered. Cash compensation at replacement cost	The value of the new site has to be equivalent but not less than the value of the current property of APs. If the assessed value of the new site is larger than the assessed value of their current property, the difference should not be collected from the APs. APs will have to conform to all existing regulations.
Loss of structure	Legal owner of the structure	(i) Cash compensation at market price. (ii) Transport allowance for relocated APs.	a. During the survey, the amount and type of structures needed will be evaluated. b. Cash compensation will be based on market price and negotiation between PGN and APs.
	Tenants and illegal occupants	Receive assistance for relocating and replacement cost for any structure that they have erected.	
Loss of standing crops	Farmers who cultivate the land	Compensation in kind for crops based on productivity of the land in the past	Prices of agriculture products in local market will be checked for comparison. APs will be given written notice several months in advance of actual land acquisition. Crops grown after the issue of the notice will not be compensate.
Loss of trees	Person who utilize the land where trees are located	Cash compensation based on type, age and diameter of trees.	

AP = affected person, PGN = PT Perusahaan Gas Negara (Persero) Tbk.
Source: PT Perusahaan Gas Negara (Persero) Tbk.

DETAILED PROJECT COST ESTIMATES

Component	Rupiah Billion			\$ Million			% Base Costs
	Local Currency	Foreign Currency	Total	Local Currency	Foreign Currency	Total	
A. Base Cost							
1. Land Acquisition	97.3	0.0	97.3	9.7	0.0	9.7	1.6
2. Construction							
a. Surveys	20.0	0.0	20.0	2.0	0.0	2.0	0.3
b. Basic Design and QA Supplies	0.0	7.0	7.0	0.0	0.7	0.7	0.1
c. AMDAL and site preparations	20.6	0.0	20.6	2.1	0.0	2.1	0.3
d. Pipeline Construction	548.2	1792.8	2341.0	54.8	179.1	233.9	37.6
e. Insurance	98.5	0.0	98.5	9.8	0.0	9.8	1.6
3. Materials and Equipment							
a. Pipes	236.5	2797.8	3034.3	23.6	279.5	303.1	48.8
b. Coating	92.8	125.1	217.9	9.3	12.5	21.8	3.5
c. Valves	0.0	56.1	56.1	0.0	5.6	5.6	0.9
d. Bouy	0.0	2.0	2.0	0.0	0.2	0.2	0.0
4. Others							
a. Environmental Monitoring	1.3	0.0	1.3	0.1	0.0	0.1	0.0
b. Consultancy Services							
i Land Acquisition	10.0	0.0	10.0	1.0	0.0	1.0	0.2
ii Legal	26.5	0.0	26.5	2.6	0.0	2.6	0.4
iii Project Management	126.4	71.1	197.5	12.6	7.1	19.7	3.2
c. PGN Project Management Cost	52.0	0.0	52.0	5.2	0.0	5.2	0.8
d. Third Party Inspection	38.1	0.0	38.1	3.8	0.0	3.8	0.6
Subtotal (A)	1,368.2	4,851.8	6,220.0	136.7	484.7	621.4	100.0
B. Physical Contingency							
			311.3			31.1	5.0
Total (A) + (B)			6,531.4			652.5	

AMDAL = Analisis Mengenai Dampak Lingkungan (environmental and social impact assessment), PGN = PT Perusahaan Gas Negara (Persero) Tbk, QA = Quality Assurance

Exchange rate: 1\$ = Rp10,010.

Notes: Taxes and duties of \$59.4 million are included in goods and services costs.

No price contingency assumed because all contracts are fixed priced and have been awarded.

Source: PT Perusahaan Gas Negara (Persero) Tbk.