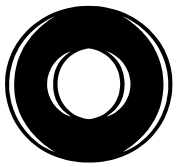
Macquarie Bank



AUSTRALIAN COMPETITION AND CONSUMER COMMISSION, GAS GROUP

ISSUES FOR DEBT AND EQUITY PROVIDERS IN ASSESSING GREENFIELDS GAS PIPELINES

MAY 2002

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MACQUARIE BANK

1. EXECUTIVE SUMMARY

This report has been prepared by Macquarie Bank Limited ("Macquarie") for the Australian Competition and Consumer Commission, Gas Group ("ACCC"). This report describes Macquarie's opinion of the issues for Debt and Equity Providers of capital in assessing greenfields gas pipelines, based on its experience of the Australian energy market. It is important to note that individual Debt and Equity Providers may have specific and additional concerns and may require further information. In addition specific greenfields gas pipeline projects may have particular issues and risks which require assessment. Also risks which are not now apparent may arise in the future, for example changes in law.

Section 2 of the report outlines the types of information which Debt and Equity Providers would typically require from a Project Developer in order to asses the risks associated with a greenfields gas pipeline project. It also discusses:

- how a financial model is used to forecast project outcomes;
- the role of independent consultants;
- issues relevant for the commercial structure of the project vehicle;
- funding structure considerations, including the types of financing instruments and refinancing; and considerations.

Section 3 of the report describes how Debt and Equity Providers are likely to assess the information provided by the Project Developer and analyse the risks specific to greenfields gas pipeline projects. It also discusses the objective of the Project Developer, the guarantee and security requirements of Debt Providers and how Debt Providers determine interest margins.

Section 4 of the report contains a discussion of how the regulatory environment affects greenfields pipeline projects and outlines possible methodologies to allow benefit sharing between owners and consumers. We recommend that these methodologies not be implemented until full consultation has taken place with all industry participants, including financiers, and institutional and retail investors.

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2. INFORMATION REQUIRED BY DEBT AND EQUITY PROVIDERS FROM A PROJECT DEVELOPER

2. INFORMATION REQUIRED BY DEBT AND EQUITY PROVIDERS FROM A PROJECT DEVELOPER

(i) Introduction

The aims of a Debt Provider are to fully recover money lent, preferably when scheduled and to receive a return on the loan commensurate with its risk. A debt provider generally does not receive any equity "upside" so will therefore take a more conservative view when analysing a prospective borrower or project than would an Equity Provider (also "Equity"). The aim of an Equity Provider is to receive a return on its investment over the desired time horizon commensurate with its risk.

For a greenfields gas pipeline, the Project Developer may be the construction contractor, the operator, an offtaker, the supplier, a financial sponsor or a combination of these parties. Consequently the "equity" in the project may be provided by a single party or a combination of parties of different natures.

The Debt Providers will structure a debt facility whose volume, margin, term and amortisation profile best reflect the Debt Providers' assessment of the risk profile and associated cashflow forecasts of the pipeline project. The information which the Debt Providers require from the Project Developer will be tailored to highlight the areas of risk, to suggest the most appropriate financial model inputs for these variables and to design sensitivities for testing. The degree of confidence in the assessment will influence the level of debt service cover which the Debt Providers require. This will then determine the amount of debt which can be raised and the repayment profile. If the Debt Providers do not themselves have the necessary expertise to assess the information provided, they will require advice from independent experts. These experts will review the information provided and/or undertake their own research and will advise the Debt Providers of any changes necessary to the cash flow forecasts provided by the Project Developer or any specific covenants which should be included in the debt documentation.

The Equity Providers will determine their contribution to the capital structure based on their required rate of return for the investment.

The Debt Providers make their assessment based on the business fundamentals supplied by the Project Developer. To the extent that a portion of the equity is provided by a party other than the Project Developer, external equity participants will generally request the same information as the Debt Providers and must also analyse the additional risk of the financing arrangements.

(ii) Risks

The table below describes the information Debt Providers and external Equity will request from the Project Developer.

Risk	Information Required
General Business	• Business case for the pipeline
Construction	• Identity and expertise of the construction contractor • Construction contract • Construction budget and drawdown schedule
Operations:	• Identity and expertise of the operations

	and maintenance provider ("Operator") • Operations and Maintenance contract • Forecast operations and maintenance expenditure
Project Vehicle	• Form of project vehicle, for example private or listed company, joint venture, partnership, unit trust • Equity parties, percentage ownership and board representation • Shareholders Agreement • Identity and experience of management
Legal	• Material Contracts • Jurisdiction • Required approvals • Relevant legislation and regulations • Real Property • Leases
Revenue	• Forecasts, including price, volume and regulatory revenue • Rationale for forecasts including experts reports • Offtake counterparties, contracts (including capacity commitments) memorandums of understanding • Gas supply sources
Expenses and Capex	• Forecasts and budgets
Environmental and Native Title	• Approvals required • Project impact • Risk allocation for existing conditions
Interest Rates and Inflation	• Project impact • Proposed hedging strategy
Regulatory	• Regulatory regime
By-pass	• Customers at risk
Financing Structure	• Financing Structure including terms and conditions. • Refinancing assumptions
Insurance	• Proposed policies
Tax and Accounting	• Details of any Tax Rulings required • Projected Balance Sheets and Profit and Loss Statements

(iii) Financial Model

A financial model ("Model") will be built by the Project Developer (and its advisors) detailing its assumptions for the construction and operation of the pipeline. The model will include assumptions for:

- Construction, including costs and drawdown schedule;
- Revenue- price path and volume, including contracted and uncontracted revenue;
- Operating and maintenance expenses;
- Asset base;
- Capital expenditure;
- WACC components and calculation;
- Debt and equity finance; and
- Taxation and depreciation.

The Model will be constructed so as to enable sensitivity analysis to be conducted on the major project variables to assess the impact on equity returns.

The Debt Providers will often construct their own financial model in order to verify the Model results They will input their own assumptions should they be different to those of the Project Developer and run their own sensitivities to determine the impact on the proposed debt structure.

(iv) Independent Consultants

Depending upon the expertise of the Project Developer, an independent consultant may be employed to provide assistance in developing forecasts particularly with regards to the regulatory price paths and the supply of and demand for gas. The Debt Providers may also rely upon this expert or may appoint their own. They may also require independent certification of construction costs and operating and maintenance and capital expenditure forecasts. In some instances Debt Providers have in-house expertise. Reports will also be required from independent parties concerning the accounting, tax and legal aspects of the project.

The Debt Providers will draft the scope of works for the independent experts and Equity will be given an opportunity to review and comment on the draft. Equity traditionally pays for the reports and will generally make available to the Debt Providers Equity's own reports. Equity will be given the opportunity to review and comment on the reports produced by the Debt Providers' independent consultants though they may not necessarily agree with the conclusions reached. In some instances, Debt and Equity may agree to use the same independent expert so will agree a joint scope of works. Whether this occurs depends on a number of factors, including whether the Debt Providers accept the credentials of the experts proposed by Equity and the size of the project and debt facility. The larger the exposure of the Debt Providers to the project, the greater will be their requirement for independent advice.

Any issues identified by the consultants will be discussed by the Debt Providers with Equity and the results will be incorporated into the Debt Providers financial model and/or the terms and conditions of the debt facility.

All the required experts reports must be specifically addressed to each Debt Provider. The Debt Providers will be relying on the reports for their lending decisions and must be able to have legal recourse to the expert for incorrect information.

(v) Commercial Structure of Project Vehicle

The Project Developer will determine whether to undertake the pipeline project on a project finance, or non-recourse basis or through its own company structure, taking into account any ring fencing requirements. Where a separate project vehicle is utilised, only the project cashflows are legally available to the Debt Providers to service and repay the debt. The parent entity's balance sheet or borrowing capacity will not be utilised and no guarantees are made by the parent to underwrite the project cashflows. A single purpose company or trust is generally used to quarantine the project risks from the parent.

Where the project is undertaken within the Project Developer's company structure, the debt requirement will be obtained through the parent company's corporate borrowing programme. In this instance, the Debt Providers will look to the group structure as a whole to determine level of risk and therefore the terms of the funding. The parent company may have existing banking relationships or capital markets borrowing programmes which can be utilised.

Where a separate project vehicle is established, its form will be determined by the Equity Providers and reviewed by the Debt Providers and will be dependent upon a number of factors including:

- The identity of the Equity Providers;
- The domicile of the Equity Providers, i.e. offshore v domestic;
- individual objectives eg maximising accounting profits, maximising pre/post tax income;
- the taxation profile of the Equity Providers;
- lease requirements;
- whether the project will have non recourse funding; and
- the requirements for distribution of cash to equity participants.

Examples of vehicles which may be used include a company, unit trust, joint venture or partnership.

Examples of ownership structures are:

- The Australian Pipeline Trust ("APT"), listed on the Australian Stock Exchange with AGL having a 30% shareholding. APT is a Division 6C trust which means that it is taxed as if it were a company, but has increased flexibility for repatriating cash to investors. Restrictions applying to companies that prevent dividends being paid where there are insufficient accounting profits do not apply to trusts ;
- GasNet Australia Trust, also a Division 6C trust and listed on the Australian Stock Exchange;
- Goldfields Gas Transmission Pty Limited, a private company owned by a consortium of Australian and offshore industry participants; and
- Epic Energy Pty Limited, a private company, owned by a combination of offshore industry participants and Australian institutional investors.

The nature of a project vehicle may change over the course of a project's life. For example, the Gasnet business was initially owned by the Victorian Government. It was sold to GPU Inc in 1999 who in turn sold the business in December 2001 via a public float. Gasnet is now listed on the Australian Stock Exchange.

(vi) Funding Structure Considerations

The project vehicle will seek to minimise its cost of capital. As the cost of debt is lower than that of equity, the project vehicle will seek to maximise the debt component of its capital structure balancing this with Equity's requirement to minimise the bankruptcy risk. The actual debt capacity will be determined by the Debt Providers from their analysis of the project risks and their determination of the certainty of the project's cashflows. The terms and conditions of the debt facility must then be agreed with Equity.

(a) Debt

When determining the appropriate debt facility for a project, Equity will seek to balance a number of objectives. These include maximising the amount of debt, minimising the cost of debt, maximising the returns to Equity, the covenants required by the different funding sources, the ease of early repayment and the matching of the debt facility with the risks of the project.

Debt requirements for projects involving construction in Australia have to date, largely been met by the bank market as opposed to the debt capital markets. This is because banks have been able to provide more cost effective financing for construction funding and for funding which is drawn down progressively. This situation may change so a project vehicle will usually pursue a variety of funding options, including capital markets both domestic and offshore, in order to determine the most cost effective source of funding. A number of Australian mining projects involving construction have raised funds in the US capital markets. These projects predominantly have US dollar revenue streams so have matched the currency of their liabilities to their revenue. These projects have generally been sub investment grade and in addition to matching the currency of revenue and liabilities, have accessed the US capital markets because there is a wider pool of investors who can purchase sub investment grade assets than is available in Australia.

With respect to bank financing, the size of the debt requirement will generally determine how many banks are involved. Individual banks will have maximum exposure levels to individual projects and to sectors as a whole.

Generally the public capital markets are a potential source of debt funding for investment grade borrowers. The private capital markets are a potential source of funding for borrowers who are non-investment grade however the volume of funding available is generally lower.

Obtaining a credit rating, particularly an investment grade rating, increases the potential sources of funding for a borrower and the flexibility of its borrowing arrangements. Generally a credit rating is not sought in relation to a project until construction is complete and some history of successful operations exists. A project is more likely to obtain an investment grade rating at this time. It is at this time that the Equity Providers may consider refinancing the project which may involve extending the term and non-amortisation period of the debt. It may be possible to achieve an investment grade rating during the construction phase through the maintenance of significant cash reserves or liquidity lines, however this may be more expensive for a project than obtaining traditional construction funding from the bank market.

Capital market funding options are therefore usually pursued by projects once they have moved to the operations phase. When reviewing its options for refinancing its original debt facility, Equity will again seek to balance its financing objectives as discussed above. Equity will compare the financing facilities offered by both the capital markets and the bank market. Structural differences between the two funding sources include the fact that bank facilities can often be repaid prior to maturity without any significant penalties paid by the borrower. Capital market issues however do generally not contain prepayment provisions so a borrower must negotiate with investors to facilitate a repurchase.

The cost of repurchasing the capital market instruments will depend upon movements in interest rates, credit margins and the availability of replacement investments for the investors. The capital markets can require less onerous covenants than the bank market.

Whether a fixed or floating rate capital markets issue is pursued will depend both upon the projects requirements and prevailing investor appetite. In some instances, a split issue is undertaken with a portion of the issue being fixed rate and a portion being floating rate. The project will then enter into interest rate swap arrangements in accordance with its hedging policy. A borrower can separate its funding and hedging arrangements however its ability to raise funds through a profile other than that ultimately required for the project, will depend on its ability to enter into appropriate interest rate hedging arrangements. This in turn depends on the credit worthiness of the project and the term and size of the swap limits required.

Capital markets issues (other than inflation indexed securities discussed above) are traditionally issued as bullet style securities, that is payments of interest only are made during the securities' life with all of the principal amount due on the maturity date.

A project may also consider issuing securities which are linked to inflation. There are two main forms of indexed securities in Australia - Capital Indexed Bonds ("CIBs") and Indexed Annuities ("IAs"). Each form offers a different profile of principal repayment, and accordingly, the cashflows associated with the two types of security vary greatly. However, each form provides inflation hedging by indexing the payments made to the Australian Consumer Price Index ("CPI").

CIBs are similar in structure to nominal fixed rate bonds in that regular coupon payments are made throughout the life of the bond and the principal amount is paid as one "bullet payment" on maturity. Where CIBs differ from nominal bonds is that this principal amount is indexed to quarterly changes in the CPI and the fixed coupon rate is paid quarterly on the indexed value of the principal. An IA has as its base a nominal annuity; a stream of payments of equal size, with each payment being equivalent to an amount of interest and a part repayment of principal. For an IA, the annuity payments made are indexed quarterly to the CPI.

A CIB may be an appropriate security for a regulated gas pipeline due to the matching of the project's asset base and revenue stream to the inflation linked payments on the CIB. However as the principal due on maturity of a CIB can accrete significantly with changes in CPI, the appropriateness as a funding instrument will depend on the long term projections of the business' asset base. Regulated businesses which have issued CIBs include Envestra Limited and ElectraNet Pty Limited. Projects which have issued IAs are generally those with defined project lives and with revenue streams linked to inflation. Examples include the M2 and Melbourne City Link tollroad projects.

The Debt Providers will seek to match the repayment profile of the debt including the amount due on maturity, with the project cashflows, taking into account any regulatory reset periods and reset dates. A project with stable and certain cashflows over a long period of time is more likely to support a debt facility which pays only interest during its term and has the whole principal amount due on its maturity date. This principal amount is then refinanced on its maturity from the remaining project cashflows. Alternatively, a project with either volatile (that is, uncertain) cashflows or cashflows which occur over a short period of time will likely have a debt facility which has payments of both principal and interest during its term.

The maturity profile of the debt will be determined through negotiation between Equity and the Debt Providers. Depending upon Equity's refinancing strategy, it may structure a tranche of debt with an earlier maturity date than the remainder of the facility. This may occur if Equity believes it will be able to refinance for example, at a lower interest margin or for a longer term. Alternatively the entire facility may mature on

the one day. Equity must balance its refinancing strategy with the risk that is unable to refinance when a specific the tranche is due for repayment, leading to a possible event of default under the debt facility.
Debt Providers will wish to minimise the risk that their facility is unable to be refinanced by the project vehicle on its maturity date, particularly if there is a significant principal payment due. They will therefore have a preference for the facility maturity date to be of a sufficient time away from the regulatory reset date so as to minimise the impact of any uncertainty as to the regulatory reset outcome. The delays experienced in finalising some regulatory outcomes have meant that notwithstanding the refinancing strategy of Equity, some Debt Providers have required their facilities to mature one year or longer from the official reset date to cover any delays in finalising outcomes.

It is possible to structure a debt facility which has a provision which allows the interest margin on the facility to be reset after the regulatory reset period (or for example, after a five year period) however to date, facilities such as this have not been commonplace. Difficulties can arise in agreeing an objective test in advance which satisfies both borrower and lender. Mechanisms for determining interest margins are described in section 3(v).

If an infrastructure project with a monopoly style business has an investment grade credit rating from two recognised agencies, it can explore the option of having its debt obligations "wrapped" or guaranteed by a monoline insurer. A number of international "AAA" rated monolines conduct business in Australia, including MBIA Assurance, AMBAC Assurance Corporation, Financial Security Assurance and XL Capital Assurance. Obtaining a wrap from these parties means that the projects debt obligations are rated "AAA" notwithstanding that the project itself has a lower credit rating. The "AAA" rating will only apply to those obligations which are specifically wrapped by the monoline. Gas businesses which have a portion of their debt obligations guaranteed by a monoline insurer include Gasnet Australia Trust and Envestra Limited. Other entities which have debt obligations guaranteed by a monoline include ElectraNet, Melbourne, Brisbane and Perth Airports and ETSA Utilities.

The advantages for a project obtaining a "AAA" rating for its debt obligations are the volume of funds that can be raised in the capital markets, the term of funding and depending on market conditions, the pricing. There is a much larger pool of funds available for investment in "AAA" securities than there are for lower rated securities especially those rated "BBB" or "BBB+". Depending on market conditions, a project may be able to issue volumes of $500m or even higher for nominal "AAA" rated securities compared to between $100 million and $150 million of "BBB" rated securities. "AAA" securities can also be issued in significant volumes for terms of maturity of 10 and potentially 15 years. The maturity terms available for "BBB" rated nominal securities are generally 3 and 5 years. With respect to pricing, the project will need to compare the total cost of issuing "AAA" securities, being the interest margin plus the guarantee cost, with the cost of alternative funding sources. The number of wrapped issues which have taken place over the past few years demonstrates that the pricing advantage quite often occurs.

In addition to raising senior ranking debt, a project may consider issuing a tranche of subordinated debt. Subordinated debt ranks below senior debt and above equity with regards to the distribution of assets if the project vehicle is wound up. Interest and principal payments are also subordinated to payments on the senior debt. The decision to issue subordinated debt will depend upon the level of senior debt a project is able to raise and the returns and terms and conditions required by subordinated debt investors.

The decision as to whether the Debt Providers will sell down their debt in the domestic or international financial markets is largely dependent upon the domestic markets capacity to provide the facility and is therefore dependent upon the size of the debt facility. Generally, bank facilities for amounts of less than A$1 billion can be funded in the domestic market. However the viability of each syndication will be dependent upon prevailing market conditions including market appetite for pipeline project transactions, competing bank facilities in the market and the parties specific to the transaction. The ability to sell capital

markets instruments offshore is dependent upon investor appetite for Australian dollar denominated issues. This appetite can fluctuate and is very dependent upon investors sentiment towards Australia. If these investors are swapping the A$ denominated security into a different currency, appetite to invest will also depend on prevailing swap market conditions.

The sell down of the debt facility is generally undertaken by the Debt Providers however the management of project usually provide assistance. The Debt Providers usually have a high degree of flexibility with regards to their selldown strategy however it is generally agreed with the project.

(b) Equity

The Equity Providers will determine their contribution to the capital structure based on their required rate of return and time horizon for the investment. Typically Equity seeks to maximise the nominal after tax return from the project's cashflows however some parties focus on accounting returns. Cash returns can be favoured by parties over short term accounting returns due to the long term investment strategy of many of these companies as well as the long term nature of the projects. Listed companies investing in new projects can be subject to accounting earnings constraints which are usually due to shareholders expectations about short term accounting profit performance.

A number of factors influence a company's cost of equity. Typically companies will have a threshold minimum or target Internal Rate of Return ("IRR") which equates to the minimum rate of return they expect to earn from investing in any project. The IRR is usually adjusted for different projects depending on their risk profiles. The target IRR to equity for a project can be derived using Capital Asset Pricing Model ("CAPM") theory after assessing the risk profile. However it is important to note that in practice, companies may use other methods to determine their target IRR to equity, reflecting the expectations management has for the level of risk they are prepared to accept in undertaking an investment. Industry benchmarks, competitive bidding scenarios and corporate strategy can all influence the required rate of return. In addition, investment returns do not automatically immediately adjust with changes in interest rates. There may be a significant period of adjustment.

Investors also take into account:

- current market conditions, including the position in the interest rate cycle which can drive demand for growth or defensive stocks;
- the liquidity of the investment, for example whether it is listed and accordingly has increased liquidity, or unlisted with potential restrictions on transfer;
- the time horizon of the investment and proposed exit strategies;
- domestic and offshore comparisons with respect to
    - returns
    - the ratio of the asset price (that is, the multiple) to:
        - Forecast Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA)
        - The Optimised Depreciated Replacement Cost of the asset.

  Investors use these ratios as a basis to compare the current project with those of similar risk profiles and will ascertain whether the difference in the ratio adequately reflects the differences in risk between the projects being compared. There are no generally accepted targets.

Each time a the project undertakes a capital raising, it may incur costs, particularly if it is a listed entity or has private equity participants. These costs are broadly described as equity arrangement costs and are paid at the time of the equity raising. The costs are amounts paid to equity arrangers for structuring the terms of the equity issue, preparing and distributing an equity information package (including an information memorandum) and arranging and undertaking roadshow presentations.

3. DEBT AND EQUITY PROVIDERS' APPROACH TO PROJECT AND CREDIT ASSESSMENT

3. DEBT AND EQUITY PROVIDERS' APPROACH TO PROJECT AND CREDIT ASSESSMENT

(i) Introduction

The Debt Providers will review the information described above, assess the risk profile of the pipeline business and determine the appropriate debt facility for that business. The Equity Providers will also review the information in order to determine the risk of the pipeline project and their maximum equity contribution based on their IRR requirements. One of the risks for Equity is the structure of the debt facility so Equity ultimately cannot finalise its contribution until the debt facility has been finalised.

Although the paragraphs below refer primarily to the actions and analysis of Debt Providers, Equity Providers will generally use similar risk assessment techniques. However as their target returns from the investment are higher than those received by the Debt Providers, they are willing to assume higher risk and to make more aggressive assumptions.

Generally the greater the certainty of project cashflows, the lower the risk profile, the greater the debt capacity and the lower the minimum debt service cover ratios required by the Debt Providers. For an infrastructure asset which is expected to have a very long life with very stable and predictable cashflows, Debt Providers will generally not require as big a comfort margin as for more risky projects. They may be expected to offer debt facilities which do not amortise quickly, if at all and the interest margin may be lower. With shorter life assets or those with less predictable cashflow, the Debt Providers will require the debt to be paid down more quickly.

Generally, if a pipeline has contracted revenue and the Debt Provider believes that the market risk beyond the end of the contract is too great for it to take, then it will require its debt facility to amortise fully prior to the expiry of the contract. If some level of market risk is acceptable to the Debt Provider, it will structure the debt facility so as to ensure that amortisation can occur from the acceptable cashflows.

Since the assessment of risk is inexact, Debt Providers will also try to compare the project with similar projects in Australia and overseas to establish an appropriate benchmark. This is especially important where the debt facility will be syndicated to other banks, many of whom may well have overseas opportunities in the same sector. As discussed in Section 2 of this report, generally, bank facilities for amounts of less than $1 billion can be funded in the domestic bank market. However the viability of each syndication will be dependent upon prevailing market conditions including market appetite for pipeline project transactions, competing bank facilities in the market and the parties specific to the transaction. Larger facilities typically require offshore syndication so the parameters of the overseas markets are given greater consideration.

If the project has obtained a credit rating, then Debt Providers will review the rating level and the rationale for the rating provided by the agency. However Debt Providers, particularly bank lenders, do not usually rely on this analysis. The majority of Debt Providers do not delegate their credit decision processes to the credit rating agencies.

(ii) Risk Assessment

The specific risk categories and the approach to project and credit risk assessment are described below.

(a) General Business Risk

In conjunction with the analysis described below, the Debt Providers will assess the rationale presented by the Project Developer for the development of the pipeline. For example, was the pipeline initiated by a major industrial user or as competition for an existing pipeline? Is it being built to satisfy unfulfilled demand or to meet projected demand growth? Debt Providers will also review the possibility of a competing pipeline being constructed, taking into account the capital costs of doing so and the extent of non-contracted demand.

(b) Construction Risk

This category includes the risk that the pipeline will not be completed on time, on budget, or to pre-agreed specifications. Given the project vehicle is generally not earning any revenue during this phase, but that interest on large amounts of borrowings is accruing, large pipeline projects are very sensitive to construction phase risks. The Debt Providers will seek to ensure that the contractual arrangements adequately allocate responsibility in relation to a number of issues. Typically Debt Providers seek to pass on as much of the risks as possible to the construction contractor. Debt Providers will assess the following aspects of a projects construction risk:

- expertise of the contractor: The Debt Provider will assess the capacity of the contractor to complete the project in time and in accordance with the budget. The contractor will need to demonstrate it has sufficient capital and management resources to conduct a project of this size in addition to any other projects it is undertaking. The contractor will also need to demonstrate its experience on similar projects;
- technology of construction: The Debt Providers will review whether the pipeline and associated equipment is being constructed using tested design techniques or whether new technology is being utilised. New technology will pose a higher risk than existing "standard" techniques as the risk of achieving scheduled completion and performance may be greater;
- cost overruns: Typically this risk would be borne by the construction contractor through the provision of a fixed price fixed time contract. The debt providers will also require that the contract provides for liquidated damages to be paid by the contractor for breaches of contract obligations, such as delays in or even non completion;
- amounts due to a foundation customer: The contract with the foundation offtaker will be reviewed to see if the party would be entitled to claim damages (arising from lack of output capacity) in the event of a delay in completion of the construction. This risk would need to be passed on to the construction contractor;
- changes in pipeline specifications; Any changes in pipeline specifications would need to be agreed with Debt Providers. Equity will usually bear the risk of changes to specifications resulting from new environmental or safety standards, or other changes in law;
- default by the construction contractor: Typically this risk is borne by both Equity and Debt however depending upon the credit worthiness of the contractor, either Equity or the Debt Providers (or both) may require the contractor to provide performance bonds, bank letters of credit or insurance bonds;
- changes in financial costs: Since the construction period will not generate any revenue, the Debt Providers will ensure that payments of interest on their loans will be met out of the project's capital contributions, most commonly from drawings on the loan facility. The Debt Providers will require that the interest costs are fixed so that these costs are known;

- adverse site conditions, including environmental and native title: Debt Providers will require that the project obtains all required authorisations and approvals prior to providing funding. Liability for existing environmental damage may be accepted by the owner of the site however the risk for ongoing environmental damage is typically borne by Equity, who will attempt to pass it on to the operations and maintenance provider; and
- Force majeure events: This is a complex issue which should be approached with a scope of possible events. If the force majeure event continues for a sufficiently long period, and there is insufficient insurance proceeds to cover the costs of repair or reinstatement, then it is usually appropriate for either party to be able to terminate the agreement. Equity ultimately assumes this risk.

Debt Providers will generally require an independent engineer to review construction costings and budgets, construction schedules, warranties, completion tests and the construction contract proposed by the Project Developer and confirm that all are satisfactory. The independent engineer will also review the technical risk of the proposed construction (including the nature of the site and proposed route of the pipeline) and will comment on the pipeline's technical specifications and whether they are suitable and appropriate for the project. The engineer may also be required to sign off on the completion test.

(c) Operations Risk (Including Operating and Maintenance Expenses)

There are a number of operating risks which Debt Providers take into account:

- Costs: Debt Providers will seek to ensure that the contract contains a clear mechanism for determining the amounts to be paid to the operator. The operating contract may contain minimum performance levels which if not met, give Equity the right to terminate the agreement and appoint a new operator;
- A default by the operator in the operation and maintenance agreement should result in the Project being entitled to claim damages, draw on performance bonds, or terminate the operation and maintenance agreement and appoint a new operator; and
- The risks of there being strikes or other labour problems should be able to be mitigated by the Project entering into binding labour agreements with the employees, or a union on their behalf. The Project may seek to transfer this risk to the Operator.

As efficient operating and maintenance costs are an important part of the regulatory framework in determining revenue, Debt Providers may request the independent engineer to review the projected costs for reasonableness and seek assurance that a replacement operator could perform the role for commensurate costs. The Debt Providers may also require confirmation that the operations and maintenance procedures meet industry standards.

The Debt Providers will review the experience and credit worthiness of the Operator in order to assess the ability to perform under the contract. The Debt Providers will also seek to identify alternative operators who can step in and perform should the original party default.

(d) Project Vehicle and Legal Due Diligence

The Debt Providers (and their legal counsel) will conduct due diligence investigations into the corporate structure, the ownership of key project assets and the nature of major project agreements to ensure that the security arrangements are appropriate for the particular structure and to ensure the due execution of all project agreements, and the validity and enforceability of the financing and security documents. The major project documents will include the construction contract, offtake agreements, memorandums of association, shareholders agreements, security documents including mortgages, debt facility documentation, property titles and leases.

The legal counsel will also review the leases and property titles required for the project and all laws appropriate for the project including local planning requirements.

If the Debt Providers view any Equity Provider or combination of parties as essential to the operations of the business, the Debt Providers may require a right of consent to any change in ownership of the project vehicle. The Debt Providers will also assess the credit worthiness of the Equity Provider to determine their ability to contribute further funds to the project should it encounter difficulties.

The Debt Providers will assess the competence of key management, technical and operational personnel to run the business including the required dealings with the regulator.

(e) Market and Revenue Risk

Market risk is the risk that there will be insufficient usage of the pipeline to generate sufficient revenues to make the project financially feasible. Depending upon the Debt Providers' view on the likelihood of the pipeline entering into further capacity commitments, Equity essentially takes market risk.

Revenue risk relates to the pricing structure - that is the risk that the tariff structure is insufficient to provide the required amount of operating revenue. For a monopoly greenfields gas pipeline, revenue risk is related to regulatory risk which is discussed below.

The Debt Providers will review the terms of any offtake agreements with foundation customers and the obligations of both the pipeline owner and the offtaker. For example, is the agreement a contract or memorandum of understanding, minimum or maximum volume commitments, whether the obligations are take or pay, price setting mechanisms, the term of the contract and the termination provisions. The Debt Providers will take account of the percentage of pipeline capacity which is contracted. The higher the contracted percentage, the greater the certainty of project cashflows. A secure revenue stream combined with certainty of operating and construction costs generally means that a proportionately high amount of the total capital cost of the pipeline can be raised using debt finance.

The Debt Providers will also assess the creditworthiness of the offtaker and other potential offtakers to further assess the certainty of the revenue stream. The proportion of the offtaker's total costs accounted for by the purchase relative to its revenues, the potential for cross-contamination from other companies in the corporate structure, the offtaker's market position and the price it is paying relative to other sources, are all key issues.

The Debt Providers will assess the extent of the pipeline's exposure to market risk, that is the uncontracted capacity as at financial close and Equity's forecasts for the timing and volume of future contracts to be entered into.

The Debt Providers will usually commission an independent expert to provide information on the future demand for the pipeline's services. This information is required to assess both the risk of any uncontracted capacity and the likelihood of replacing any foundation customers should they default on their obligations. This analysis will take into account forecast demand for gas as an energy source both generally in Australia and specific to the destination of the pipeline, demand at the pipeline's projected tariffs, competing energy sources, the impact of weather patterns on gas use, the impact of the Kyoto Protocol and any potential environmental levies on gas and alternative energy sources, the source and availability of the gas which will be put through the pipeline and the ability and reliability of the supplier to supply the resource.

Equity's market risk increases with the proportion of capacity which is uncontracted.

(f) Capital Expenditure and Other Expenses

Capital Expenditure forms part of the regulated asset base and is therefore an important determinant of regulated revenue. Accordingly the Debt Providers will require independent certification of forecast expenditure including suitability for the projected demand. The Debt Providers will review any other expenses (in addition to operating and maintenance expenses which are discussed above) for reasonableness.

(g) Environmental and Native Title Risk

The Debt Providers will assess the Project's potential for environmental risk, both in respect to likelihood of occurrence and associated impact on the project's cashflows and will require the Project to obtain all authorisations and approvals from the appropriate regulatory bodies. The Debt Providers may appoint an independent expert to determine whether there is any contamination of the site and will assess the proposed risk allocation for existing contamination. Similarly, the Project will need to identify any Native Title claims over the route proposed for the pipeline and will require all approvals under Native Title legislation and regulations.

(h) Interest Rate and Inflation

If the project vehicle has a debt facility which pays a floating rate of interest, it will be exposed to interest rate risk as its revenue does not move in line with changes in interest rates. For example, the floating interest rates on the debt facility may reset on a quarterly or six monthly basis. If the project is funded by the banking market it will have exposure to changes in interest rates as banks traditionally provide their funding by way of a floating interest rate facility. However, in order to have increased certainty of cashflows, Debt Providers will require that the project enters into interest rate hedging arrangements to eliminate or reduce the extent of this interest rate risk. The extent of hedging required is determined by the sensitivity of the project cashflows to changes in interest rates. This is in turn dependent upon (amongst other things) the level of gearing, the term of the financing and the regulatory reset period.

If the Debt Providers are confident that the project's WACC will be reset at the expiry of the regulatory period, they will generally require that interest rates be hedged until this date. Upon the next reset period, the Debt Providers would require that new interest rate hedging arrangements are entered into. However, delays in new access arrangements, tariffs and WACCs being finalised have meant that Debt Providers now require a project to hedge their interest rate exposure for a longer period, that is past the proposed regulatory rest date.

Debt Providers will review how inflation will impact the pipeline project and the extent of an inflation linkage in the project revenue which may provide a match for increases in expenditure resulting from inflation. The asset base of a regulated pipeline has an inflation component providing a mitigant for inflation risk.

(i) Regulatory Risk – The Impact of Regulatory Approvals and Uncertainty

In assessing the reliability of the projected revenue streams, Debt Providers will examine whether the pipeline will be subject to regulation. In cases where there is a clear reason for regulatory involvement, independent advice on the likely basis and outcome of the regulatory process will be sought. The Debt Providers will form their own opinion of the advice drawing on precedents in the relevant industry, public statements by the regulator and their assessment of the pipeline's risk. The results will be included in the Debt Providers' financial model.

Debt Providers will consider not only the regulatory decisions applying specifically to gas transmission pipelines but will also review decisions made in relation to other regulated assets. This includes decisions made by State regulators and decisions made by the ACCC in respect of other asset classes. These decisions can provide guidance as to the regulators current views.

Projects which have a clear pre-established regulatory regime will be able to demonstrate with a high degree of confidence that the projected cashflows over the regulatory period will be met. This will reassure the Debt Providers and will decrease the risk profile of the project. Accordingly, the Debt Providers may be willing to lend more debt on finer terms than if the regime is less certain.

However, if there is a possibility of a resetting of the regime, Debt Providers will adopt a more conservative approach and will discount the reliability of the cashflows in the period following the expiry of the original regime. The consistency of approach by the regulator exhibited in precedent transactions may provide comfort that change will only be incremental. However the uncertainty may be reflected in lower debt levels and/or higher pricing. In addition, Debt Providers may require amortisation of the principal amount of the loan from an earlier stage in the project's life.

If the Debt Providers do not derive sufficient comfort from their analysis of the future direction of the regulator, they may require the project to amortise the debt during the first regulatory period. The cashflows during this period are more predictable. Essentially, the Debt Providers increase the regulatory risk assumed by the Equity Provider.

With respect to a greenfields gas pipeline, the Debt Providers are likely to require certainty as to whether the pipeline will be covered by the National Third Party Access Code for Natural Gas Pipeline Systems ("the Code") and be regulated accordingly. If the pipeline is covered by the Code, the Debt Providers will also likely require evidence that the access arrangements used to forecast project revenue have been agreed with the regulator. Notwithstanding advice obtained from experts, Debt Providers are unlikely to take the risk that the actual project revenue may differ from forecast due to the regulatory determinations. This evidence will be required prior to the Debt Providers committing to fund the project.

The Debt Providers will asses the impact of regulatory resets on the project cashflows. The major issues which will have an impact are the asset base, the cost of capital and interest rates.

Equity may also be unprepared to take regulatory risk for a new development and may require confirmation of the regulatory requirements for the pipeline.

Regulatory risk is discussed further in Section 4 of this report.

(j) By-Pass Risk

The Debt Providers will assess the potential for the major customers of the pipeline to access gas from alternative sources and incur the costs of replacing a portion of the pipeline rather than purchasing access to the pipeline. Assessment of this risk will depend upon the route of the pipeline, the identity and location of the customers and the diversity of the pipeline's customers. By-pass is generally seen as only commercially viable for major industrial customers with loads large enough to support the capital investment required.

(k) Financial Risk

The terms and conditions of the Debt Provider's financing arrangements will be assessed by Equity. The arrangements impact both the project cashflow that is available to provide Equity's return, the degree of control which Equity has over the business operations and potentially the liquidity of Equity's investment. The Debt Providers may impose restrictions on the distribution of cash to Equity based on debt service cover ratios and may impose restrictions on changes to Equity participants.

In addition, if the debt facilities are structured as bullets, that is are not fully amortising over their term, both Debt and Equity take refinancing risk. This is the risk that the project is unable to rollover its debt financing obligations at maturity and renegotiate debt finance on the terms assumed in the initial analysis of the project. To assist in mitigating this risk, the Debt and Equity Providers will also conduct sensitivity analysis on their financial models to ensure that the project can support the amount of debt post the legal maturity date, under a number of assumptions. In addition, the Debt Providers generally require that notwithstanding the legal term to maturity of the debt, the principal amount of the debt can be fully amortised from projected cashflows over a period of no more than 20 – 25 years. This will be one of the key determinants of the amount of debt that a project can raise.

These factors will be taken into account in determining Equity's required return.

(l) Insurable Risks

The Debt Providers will generally require the project vehicle to take out comprehensive insurance policies to cover areas of concern. The 1998 explosion at Esso's Longford gas plant heightened awareness of this potential risk to gas businesses and insurance policies are now even more closely scrutinised to ensure amounts and coverage are sufficient. Typical insurances required include Industrial Special Risks, Public and Products Liability, Directors and Officers Liability and Workers Compensation and Terrorism. Terrorism insurance, post September 11 2001, is almost impossible to obtain and if at all is usually capped and very expensive. An insurance consultants report may be commissioned to determine what policies are required by the project and to recommend minimum policy amounts.

Whether Debt Providers will accept self insurance from a project vehicle will depend on the particular risk involved, the impact on the business and its cashflow should the event occur and the Debt Providers' assessment of the likelihood of the risk occurring. The Debt Providers will assess the ability of the project vehicle to replace the lost cashflow due to the occurrence of the event which is self insured . For example, the project vehicle may have a dedicated cash reserve account, a separate bank facility or an obligation of Equity or Equity's parent (depending upon Equity's standalone credibility) which can only be drawn upon to cover such events,

If any self insurance is permitted by the Debt Providers, the financing documentation may include a covenant requiring the project vehicle to regularly assess the adequacy of the arrangements and provide evidence of compliance to the Debt Providers. Depending on the extent of self insurance, a regular review by an insurance expert may be required.

(m) Tax and Accounting

The Debt Providers will review the tax and accounting assumptions of the project and may require independent experts to provide opinions on the assumptions. Debt Providers are generally unwilling to take tax risks. If any tax structuring is involved, an independent review will be required and depending on the extent of the structuring, a tax ruling may also be required.

(iii) The Objectives of the Project Developer

Although Debt Providers focus on the economics of the pipeline project in terms of the serviceability of debt, they will also examine the motivations of the Project Developer. In particular, they will want to ensure that the interests of the developer are broadly aligned with those of the Debt Providers. Conflicts of interest may arise.

This may occur where the Project Developer is the major customer of the pipeline. The provision of the pipeline's services will be an input cost to the developer further down the chain. The developer may have a greater desire to minimise the input cost and therefore will not seek to maximise the revenues from the project. Where a project has a consortium of developers, the opportunity for conflicting agendas is increased however the overall risk to the project may be mitigated by the requirement that the competing agendas must ultimately be reconciled.

Another example is where a construction company initiates a project. Its prime objective may be to win the construction contract. The Debt Providers will not want to see the developer earn all of its profits by the end of the construction period since it will have no reason to drive the operational performance of the project. This is especially true where the project relies on the specific expertise of the developer to manage the project. In a similar fashion, projects which generate very high returns to Equity may lead the Debt Providers to consider whether they are accepting more of the risks than they are being rewarded for. Common techniques to overcome this include the requirement to invest a very substantial amount of equity relative to the total equity or to the amount earned from any contracts, deferral of fees, and performance incentive fees paid after debt servicing for operators.

(iv) Guarantee and Security Requirements

The Debt Providers will review the project parties and taking into account the creditworthiness, expertise and access to resources and capital, will determine whether each party can support its own obligations or whether some form of external support is required. Where the party is a subsidiary, this could take the form of a guarantee from the parent or an agreement to provide the required technical expertise.

If the project is undertaken through a separate vehicle, the Debt Providers will assess the ability of the project to operate as a stand alone entity. If they assess that the project cannot support its obligations on its own, they may request that Equity provide support such as guarantees from parent companies. However as the intention of establishing a special purpose vehicle is to quarantine the project risks from the parent, Equity will strongly resist providing support and if there is no other alternative, may in fact elect to pursue the project under its corporate structure and raise corporate debt instead of limited recourse project debt.

The security requirements of Debt Providers may change over the life of the pipeline project, particularly as the project enters the operations phase and achieves a track record of operating successfully.

The debt facility will generally be for a term which covers both the construction phase and the first years of operations. Since the proportion of the project's liabilities which will be represented by the debt level is likely to be high (for a project with secure cashflows), the Debt Providers will generally require that the project vehicle provides security for its obligations. The purpose of taking security is to increase the likelihood that the Debt Provider will recover the amounts lent to the project vehicle. Taking security provides a mechanism to protect the value of the pipeline project should the project vehicle default. Secondly, through taking security, the Debt Providers seek to encourage the project vehicle to perform its obligations as a breach may result in the Debt Providers taking control of the pipeline.

Debt Providers obtain security typically through taking a first ranking fixed and floating charge over the project's fixed assets and all of the material contracts (construction, operation and maintenance, insurance, and offtake). Mortgages may be taken by the Debt Providers over the shares in the project vehicle. Debt Providers often require tripartite agreements with the other party to the material contracts which confirm that the underlying contracts will not lapse in the event of a default as long as the obligations are assumed by the Debt Providers or the Debt Providers are pursuing a remedy to the default. In this way, the Debt Providers can prevent a default from terminating important relationships, thus diminishing the asset value.

Once the pipeline project has been operating successfully for some time, the Debt Providers may relinquish their requirement for security and may be satisfied that the repayment obligations of the project vehicle are supported through the terms and conditions of the borrowing agreement. The agreement would typically contain a negative pledge whereby the borrowing project vehicle agrees not to encumber its assets without the prior consent of the Debt Providers. The agreement may contain covenants such as a maximum gearing ratio and restrictions on distributions to Equity, disposals of assets and changes to main business purpose.

If the project vehicle is able to obtain an investment grade credit rating from one of the major rating agencies, it is likely to have the ability to raise funds through the capital markets. Capital market issues are traditionally unsecured.

(v) Interest Margins

The interest margin charged by the Debt Providers will represent the required return on the debt facility taking into account its risk profile. This profile reflects (amongst other things) the business risks, the project participants, leverage, amortisation profile, covenants/protections within the debt and other documentation, the size of the debt facility and market benchmarks. The interest margin reflects the Debt Providers' assessment of the overall risk of the project and is not generally calculated as the sum of the price for each of the different risk categories. The final interest margin will often be determined by the Debt and Equity Providers negotiating an outcome. Equity may run a competitive tender for the financing role thus incentivising financiers to quote as low a margin as possible in order to win the business. Alternatively the Debt and Equity Providers may form a consortium to bid for an asset so a competitive tender is not possible due to the nature of the bidding process including confidentiality requirements.

Interest margins for bank facilities and floating rate capital markets issues are traditionally quoted as a margin over the swap rate relevant for the term to maturity and payment frequency of the particular debt facility. Interest margins for fixed rate capital market issues can be quoted as a margin over the swap rate or the Commonwealth Government Bond rate.

Assuming that all other risks remain constant and that financial markets conditions remain unchanged, the interest margin required by the Debt Providers at the project's financial close will be higher than that required by new Debt Providers at the time when construction is complete and the project can demonstrate a successful record of operations. This is because some of the risks of the initial project will no longer exist. The project will no longer has construction risk and its certainty of cashflows is increased through the existence of a successful operating history. The project will have to refinance its initial debt facility or renegotiate with its existing Debt Providers in order to get the benefit of any reduction in margin. When considering refinancing, the project will have to take account of its interest rate hedging arrangements. Any early termination of these arrangements is likely to result in a payment either to or by the project from or to the swap provider. This payment is calculated with reference to changes in interest rates from the date the swap was entered into.

A debt facility may be structured with a constant interest margin applying over the life of the facility or alternatively the interest margin may be linked to the credit rating or debt service cover ratio of the project. In the latter instances, the interest margin will vary over the life of the facility in accordance with changes in the determining variable.

In addition to the interest margin, the project will also incur non-margin financing costs, such as arrangement fees, advisory fees and syndication costs all of which are paid at the time the financing arrangements are entered into. For a capital markets issue, the extent of the arrangement fees will depend upon whether the facility is underwritten by the Debt Provider or provided on a best efforts placement basis, that is, dependent on market demand on the day of financial close. The method of issue chosen depends upon the projects desire for certainty of funding and for certainty of funding cost. For this reason, non-underwritten financing is generally utilised for refinancing rather than an initial financing where certainty of both cost and amount of finance is very important.

These non-margin financing costs will be incurred each time the project refinances or renegotiates its debt. If the project obtains a credit rating, it will incur both upfront and annual rating agency costs. If any of the project's debt is provided as a syndicated loan facility, it will also incur an annual agency fee for the management of the facility.

As discussed above, if the project has entered into a floating rate debt facility, it will need to swap its floating interest rate exposure into a fixed rate exposure. A dealer swap margin therefore needs to be added to the interest margin to obtain the fixed interest rate for the project. This margin will be determined by the volume and tenor of the swap arrangement, the credit of the project and prevailing market conditions.

Details of debt facilities, including interest margins are not always publicly disclosed. The table below lists examples of debt facilities which have been disclosed for pipeline and regulated asset borrowers.

Issuer [1]	Borrowing Type	Date of Issue	$Am	Term (yrs)	Interest Margin (%pa) [2]
Australian Pipeline Trust (NR)	Bank	July 2000	695	4	0.80-0.90 [3]
Epic Energy (WA Nominees) (NR)	Bank	March 1998	1,910	5	0.80-0.90 [3]
Gasnet (BBB+)	Capital Markets, Fixed and Floating rate notes	November 2000	150	2.8	0.70
Gasnet ("AAA")	Capital Markets, Fixed and Floating rate notes	March 2002	300	7	0.48
Gasnet (BBB/Baa1	Bank	March 2002	120	3	0.80-1.15 [5]
Dalrymple Bay Coal Terminal (NR)	Bank	October 2001	41.2	4	100
Dalrymple Bay Coal Terminal (NR)	Bank	October 2001	552.4	5	100
Duke Australia Pipeline Finance	Bank	February 2002	900	[4]	[4]

Notes

1. Rating of issue at time of issue. NR = not rated
2. Credit margin over the swap rate. Does not include dealer swap margins and upfront fees.
3. Dependent on debt service cover ratio and/or term.
4. See Annexure A for details of this facility.
5. Interest margin is dependant upon credit rating.

4. REGULATORY ENVIRONMENT

4. REGULATORY ENVIRONMENT

(i) Introduction

Regulation is one of the risks that providers of debt and equity capital must assess in connection with a greenfields pipeline project. Regulation is an important determinant of the pipeline's revenue line, the cashflow available to service debt and equity and the access arrangements with pipeline customers. The regulatory risk for both debt and equity capital providers is if the assumptions as to the outcome of regulatory decisions used in their initial project analysis prove to be incorrect, and result in lower cash available than was projected. The ultimate risk for both Debt and Equity Providers from either regulatory risk or any other risk impacting the project, is that this reduction of cashflow is of such a magnitude that the project defaults in its debt obligations and both Debt and Equity Providers suffer a loss in amounts recovered, for example from a rescheduling of the debt arrangements or a sale of the project.

As discussed earlier in this report, when determining their contribution to a pipeline project's capital structure, Debt and Equity Providers will analyse the risk of the project's cashflows and assess their certainty. The higher the level of certainty of the regulatory regime and its impact on the project, the greater the certainty of cashflow. Other risks being constant, greater certainty generally means that higher amounts of debt can be raised potentially at lower margins and the lower the required equity contribution to the project's capital cost.

The results of regulatory determinations where project developers have not received their desired regulatory outcomes have led providers of capital to question the assumptions that they have made when reviewing regulated assets, particularly the revenue assumptions. This led to increased uncertainty surrounding the future cashflows of new projects. Depending on the project specifics, this uncertainty may restrict the level of debt financing available for a project, which then affects the total capital available for pipeline project development.

The perception of the regulatory environment is also important. Notwithstanding the partiality that may or may not be contained in public statements, uncertainty as to the future direction of regulation is increased through the action of independent parties. A review of the Australian Energy Industry and its future direction is currently underway following the recent appointment of a panel by the Ministerial Council on Energy. Regulation will be one of the issues considered. The panel's draft report is not due until the end of the year with the final report due mid 2003. In addition, the Productivity Commission released a Position Paper on its review of the National Access Regime in mid 2001. The position paper noted that "access regulation is not without costs. Paramount among these is the potential for it to deter investment in essential infrastructure". Thus the potential exists for changes to be implemented to the regulatory environment currently applying to the energy industry.

(ii) Key Issues

The issues listed below are key issues for providers of debt and equity capital to pipeline projects concerning the certainty of the regulatory environment.

- Whether pipelines are covered by the Code;
- Timing of access arrangements being finalised;
- Differences between jurisdictions and regulators for regulated assets;
- Changes to methodology for revenue determination; and
- Rates of return being determined by regulators.

These issues are not necessarily limited to greenfields pipelines as existing regulated pipelines also have regulatory risk and their ability to finance capital expenditure and refinance existing debt facilities is accordingly impacted.

Debt and Equity Providers will require certainty as to the above issues before committing significant amounts to a greenfields gas pipeline project.

(a) Whether pipelines are covered by the Code

Capital providers will require certainty as to whether the pipeline project will be covered by the Code. The process for determining coverage is that the National Competition Council ("NCC") recommends to the relevant minister whether or not a pipeline should be covered by the Code. Pipeline projects have the option of requesting a non-binding opinion from the NCC as to whether they are likely to meet the coverage criteria and also have the option of seeking coverage by submitting an access arrangement to the relevant regulator.

Uncertainty as to coverage has recently been demonstrated by the submission made by the Australian Gas Association to the National Competition Council ("NCC") in February 2002 that the coverage of the Moomba-Sydney Pipeline under the Third Party Access Code for Natural Gas Pipeline Systems should be revoked. The submission disagreed with the Draft Recommendation of the NCC that the coverage not be revoked. This submission asserted inconsistencies with the approach and conclusions of the Australian Competition Tribunal in the Duke Eastern Gas Pipeline case.

(b) Timing of finalising access arrangements

Delays in Access Arrangements being given final approval is a concern for providers of capital. Information in Gas Statistics Australia 2001 shows that a considerable period has existed between the submission of an Access Arrangement and its final approval. In the majority of cases, the time between the lodging of the initial access arrangement and its final approval has been over 12 months. In order to mitigate timing uncertainties for regulatory decisions regarding greenfields pipeline projects it is incumbent on both project proponents and the regulator to proactively manage the regulatory determination processes to ensure regulators are able to promulgate determinations within an acceptable timeframe

Delays in finalising access arrangements can mean that there are significant differences between a project's cashflow assumptions and actual cashflows. This can result from a mismatch between the interest rates used in the project's regulatory WACC and the actual interest rates on the project's debt obligations. Section 3(ii)(h) of this report describes how Debt Providers require a project to enter into interest rate hedging arrangements to reduce exposure to interest rate risk. For perfect matching to occur, the interest rates for the project's debt obligations should be set on the same date as those used in the regulator's WACC calculation.

For a greenfields gas pipeline, any delay between setting the interest rates for the regulatory WACC and financial close can impact the amount of debt the project can actually raise. For example, if there has been an upward movement in interest rates between the time of WACC setting and financial close, (all other things being equal) the project will able to support less debt than originally assumed. The debt will have higher servicing costs than those reflected in the project's revenue.

In addition, Debt and external Equity Providers generally do not provide unlimited unconditional commitments. The project's capital is therefore at risk of changes in financial market conditions including changes in interest margins and appetite for greenfield projects and more attractive investment opportunities emerging for external Equity Providers. In order to eliminate any regulatory uncertainty in a greenfields pipeline project is desirable to have a regulatory determination that is coincident with financial close for a project occurs within a timeframe which allows the project to arrange unconditional debt and equity funding and appropriate interest rate hedging

(c) Jurisdictional Differences

The ACCC is the regulator for all transmission pipelines, except for Western Australia, where the Office of the Gas Access Regulation (OffGAR) is responsible for both transmission and distribution. In February 2002, the WA Government announced that a new single regulator would cover the electricity, water, gas and rail industries. Distribution pipelines are covered by state regulators, except in the Northern Territory where the ACCC administers the regulation.

The jurisdictional responsibilities of the States and the ACCC for regulation may contribute to an uncertain environment in the event that inconsistent interpretations and decisions between transmission and distribution assets and the ACCC and a state regulator occurred. The Regulators' Forum which is comprised of all state and Commonwealth regulators, aims to ensure the consistent application of the Code's requirements between the various jurisdictions. There is some overlap and inconsistencies between electricity and gas regulation and some industry players have called for a single national independent gas and electricity regulator to ensure consistency of treatment of regulated energy assets.

As mentioned previously in this report, when capital providers are assessing a regulated asset, they will review previous decisions of the regulator for the specific asset class and also decisions made by different regulators for the same asset and decisions made by the relevant regulator for different assets.

(d) Methodology

Uncertainty as to the future cashflows of a project also arise from concern that the regulator may change the details of its methodology in determining regulated revenue, particularly in respect of the WACC calculation. For example, there has been a change from a pre-tax real WACC to a post-tax nominal WACC calculation. Whilst this change in the way the regulatory model has been presented has been NPV equivalent in effect (with respect to the regulatory WACC calculation) and was designed to enhance the transparency of the regulatory determination process, it has meant that pipeline proponents have had to change their focus from pre-tax to post-tax returns. This can have implications for the financing and capital structure chosen by a pipeline proponent.

Another example is that the regulator currently uses a benchmark gearing (debt:equity) ratio of 60:40 and there is no assurance that this ratio will remain unchanged when determining revenue for future reset periods. It is understood that to date, service providers have not sought to change markedly from this benchmark approach however uncertainty still exists as to the outcome for future reset periods should the gearing ratio proposed by a proponent not be accepted by the regulator.

(e) Regulatory WACC

The method of calculating a project's WACC and its components are a significant determinant of a project's revenue. Debt Providers have concerns if there are significant differences between the WACC proposed by Equity and that which is allowed by the regulator. Debt levels may have been determined using Equity's projections and if the regulatory WACC is much lower and revenue is corresponding lower, then a cash short fall may result. Equity Providers have concerns about lower returns being allowed and this is discussed further below.

In October 2001, the ACCC released its post-tax revenue model and handbook to provide guidance as to its calculation methodology and to assist with the transparency of the regulatory determination process.

Concerns about the appropriateness of WACC calculations provide no assurance that the methodology will not change in the future. These concerns include that the WACC assumptions used in calculating regulatory revenue are often simplified and do not reflect the variables over the life of a project although they may reflect the assumptions at the commencement of a project. Often these assumptions, for example benchmark gearing do not hold in project finance. If a pipeline has contracted revenue for a certain portion of capacity but is taking market risk for the remainder, a debt provider may not wish to take the market risk and may only lend for the term of the contract and may require complete amortisation prior to the end of the contract.

A further complication arises when the pipeline owner is a listed entity with retail shareholders amongst its shareholder base. These shareholders do not typically make their investment decisions based on a theoretical CAPM and therefore a theoretical equity return may need to be adjusted for other factors. For example, retail investors may compare the dividend yield on a stock with interest rates available on retail cash deposit style investments. The determination of the required equity return and the required level of equity contribution is further discussed in section 2 (vi) (b).

Regulatory uncertainty is a reason cited by institutional investors as to their general lack of participation in listed equity of regulated businesses. In a stable regulatory environment, regulated businesses should be viewed as low growth and low volatility stocks. However, in some instances, delays in regulatory decisions being finalised combined with recent regulatory outcomes mean that institutional investors currently view this equity as having a higher risk profile. A review of the shareholder registers of regulated business such as Gasnet, Envestra, Australian Pipeline Trust and United Energy shows the lack of representation of institutional investors relative to other listed companies. The recent float of Gasnet in Victoria resulted in approximately 80% shareholding from retail investors. This lack of institutional participation is not solely due to the uncertainty of the regulatory environment with other issues including the small size of the companies and the existence of significant shareholders, both which reduce the liquidity of a listed stock.
In addition, the economic and interest rate cycle can influence investor appetite for the equity of a particular company. Regulated business may be in demand in a time of economic slowdown and low interest rates, however once the cycle starts to turn and interest rates begin to rise, investor focus moves to growth orientated and cyclical assets.

As discussed above, when determining the appropriate WACC for a project, it is important that there is no delay between when the cost of debt component is determined under the regulatory regime and when the project's actual cost of debt is determined.

(f) Tariffs for Foundation Customers

It is in the interests of both Debt and Equity Providers to have foundation customers for a greenfields pipeline project. Such contracts will generally increase the certainty of project cashflows meaning that higher debt levels can be achieved. An important issue therefore is reconciling the tariff levels for foundation customers and subsequent customers.

For example, a foundation customer and the pipeline proponent may agree a tariff structure which effectively represents the supply and demand forces and also the negotiating ability of the parties. However the regulator may apply a different tariff regime to the uncontracted capacity which results in a lower tariff for non-foundation customers. Foundation customers may therefore be reluctant to commit early to a pipeline and take the risk of being charged higher tariffs than those customers who enter arrangements after an access arrangement has been determined by the regulator.

In order to encourage foundation customers to commit to a project, Equity may agree a tariff structure with foundation customers that reflects the risk sharing, that is, the fact that by committing early, foundation customers are assuming an element of project risk. For example foundation contracts might include a number of benefit sharing arrangements that reward foundation customers over time for taking up initial pipeline capacity.

A regulator may make a determination for a benchmark reference tariff that is different to what foundation customers negotiate, however the regulatory regime does not impinge upon the rights of contractual arrangements in such a case.

(g) Rates of Return

Various pipeline developers have claimed that the rates of return being delivered by regulators do not encourage investment in new pipelines with spare capacity and that incentive is not provided for pipeline operators to build pipelines with spare capacity taking a risk on market growth.

Such claims are made notwithstanding provisions in the Code which have been designed to mitigate these risks. For example, under the Code the initial capital cost of the pipeline must be based on actual cost; there is no optimisation of the regulatory asset base in subsequent regulatory reviews; economic depreciation effectively allows for the carry forward of losses in the early years of operation; and the derivation of reference tariffs is based on forecast volumes, hence the pipeline developer is substantially insulated from volume risks (with respect to cost recovery). The pipeline developer also reserves the right to unilaterally seek a review at any time of an access arrangement in the event that its circumstances materially change and CPI-X incentive mechanisms assist in alleviating the pipeline developer's inflation risk.

Debt Providers consider it important that Equity is receiving a return sufficient for them to remain committed to the business. Notwithstanding covenants contained in the debt facility documentation, Debt Providers rely on Equity to run the business in a prudent manner. If Equity is not receiving its required return, it may attempt to undertake other activities in order to try and boost its returns or it may ultimately decide to abandon a project. Neither of these paths are in the interests of the Debt Provider as they can result in the deterioration of the value of the business.

There are a number of parties that have invested in regulated energy assets globally that are scaling back their international operations, including withdrawing from Australia. In Australia these parties include (and their market caps are in brackets) American Electric Power (US$14.427b), GPU/First Energy (US$10.432b), National Grid (GBP8.212b), Transalta (C$3.814b), TransCanada (C$10.7b), Entergy (US$9.226b), and Scottish Power (GBP 7.908b).

The resulting lack of depth of potential pipeline owners is potentially a concern for Equity Providers as the options for exiting their investment are reduced and accordingly the lack of competitive tension in bidding for assets could reduce the potential exit price. A number of South East Asian companies are now investing in Australia, taking advantage of the lower prices that can be paid for energy assets. For example Singapore Power acquired PowerNet in Victoria upon GPU's exit and Chung Kong Infrastructure has made investments in both Victoria and South Australia.

(h) Credit Rating Agency Analysis

The views of the credit rating agencies of the regulatory environment are important for projects that obtain their finance through the public capital markets. As these markets are predominantly credit ratings driven, a project's credit rating will impact the volume of funds which can be raised, the credit margin, the term of funding which can be obtained and the covenants and security required to be given by the project. The views of the rating agencies can also impact whether a project obtains funding from the bank market or the capital markets. If the rating agencies have a stronger view of the regulatory environment than the bank market, it may be more efficient for a project to borrow through the capital markets as the banks may price regulatory risk at a higher rate. This may be reflected for example in banks offering projects lower debt volumes, shorter terms and/or higher margins.

(i) Increasing the Certainty of the Regulatory Environment

One of the prime objectives of project developers, financiers and investors is obtaining increased certainty as to the impact of the regulatory regime over the life of the pipeline project. As discussed, having increased certainty as to a project's revenue line may lead to increased debt capacity thereby increasing the total capital available for new projects. It may also decrease the returns required from projects, leading to an increase in new investment.

The ACCC's post-tax revenue handbook and model provides guidance as to the practical application of the current regulatory framework however resolution of the uncertainties discussed above will not be achieved without full consultation with all industry participants, including financiers, and institutional and retail investors.

The existence of any profit sharing mechanisms would likely influence the initial negotiated tariff outcome between the pipeline owner and the foundation customer and importantly will limit Equity's upside from the investment, potentially providing a further disincentive to invest.

The Code does have the ability to provide certainty to investors by confirming at an early stage the effect of any benefit sharing mechanisms on project revenues.

A pipeline proponent could reduce the regulatory uncertainty for a project by utilising a number of mechanisms available in the regulatory regime and obtaining agreement from the regulator as to the application of these mechanisms for the particular project. However, the extent of the reduction in uncertainty will depend upon the pipeline proponent reaching an agreement with the regulator in a timely manner. Examples of mechanisms which the pipeline proponent can agree with the regulator include:

- extending regulatory periods from the nominal five year approach;
- confirming that the benchmark gearing ratio will not change and that the regulator is not regulating capital structure;
- making the same tariff arrangement available to all users, including foundation customers;
- utilising methodologies to allow benefit sharing between pipeline owners and consumers such as;
  - introducing a profit sharing mechanism where rates of return in excess of a certain level are shared with the foundation customer;
  - introducing a profit sharing mechanism where rates of return, due to increases in volume only, in excess of a certain level are shared with the foundation customer; and/or
  - introducing a profit sharing mechanism where rates of return, due to increases in volume only, in excess of a certain level are shared with the users over the period.

Annexure A Duke Australia Pipeline Finance

According to the publication "Basis Point" (issues 467 and 473), a debt facility for Duke was being syndicated to both Australian and international banks. The facility is divided into three tranches:

- Tranche A1: $350m 364 day standby facility, guaranteed by Duke Capital Corp;
- Tranche A2: $300m 3 year facility guaranteed by Duke Capital Corp;
- Tranche B: $250m 3 year facility secured by project assets.

Tranche A1 will support Duke's issuance of commercial paper. Commercial paper is a form of short term capital markets instrument, traditionally issued for periods of 30, 60 and 90 days. The ratings agencies require issuers of commercial paper to maintain standby or liquidity facilities to meet maturities of commercial paper in the event of a disruption to the commercial paper market.

Once a number of conditions precedent are met, the security arrangements of Tranche A2 will change so that security is over project assets only. These conditions include Duke securing an offtake agreement with an investment grade counterparty for the pipeline being financed.

Tranche B will initially be secured by Duke's Eastern Gas Pipeline and its Queensland Gas Pipeline. Other pipelines now under construction (including the Tasmanian Gas Pipeline) will initially be funded under Tranche B then transferred to the project tranche once the conditions for transfer are met.

The total size of Tranche B will be set using a number of parameters including, a Loan Life Cover Ratio ("LLCR"), a maximum gearing ratio and a minimum interest coverage ratio. A LLCR is the ratio of the present value of project cashflows available to service to the loan over the life of the loan to the present value of the loan.

The interest margins for Tranches A1 and A2 are determined by a ratings matrix and the extent that the tranche is utilised. The interest margins for Tranche B are determined based on interest coverage ratios. The summary terms of the facility (including interest margins) are:

Guarantor:	Tranches A1 and A2: Duke Capital Corp
Security:	Tranche B: Charge over project assets
Facility Type:	Tranche A: Revolving credit Tranche A2: Revolving credit Tranche B: Project financing
Amount:	Total: A$900m Tranche A1: A$350m Tranche A2: A$300m Tranche B: A$250m
Maturity:	Tranche A1: 364 days Tranche A2: 3 years Tranche B: 3 years
Margin:	50% utilisation or less: Tranche A1: 42.5bp (A+ or higher), 47.5bp (A),

	55bp (A-), 67.5bp (BBB+), 87.5bp (BBB) 117.5bp (BBB- or below, or unrated) Tranche A2: 45bp (A+ or higher), 50bp (A), 57.5bp (A-), 70bp (BBB+), 90bp (BBB), 120 bp (BBB- or below, or unrated) Over 50% utilisation: Tranche A1: 47.5bp (A+ or higher), 52.5bp (A), 60bp (A-), 72.5bp (BBB+), 92.5bp (BBB), 122.5bp (BBB- or below, or unrated) Tranche A2: 50bp (A+ or higher), 55bp (A), 62.5bp (A-), 75bp (BBB+), 95bp (BBB), 125bp (BBB- or below, unrated)
	Tranche B: 75bp (interest coverage over 2.5 times) 80bp (interest coverage 2.25-2.5 times 90bp (interest coverage 2-2.25 times) 100bp (interest coverage 1.75-2 times) 120bp (interest coverage below 1.75 times)
Benchmark:	BBSY
Repayment:	Bullet
Commitment fee:	Tranche A1: 10bp (A+ or higher), 12.5bp (A) 15bp (A-), 17.5bp (BBB+), 20bp (BBB) 30bp (BBB- or below, or unrated) Tranche A2: 15bp (A+ or higher), 17.5bp (A) 22.5bp (A-), 25bp (BBB+), 30bp (BBB)

	42.5bp (BBB- or below, or unrated Tranche B: 30bp (interest coverage over 2.5 times), 32bp (interest coverage 2.25-2.5 times), 36bp (interest coverage 2-2.25 times), 40bp (interest coverage 1.75-2 times), 48bp (interest coverage below 1.75 times),
Lead management fee:	For A$65m: Tranches A1 and A2: 15bp Tranche B: 55bp
Management fee:	For A$50m: Tranches A1 and A2: 10bp Tranche B: 45bp

Commitment fees are usually calculated and paid on the undrawn component of a facility.

Management fees are paid to the banks which participate in the syndication of the facility.

The upfront fees paid to the banks who arranged the facility are not disclosed in the above table.