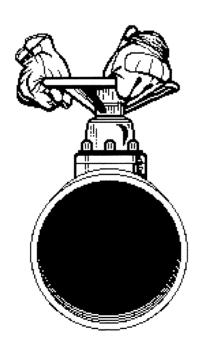
2001 Comparative
Performance Benchmarking
for the Natural Gas Pipeline
Industry

# GPU GASNET PTY LTD. PUBLIC REPORT



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# **NON-DISCLOSURE**

All materials associated with this study including but not limited to:

- · design, process and methodology
- training materials
- company information
- interim and Final reports

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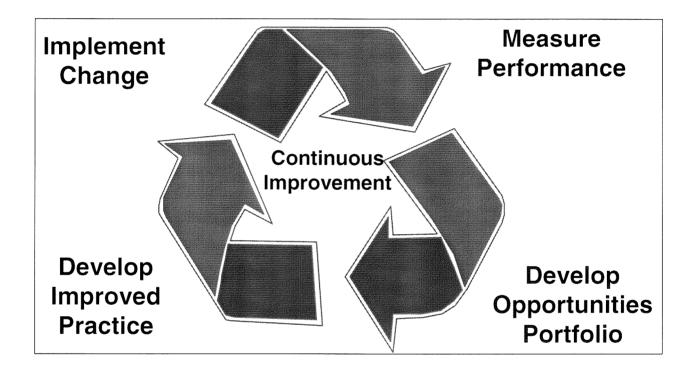


# GPU GASNET PTY LTD. 2001 GAS TRANSMISSION INDUSTRY COMPARATIVE STUDY

#### BACKGROUND ON BENCHMARKING

#### **OVERVIEW OF BENCHMARKING**

Comparative performance benchmarking is a process whereby organizations compare selected areas of their business performance relative to other companies. Benchmarking is the cornerstone of continuous improvement, as portrayed in the following graphic.



The cycle begins with Measuring Performance (top right hand corner). Based on results from performance measurement initiatives, companies can develop a portfolio of opportunities for improvement (bottom right). Following development of the opportunities portfolio, the company decides upon which, if any, potential areas to focus its improvement efforts. Based on a detailed examination of those areas the company will develop improved practices (bottom left). The changes in business practices are then implemented (top left). The cycle is then reiterated, measuring the new performance level to assess if the changes implemented produced the anticipated results.



#### GAS TRANSMISSION BENCHMARKING SCOPE

Cap Gemini Ernst & Young has been conducting comparative performance benchmarking for the gas transmission business for the past eight years from its offices in Calgary, Alberta, Canada.

The scope of this study is limited to conventional natural gas transmission pipeline operations. These operations include pipeline transmission, pipeline measurement, and pipeline compression business process activities. As such, the study results reflect the portion of staff, general and administrative (G&A) expenses, and operating results that each company determines is associated with their gas transmission operations.

The study included 24 gas transmission companies from 11 different countries. GPU GasNet was benchmarked against a select group of 4 other peers and the entire sample of 24 companies. Due to the confidential nature of this study, we cannot disclose the names of the other study participants, however the company locations are as follows:

Country	Number of Participants
Argentina	2 companies
Australasia	3 companies
Bolivia	1 company
Brazil	3 companies
Colombia	1 company
Canada	4 companies
Mexico	1 company
Trinidad & Tobago	2 companies
United States	6 companies
United Kingdom	1 company

The study participants are from very diverse regions and consist of a mix of companies. Some are new pipelines, recently commissioned, using leading edge technology. Others are established world-class organizations that seek out and employ the latest in best management and operating practices.

#### **CONVERSION INFORMATION**

All costs and expenses have been converted to Australian dollars based on a common exchange rate for the past three years. A three-year rolling average is used to dampen the impact of any abnormal swings in exchange rates in any one year. The exchange rate used in this study is 1 US dollar = 1.62 Australian dollars.

#### STUDY PROCESS

The following outlines the key steps that were completed as part of this benchmarking process with GPU GasNet.



1. *Study Initiation*. This took place early in 2001. It involved a long distance teleconference call meeting between GPU GasNet and Cap Gemini Ernst & Young (CGEY). At this time, CGEY conducted a detailed review of the data requirements and provided GPU GasNet staff with guidelines regarding the process used to conduct the study, including assignment of roles and responsibilities and the setting of timelines.

- 2. *Data Collection*. The focus of the study is Year 2000 actual results. Data collection was performed by GPU GasNet with long distance support from CGEY. The data was gathered, as best as possible, consistent with a standard set of definitions that were used by all participating companies.
  - GPU GasNet provided a pre-determined set of data that reflected their operations. The data was gathered in a consistent manner among the companies participating in the benchmarking survey. CGEY worked closely with each company to review the data and to ensure that its data was consistent with the study definitions.
  - As an example, staffing is calculated on full-time equivalent (FTE) basis and includes full-time employees as well as temporary, casual, and contract personnel who perform functions that would normally be performed by full-time employees. Staff are included in a functional group depending on the type of activities they perform, and how these activities fit the organizational framework used in this study.
- 3. *Data Review*. CGEY conducted a detailed review of the data submitted by GPU GasNet (and all other companies) to ensure consistency with the intent of the definitions (note that we have detailed definitions for each data item requested). During this stage, some data was modified, reviewed and then validated. We note that despite all best efforts, it is not possible to obtain complete consistency. However, the data does have a sufficient level of accuracy to "directionally" assess the differences in performance among the group of participating companies.

4. **Review of Preliminary Results**. Following the initial review of the data from all companies, CGEY provided a draft report that identified performance gaps and potential opportunity areas. In analyzing the results of this study, CGEY has taken into consideration the nature of GPU GasNet's operations relative to those of the other companies in the study. In this study, GPU GasNet has been compared to a specific peer group of pipeline companies as well as the sample of all study participants.

- A detailed review of the draft report followed and through telephone and email communications, a number of changes were made to the report. The emphasis was on ensuring the data was accurate and obtaining a better understanding of the aspects of GPU GasNet's business that could impact the performance gaps.
- 5. *Delivery of Final Report*. The final report was then updated based on the input from the review of the draft report. A formal bound report customized for GPU GasNet's operations was delivered. The report presents specific results and identifies potential opportunities for improvement.

#### **USES OF BENCHMARKING**

Cap Gemini Ernst & Young's Comparative Performance Benchmarking is a tool that can be used by companies to assist them in their continuous improvement efforts. The primary purposes of the benchmarking are:

- 1. Assist companies in identifying their major cost drivers.
- 2. Identify areas where their performance is different than other companies.
- 3. Provide a set of performance measures for use internally.
- 4. Obtain insights into international standards of performance. This will provide a basis for setting improvement targets, but will not provide sufficient insights to determine what those targets should be for your company.
- 5. Support companies in assessing the efficiency of their operations.
- 6. Provide guidance for focusing your continuous improvement efforts.

This benchmarking is focused on operational efficiency and effectiveness. It is *not a tool that can* be used for the following:

- 1. Setting transportation prices.
- 2. Determining precise levels of efficiency and precise targets for performance.

Benchmarking is an approach to identifying the differences in your operations relative to a sample of other gas transmission companies. It is directional in nature; that is, pointing your company in the directions where it may wish to review operations for potential improvements in overall performance.



# KEY PERFORMANCE MEASURES FOR GPU GASNET

CGEY has been conducting gas transmission benchmarking for the past eight years. Over this time period, we have conducted significant analysis to assist in the identification of cost drivers and key performance metrics for gas transmission operations.

Four of the major cost drivers are:

- 1. Cubic metres of gas throughput
- 2. Cubic metre-kilometers transported (gas throughput X average haul distance transported)
- 3. Pipeline kilometers
- 4. Diameter centimeter kilometers (average pipeline diameter X pipeline kilometers)

In addition, there are other factors such as number of meters, amount of horsepower, level of automation, mix of customers, etc. that will impact costs and achievable levels of performance. Efficiency of operations must be assessed in conjunction with the effectiveness.

On a global or total company basis we have found that for companies similar to GPU GasNet the most appropriate normalizing factors are cubic meters transported (million cubic metres delivered), volume-distance (million cubic metre-kilometers) and pipeline kilometers. The appendix will present GPU GasNet's results relative to other study participants, applying the most appropriate Key Performance Indicators (KPI's).



#### AREAS OF GOOD PERFORMANCE

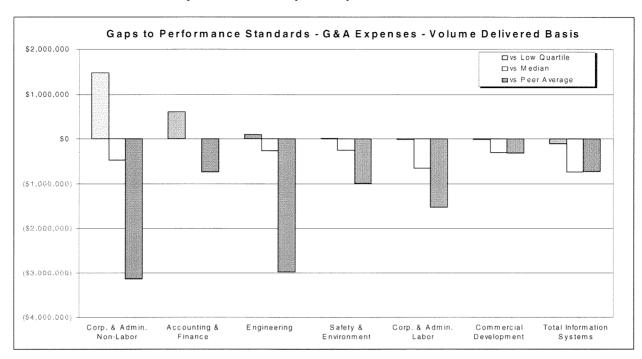
The following presents some areas where GPU GasNet appears to be performing operations in line with or better than the comparative sample of companies.

- 1. Support services delivery in the Accounting, Information Systems, Commercial Development, Purchasing and Human Resources areas appear to be efficient relative to other companies in the study.
- 2. Non-Labor related support costs in the insurance, travel and communications areas also report good performance compared to other study participants.
- 3. GPU GasNet reports good level staff activity levels in the Operations and Maintenance functions with relatively high volumes delivered per staff.
- 4. Overall, Measurement and Pipeline Operations and Maintenance appear to be relatively efficient relative to others.

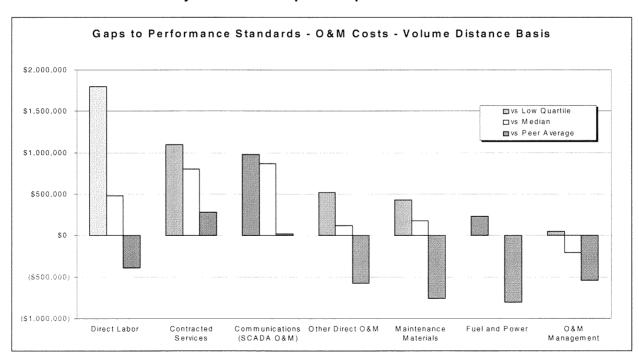
These are some of the areas where the benchmarking results suggest GPU GasNet has good performance.



# Potential Benefits Analysis - G&A Expense per Million Cubic Metres Delivered



#### Potential Benefits Analysis - O&M Expenses per Million Cubic Metre-Kilometers



# **Potential Benefits Analysis**

The main objective of the benchmarking study is to identify areas where there are differences in a company's performance that can potentially lead to continuous improvement of operations.



The following presents some areas where GPU GasNet appears to have some opportunities for improvement relative to the comparative sample of companies.

The graphs on the preceding page present the potential benefits for GPU GasNet if a high level of performance was achieved; i.e. average performance relative to peer results and median and top quartile performance relative to all companies considering G&A expenses per million cubic metres delivered and O&M costs per million cubic metre-kilometers.

The bars above the primary axis indicate those functional areas where a gap exists between GPU GasNet's unit costs and study performance standards. In these cases a potential benefit would be realized by reducing unit costs to peer or all company levels. (For example, if GPU GasNet were to achieve best quartile results in Corporate & Administration Non-Labor costs, the potential savings would be in the order of \$1.5 million per annum). The bars below the primary axis indicate areas where GPU GasNet enjoys a cost advantage over its peers and other companies.

As shown, there are a number of areas where potential savings might be realized. It is important to note however that these graphs are intended to highlight potential savings only; other factors such as the absolute savings available and strategic and other issues must be considered when analyzing potential opportunities for improvement versus the effort to realize such savings.

Despite GPU GasNet's good performance, there is still potential for improvement. The following represents a potential list of opportunities for GPU GasNet:



#### REVIEW AND MONITOR SAFETY ACCIDENT STATISTICS

#### **Key Results**

GPU GasNet reported a Safety & Environment G&A cost of \$20 per million cubic metres delivered in 2000, much lower than the average of the peer group and very close to the lowest or best quartile of all participating companies. Unit costs on other major comparison bases are generally better than peer and all company standards.

GPU GasNet has reported recordable injury frequency rates that are well above peer and all company levels in all years. GPU GasNet's Motor Vehicle Accident Rate is also high relative to results reported by other companies in the study.

We understand that GPU GasNet has a very rigorous reporting methodology which may contribute to these results.

# **Opportunity**

It is important to ensure that an appropriate amount of time and effort is expended in this area to produce positive tangible results in accident prevention. GPU GasNet should closely monitor Recordable Injuries and Motor Vehicle Accidents and assess ways and means of reducing these accident statistics. Higher costs are tolerable so long as accident statistics are reduced and/or maintained at acceptable levels.

#### Considerations

Following are a few practices employed by others some of which we understand are already used by GPU GasNet:

- 1. Maintain higher field visibility for safety representatives to facilitate a reduction in injuries and accidents.
- 2. Maintain strong and visible management commitment for S&E awareness.
- 3. Redistribute responsibility areas for O&M to optimize travel distances.



#### FOCUS ON INCREASING SYSTEM UTILIZATION AND LOAD FACTOR

#### **Key Results**

GPU GasNet reports a system utilization factor, defined as the volumes delivered from the system divided by the sustainable system capacity, of 47% in 2000. This is down from the 51% level in 1999 and reflects additional capacity added. Utilization is expected to decline further in 2001. GPU GasNet's Load factor is also low relative to other companies.

We understand that these results are impacted by the large residential winter load component in the load mix.

### Opportunity

Based on year 2000 data, each 10% increase in volumes delivered, about 550 million cubic metres per year, would increase system utilization by about 5%. This would generate an additional \$8.3 million in revenues and, assuming a minimal increase in costs, reduce overall cost of service expenses by about \$585 per million cubic metres delivered.

#### Considerations

It is critical to ensure that the asset base being operated and maintained is effectively utilized in order to reduce unit costs and increase revenues. A key focus for GPU GasNet should be to ensure that all available market opportunities to increase system utilization and load factor are realized.



#### MONITOR O&M CONTRACTED SERVICES EXPENSE

#### **Key Results**

GPU GasNet's Contracted Services expense amounted to \$1.7 million in 2000 and is expected to more than double in 2001. This category of costs accounted for 20% of GPU GasNet's overall O&M expenses in 2000. Unit costs, at \$1.29 per million cubic metre-kilometers are higher than the average of the peers and are expected to fall within the highest all company quartile in 2001.

We understand that GPU GasNet outsources as many O&M functions as possible and its labor costs are consistent with this approach. Taken together, Labor and Contracted Services costs are in line with the all company median costs on a volume-distance basis in the year 2000.

### Opportunity

Based on year 2000 costs, a 10% reduction in Contracted Services expenses would generate an annual savings of \$170,000 and would reduce GPU GasNet's unit costs to \$1.16 per million cubic metre-kilometers, close to the peer average and below the all company average unit cost.

#### Considerations

These costs are expected to rise substantially in 2001 and are likely related to GPU GasNet's implementation of a long-term catch-up pigging program to monitor the condition of the buried pipe. A focus should be to monitor closely and minimize any increase in these costs over time. GPU GasNet may wish to review these contracts to assess opportunities for cost optimization. One aspect of this may include reviewing the level of service required in the areas under consideration.



#### REVIEW MEASUREMENT & PIPELINE COMMUNICATIONS COSTS

# **Key Results**

GPU GasNet reported M&PL Communications expenses of \$981,000 in 2000, equating to \$0.75 per million cubic metre-kilometers, close to the average of the peer group but within the poorest quartile of the all company group. The all company median cost is \$0.16 per million cubic metre-kilometers. Unit costs are expected to decline in 2001 to \$0.50 per million cubic metre-kilometers, still within the highest quartile of all participating companies.

We note that GPU GasNet reports 100% EFM's and that it reports a relatively high number of meters. In addition, the market requires a high level of interrogation for settlement purposes.

## Opportunity

GPU GasNet should ensure that the investment in the communications area is providing an appropriate benefit. Each 10% reduction in expense would generate savings of approximately \$100,000 annually.

#### Considerations

GPU GasNet reports that 100% of all measurement stations are EFM's (Electronic Flow Measurement). Most other companies report 80% or more EFM stations.

There is obviously a cost associated with a higher EFM ratio and many companies have found that the benefits far outweigh the capital and operating costs. The benefits arise from reduced operating costs (less charts to gather, read and manage) and in the form of more accurate and timely measurement. The offset is higher communication costs to network the EFM's.

GPU GasNet should ensure that the benefit outweighs the cost in this area.



# REVIEW COMPRESSOR O&M "OTHER" EXPENSES

# **Key Results**

GPU GasNet's "Other" Compressor expense totaled close to \$390,000 in 2000, which is up from 1999 and is expected to increase to \$481,000 in 2001. This category of costs accounts for a relatively small 14% of GPU GasNet's overall Compression expense, however unit costs, at \$0.30 per million cubic metre-kilometers, are higher than the average of the peers and fall within the highest quartile of all of the participating companies.

# Opportunity

A 10% reduction in Other Compressor O&M costs would generate modest annual savings of \$39,000. To achieve the peer average would require a \$68,000 or 18% reduction from 2000 expense levels.

#### Considerations

GPU GasNet is at a competitive disadvantage because of its low compressor utilization, however it is important to understand the major expense sub-categories that constitute this \$390,000. The first step is to understand the expenses in this category that could be things such as vehicles, non-maintenance related supplies, and any other field related expenses not captured in a separate category in this study.

Following understanding these expenses, GPU GasNet can then assess any potential for optimizing these expenses or at least minimizing any increases in future years.



# REVIEW AND MONITOR RISING CORPORATE &ADMINISTRATION "OTHER" LABOR COSTS

# **Key Results**

GPU GasNet reported 11.9 Corporate & Administration staff in 2000 with an associated expense of \$1.7 million. Of this total some \$1.2 million or 72% is categorized as "Other" staffing expense. "Other" staffing expenses equates to \$223 per million cubic metres delivered versus the peer average of \$346 per million cubic metres delivered and the all company median level of \$216 per million cubic metres delivered. We note that unit costs are expected to increase in 2001 to \$302 per million cubic metres delivered, which would fall within the all company highest quartile.

# Opportunity

GPU GasNet should review these expenses with a view to, at a minimum, maintaining its current spending levels and potentially targeting reductions toward the all company median level. Reducing costs to the study median would require a reduction in the order of \$40,000 or 3% of 2000 costs.

#### Considerations

GPU GasNet should consider conducting a detailed breakdown of the items that comprise this category of expense to identify the primary cost drivers and assess any potential for cost optimization.



#### MONITOR CAPITAL PROJECT ENGINEERING ACTIVITY LEVELS

#### **Key Results**

GPU GasNet reported 10 Capital Engineering staff with an associated expense of \$531,000 in 2000. Capital expenditures were \$6.5 million in 2000 but are expected to rise to \$8.7 million in 2001. In terms of staff productivity, each of GPU GasNet's capital engineering staff managed an average of over \$3 million in capital expenditures in 1999, in line with the peer average and study median/average. However we note that in 2001, this indicator drops to a level that is well below peer and all company standards.

# Opportunity

Given GPU GasNet's aggressive expansion plans in 1999 and the subsequent decline in activity in 2000 and 2001, it is important to ensure that an appropriate amount of resources are devoted to managing the company's capital resources.

#### Considerations

Many firms are employing contract staff to load level project management and we note that GPU GasNet's project Engineering staff fluctuates from year to year.

The following highlights some business practices that have been successfully utilized by others to improve their business performance. Some of these practices may have been implemented by GPU GasNet; implementing others may not be practical given the size of the company.

- 1. Some companies have established Engineering alliances. These can take various forms including staffing the alliance jointly or completely utilizing third party resources. The latter requires some in-company management. Companies have reported cost savings of 5% to 15% as a result of working with these alliance relationships. The critical success factors for this arrangement include:
  - strong team and a clear mandate;
  - clear criteria for selection of the alliance; and
  - getting internal people to use the resource.
- 2. Categorizing projects by size and type has assisted companies in determining the amount of engineering effort that should be focused on the project. Many companies manage all projects in the same manner regardless of size or complexity. Thus, the smaller, more straight-forward projects may be over-managed or designed while larger, more complex projects may not receive enough attention.



- 3. Some companies have established field based project managers to handle the smaller projects and free up the central group to concentrate on the larger, more complex projects.
- 4. Further to this, companies have encouraged more participation in projects from the operations and maintenance personnel. This is in the form of input to realize more practical designs and to assist in the site supervision of certain projects.
- 5. Managing Engineering resources has always been a challenge for companies. An approach taken by some companies is to focus engineering on adding value to the company rather than just viewing engineering as necessary input for expansions. Value added can arise from total life cycle cost evaluations, focusing on enhancing operations, or other areas.
- 6. Depending upon the nature and scope of operations, companies have selectively decentralized their engineering staff to strategic field locations. This has been done with the view that they will work more closely with operations to support them in realizing operational improvements.
- 7. Some companies have moved towards standardizing designs so they do not begin every project with a blank sheet of paper. Rather, they pull the standard design and modify to fit the specific situation under consideration.
- 8. Selective outsourcing is an approach used by some companies. This may include outsourcing, to some degree, activities such as reserve forecasting as this may be available in part from other sources.
- 9. Companies have realized significant benefits from applying Business Process Improvement techniques to their Engineering and / or Project Execution functions. They start by defining a start and end point, defining the typical activities (listed below), mapping the current process, gathering specific back-up data, and then re-designing the overall process.

Typical Project Execution activities include:

- definition and analysis of alternatives
- cost benefit analysis
- project design
- resource planning
- requisition of materials
- executing the work
- construction inspection
- facility commissioning
- 10. Many companies still find their Engineers spend a large percentage of their time moving paper. Companies have reviewed their AFE (Authorization for Expenditure) approaches and their purchasing processes with the view to remove some of the "busy work". The same hold for capital management and project reporting. Companies have moved towards more



automated approaches that are less paper intensive yet still provide real time access to data for project management.

11. Another approach utilized to reduce the paperwork is to increase the level of approval for senior project engineers or managers. Provide the engineers with the authority to approve the invoices and have more input to the contractor selection and purchasing process. With this, there is the movement for total project responsibility to be with the Project Manager and their team.

# MONITOR CORPORATE & ADMINISTRATION NON-LABOR COSTS - REGULATORY AND OUTSIDE SERVICES

#### **Key Results**

GPU GasNet's non labor expense amounted to some \$3.3 million in 2000, representing 41% of its overall G&A expense. This category of expense is expected to increase by just over 13% in 2001, to \$3.7 million and is driven primarily by rising Regulatory Fees and Outside Services expenses.

On a unit cost basis, projected 2001 costs in each of these categories would be higher than all company median costs.

# Opportunity

There may be benefits to GPU GasNet to review opportunities to optimize expenses in the Outside Services and Regulatory Fee areas. We understand that both categories may be largely non-controllable in that costs must be incurred to prepare for regulatory hearings.

#### Considerations

The next step is to assess the potential for expense optimization in each of these major categories. In the case of Outside Services, ensure that services contracted for are closely managed and delivered in a timely and cost effective manner.



#### CONCLUSIONS AND NEXT STEPS

Overall GPU GasNet shows some areas of strong performance. We note that costs are expected to rise over the 2000 to 2001 time period as the company embarks on a long term pigging program. In addition, the company is also preparing for regulatory hearings and for an Initial Price Offering. Over the next couple of years, cost levels should stabilize as operations reach a steady state.

We present the following next steps for your consideration:

- 1. Review the opportunities presented as part of this study.
- 2. Determine which of these are truly improvement opportunities and agree on which opportunities will be pursued.
- 3. Develop plans for addressing these opportunities assigning key responsibilities and time frames for actions. Estimating realistic targets for improvement in these areas should also be considered.
- 4. Continue to measure performance to determine if unit costs decrease as operations progress.



# **APPENDIX**

# **DETAILED DISCUSSION OF STUDY RESULTS**

#### PRESENTATION OF KEY RESULTS

#### BASIS FOR COMPARISON

GPU GasNet's pipeline is a medium haul system that transports gas from producing areas through the State of Victoria. The pipeline network is almost 2,000 kilometers long with five major receipt points and over 120 delivery points. GPU GasNet's system is roughly 25% haulage and 75% distribution/transportation with relatively small diameter pipe that runs through a mix of high populated urban, high intensive farming and low intensity farming areas. System utilization and load factors are relatively low due to the large winter load component in the load mix and limited access to external and internal (line pack) storage. As a result, the majority of the compression units are utilized only during the peak two to three month heating season. This results in a very low utilization rate and high fixed costs compared to most other gas pipeline systems, thereby driving up unit costs.

For GPU GasNet and its peers, the primary bases for comparison of performance will be relative to volume-distance (million cubic metre-kilometers) and volume delivered (million cubic metres delivered). We will also focus on expenses per pipeline kilometer, per diameter centimeter kilometer and per compressor horsepower when analyzing certain Operations and Maintenance (O&M) related expenses. As appropriate, we will also compare performance relative to other bases and will consider these in conjunction with staff activity levels and results measures.

We have conducted a detailed analysis of the study results that show the correlation between various categories of expense and a number of potential normalizing factors. For medium haul systems like GPU GasNet, the most appropriate basis for comparison of O&M costs is million cubic metre-kilometers. Measurement & Pipeline activities may also be suited to use of a pipeline kilometer normalizing factor. For support services, (G&A expenses) the primary normalizing factor is volume delivered.

Throughout this study, GPU GasNet will be compared to its peers, the all company median and the all company best quartile values.



#### **GPU GASNET - CONSIDERATIONS**

The asset values and related depreciation reflected in this study are regulatory values and do not represent the balances carried in GPU GasNet's internal accounting records.

For the purpose of this study, the cost associated with an anticipated Initial Public Offering and ongoing associated expenses have been included in overhead (support) costs. These costs are estimated at \$800,000 per annum.

For comparability purposes, the cost of odorant chemicals has been excluded from GPU GasNet's costs. These costs are approximately \$200,000 per year.

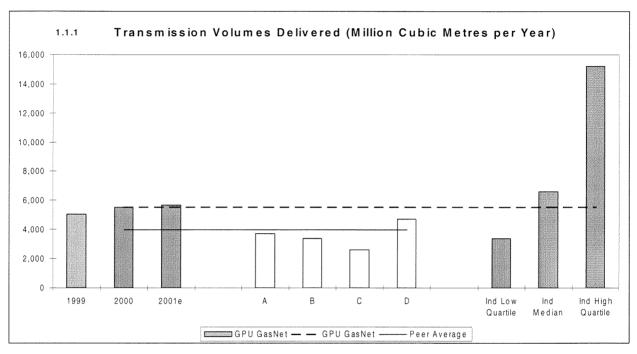
Staff and expenses associated with gas control functions performed by the independent system operator, VENCorp have been included in GPU GasNet's Operations and Maintenance costs in all years. For the Year 2000, this amounted to 9 full time staff and costs of \$620,000.

Operational and financial data exclude staff and associated costs for GPU GasNet's LNG facility at Dandenong.



The following series of charts and commentary are intended to portray GPU GasNet's scale of operations relative to other study participants. It should not be implied that GPU GasNet is either better or worse than other companies or that GPU GasNet should strive to achieve an operating profile that more closely resembles these companies. Comparative results are assessed only on "normalized" cost profiles, such as costs per million cubic metre-kilometers, which are detailed in the following sections of this report.

# Transmission Volumes Delivered - Million Cubic Metres per Year



The chart above shows GPU GasNet's volumes delivered from the system from 1999 through 2000 as well as the volumes predicted for 2001. The chart also shows the peer average volumes for 2000 and industry low, median and high quartile values.

- GPU GasNet's volumes delivered in 2000 were 5,509 million cubic metres per year, higher than the peer average of 3,980 million cubic metres delivered per year.
- GPU GasNet's volumes delivered are slightly lower than the all company median level of 6,596 million cubic metres per year.
- Year 2000 volumes have increased by over 9% from 1999 levels and are projected to increase slightly in 2001.

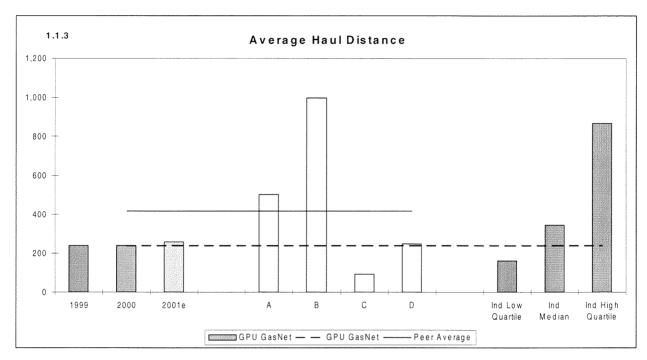
#### **Pipeline Kilometers**

• GPU GasNet reports 1,929 pipeline kilometers in 2000 compared to the peer average of 2,700 kilometers.



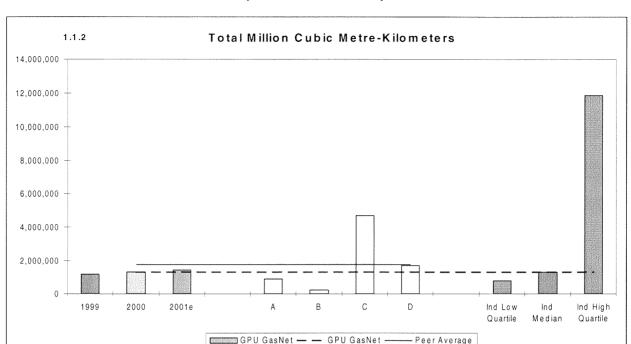
- Three of the peers operate relatively short systems and GPU GasNet's system is in the mid range of the peer group.
- Relative to the all company group, GPU GasNet's system length is very close to the all company median.
- There has been little change in system length over the 1999 to 2001 time period.

# **Average Haul Distance**



The average haul distance is defined as the average distance that a cubic metre of gas is transported on a system.

- As shown, GPU GasNet's average haul distance of 239 kilometers in 2000 is the second lowest of the peer group but lower than the peer average.
- GPU GasNet's average haul has remained flat over the 1999 to 2001 time period.
- GPU GasNet's average haul distance falls below the all company median average haul distance of 342 kilometers.



# Million Cubic Metre-Kilometers (Volume-Distance)

Million cubic metre-kilometers is defined as the volume delivered from the system multiplied by the average haul distance.

- GPU GasNet reports 1,316,208 million cubic metre-kilometers in 2000, up by about 9% from 1999 and slightly below the peer average 1,771,734 million cubic metre-kilometers. One peer reports a relatively high million cubic metre-kilometer factor.
- Relative to the all company group, GPU GasNet's million cubic metre-kilometers total falls very close to the median value.
- There is a wide variance in volume-distance measures reported by study participants.
- This profile is consistent with GPU GasNet's higher than average volumes delivered and lower than average haul distance relative to the peer group.

# **System Utilization**

System utilization is defined as the annual volume delivered divided by the average annual sustainable system volume capacity. This indicator provides an indication of the utilization of the existing pipeline assets and the potential for increases in volume given the existing asset base.

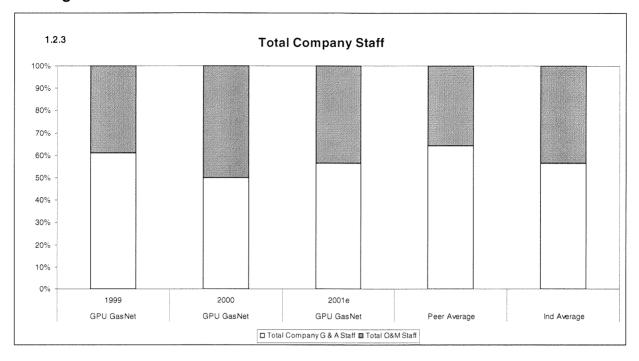
- GPU GasNet's utilization factor was 47% in 2000, the lowest of the peer group and lower than many other companies in the study. In this case, the median utilization is, in our opinion, lower than standard industry norms.
- GPU GasNet's utilization has declined since 1999 as capacity additions have exceeded the growth in volumes delivered. Low utilization is related to the system load factor.
- There is a wide variation in utilization factors reported by study participants, from 27% to 96%.
- It appears there is scope for increasing volumes on this system, which could positively impact (reduce) unit costs.

#### **System Load Factor**

The system load factor is defined as the average daily volume delivered (million cubic metres per day) divided by the peak day volume delivered. This indicator provides an indication of the fluctuation in load on the pipeline system.

- In 2000, GPU GasNet reports a load factor of 55%, lowest of the peers and of any company in the study.
- GPU GasNet has a very large residential winter load component in the load mix that drives this fluctuation. In addition, there is limited external storage and system line pack available to assist in managing volume demand swings.
- GPU GasNet's load factor has declined over the 1999 to 2000 time period.

# **Staffing Profile**



# Staffing Profile

For purposes of this study, all staff are reported on a Full Time Equivalent (FTE) basis and include all full time, part-time and contract employees.

- GPU GasNet reports 83.7 full time equivalent staff (including contractors and project engineering staff) in 2000 associated with gas transmission operations. Staff numbers do not include the non-regulated LNG facility, but do include those gas control staff from Vencorp.
- In 2000 GPU GasNet has a higher percentage of Operations and Maintenance (O&M) staff of total company staff than its peers and other companies, a positive result.
- The peer split is about 36% O&M staff / 64% General and Administration (G&A) staff whereas GPU GasNet's split is roughly 50% O&M / 50% G&A in 2000. GPU GasNet's split is similar to the all company average split.

# **Capital Expenditures**

Capital spending impacts all areas of a company's operations. Large capital programs require not only larger Engineering effort, but also impact Administrative and Operations and Maintenance areas of the company.

- In 2000, GPU GasNet reported \$6.45 million in capital expenditures compared to the peer average of \$81.82 million.
- 100% of GPU GasNet's expenditures were directed to ongoing O&M CAPEX in 2000.
- The capital expenditure profile changed dramatically in 2000 versus 1999 and expansion project spending is expected to rise in 2001.
- In GPU GasNet's case, we would expect that its capital program in 2000 and 2001 would not result in higher costs relative to its peers and other companies, although the exact magnitude of the cost differential is not quantifiable.

# **Average System Age**

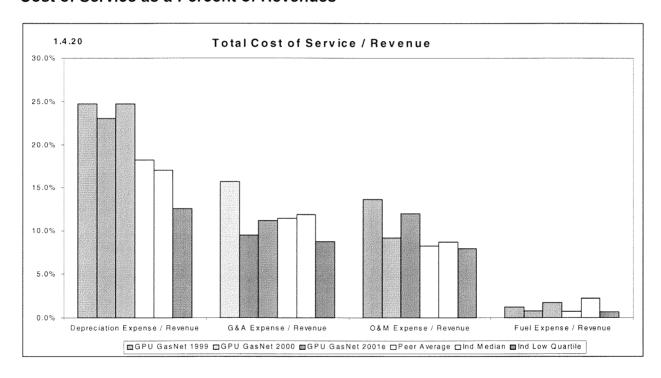
- GPU GasNet's average system age of 19.0 years is very close to the all company average age of 20.8 years.
- All else being equal, an older pipeline system may result in somewhat higher maintenance costs. However, it is not possible to quantify the additional maintenance costs that are associated with an older pipeline system.
- Based on the age of the GPU GasNet system relative to the other pipeline companies in the study, system age should not be a factor impacting maintenance or other expenses.



# **Operating Revenues**

Transmission Revenues	GPU GasNet	GPU GasNet	GPU GasNet	Peer Average	Study Median	GPU GasNet
	1999	2000	2001e	2000	2000	Rank-Peer Group
Total Transmission Revenues / Delivered Volumes	\$13,405	\$15,051	\$14,449	\$29,703	\$22,419	Lowest
Total Transmission Revenues / 106M3-Kms	\$56.13	\$63.00	\$56.03	\$104.31	\$49.60	2nd Lowest

# Cost of Service as a Percent of Revenues



# **Operating Revenues**

The table on the opposite page shows GPU GasNet's unit revenues for 1999 through 2001 versus its peers and other companies 2000 results.

- As shown, GPU GasNet reports revenues per million cubic metres delivered that are below peer and all company levels.
- Revenue per million cubic metre-kilometers is below the peer average but slightly higher than the study median.
- Unit revenues are expected to decline slightly in 2001.

#### Cost of Service as a Percent of Revenues

The graph on the bottom of the preceding page demonstrates the affordability of the various costs incurred by GPU GasNet and details the percentage of revenue that is consumed to pay for each category of expense.

- GPU GasNet's depreciation expense consumes 23.0% of its revenue, slightly higher than the peer and all company results that fall in the 18% to 20% range.
- The amount of revenue consumed by G&A expenses is slightly less than the results reported by the peer and all company groups in 2000 and 2001.
- The relative burden of O&M expenses is in line with the all company median in 2000, but is expected to increase in 2001.
- As expected, Fuel costs consume a relatively small 0.8% of GPU GasNet's revenues generated, in line with peer results and lower than many other companies in the study.



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