

APA
Group

APT Allgas Energy Pty Limited

(ACN 009 656 446)

Full Retail Competition

Cost Pass-Through Submission

to the

Queensland Competition Authority

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1 Executive Summary

This document outlines the scope and cost of the APT Allgas Energy Pty Limited (APT Allgas) Full Retail Contestability (FRC) program and the proposed arrangements for the recovery of these costs.

APT Allgas' approach has been significantly influenced by two major considerations:

- The need to meet the Queensland Government FRC timetable of 1 July 2007; and
- The need to limit the cost impact on Queensland gas users.

APT Allgas considers that both the work undertaken to implement FRC by the due date and the costs incurred in undertaking that work, have been prudent and efficient. For example, although the FRC costs incurred by APT Allgas are substantial, APT Allgas' costs are relatively lower when benchmarked to FRC costs incurred by energy companies in other jurisdictions.

In light of the ongoing uncertainty as to the costs of implementing FRC, including the likelihood of continued rule changes, APT Allgas submits its costs and proposed tariff revision on the understanding that there will be an annual adjustment or "true up" of actual expenditure incurred against these submitted costs. APT Allgas has sought to achieve prudent FRC costs by:

- Formal tendering for the main FRC system and informal tendering for other components;
- Optimising the mix of in-house and external resources;
- Leveraging the FRC work undertaken by other jurisdictions and buying "off-the shelf" solutions where available;
- Minimising expensive customisation; and
- Minimising the number of staff working on the project, including LogicaCMG, Hansen Technologies and APT Allgas staff;

To ensure compliance with the market rules and associated requirements, the scope of the APT Allgas FRC program includes:

- Development of a FRC IT system to manage:
 - Meter data for all retailers (approximately 6,500 transactions weekly);

- Service orders (approximately 500 transactions weekly generated by retailers, plus additional service orders generated internally by APT Allgas); and
 - Customer transfers (assumed to be 150 transactions weekly).
- An Interface of the FRC IT system into the VENCORP central market operator hub;
 - Interfaces of the FRC IT system into complementary APT Allgas and APA Group back office systems (Works Management, Finance, SCADA, GIS etc);
 - A significant change management program involving up to 19 new FRC staff;
 - A rollout of approximately 120 interval meter systems related equipment and communications to all customers consuming greater than 10TJ per annum; and
 - Legal and regulatory compliance work, including implementation of appropriate compliance systems where necessary, and legal review of FRC contracts.

In order to avoid a large price shock in 2007-08, APT Allgas has smoothed its proposed revenue recovery such that the costs incurred in 2006-07 and 2007-08 are passed-through in 2007-8 to 2008-09. The present value of the total pass-through is \$20.32 million and the proposed annual pass-through amounts are shown below.

\$'000	2006/07	2007/08	2008/09	2009/10	2010/11
Return on capital	152.2	249.5	97.3	-	-
Recovery of capital	1,739.4	4,677.2	2,278.5	-	-
O&M expenditure	3,988.1	3,848.6	2,351.4	2,201.9	2,204.8
Less CPI escalator	(87.0)	(55.6)	-	-	-
Pass through (nominal)	5,792.69	8,719.69	4,727.19	2,201.85	2,204.76
Pass through (smoothed)	-	8,719.69	10,664.70	2,201.85	2,204.76

APT Allgas's proposed cost recovery results in an average tariff increase for residential customers of \$119.02 per year (\$0.33 cents per day) in 2007-08 and \$141.83 per year

(\$0.39 cents per day) in 2008-9. The average increases for the non-tariff customers are \$6,899 per year (\$18.90 per day) in 2007-8 and \$7,495 per year (\$20.53 per day) in 2008-9.

2 Background

APT Allgas Energy Pty Ltd (APT Allgas) owns the South- Eastern Queensland and northern New South Wales gas distribution system, which is regulated by the Queensland Competition Authority (QCA). This system comprises:

- The pipelines under DA-A-009 (Area Distribution Authority) issued to APT Allgas by the Queensland Government for:
 - South East Queensland, as delineated in maps GAS134 and GAS135 held by the Department of Energy;
 - Toowoomba, as delineated in Map GAS136 held by the Department of Energy; and
 - Oakey, as delineated in Map GAS137 held by the Department of Energy; and
- the Tweed Distribution System, located in New South Wales, which was cross-vested from New South Wales (IPART) to Queensland (QCA) on 26 June 2001¹.

While APT Allgas also owns the Moura distribution asset - as covered by DA-A-009, and as delineated in Map GAS 138 held by the Department of Energy - this asset is not covered by the National Third Party Access Code for Natural Gas Pipeline Systems and consequently is not covered by APT Allgas' Access Arrangement.

The approved APT Allgas Access Arrangement (section 3.3.4) allows for pass through of costs resulting from changes in government policy, such as costs associated with FRC. The QCA's "Final Decision for Gas Distribution Networks: Allgas Energy, May 2006" (Final Decision) sets out the allowable price and revenue paths for APT Allgas for the period commencing 1 July 2006 and expiring on 30 June 2011. In the Final Decision² the QCA indicated that FRC related costs pre-qualified to be "passed through", subject to a prudence assessment at a time when the costs are known with greater certainty. The QCA indicated that the materiality threshold for cost pass-through will not be applied to these costs.

This Submission sets out the costs, and prudence of the costs, to be "passed through". This Submission is submitted consistent with the Final Decision and the approved Access Arrangement for the Queensland Network.

¹ See Code Registrar list of covered Queensland pipelines for proof of inclusion within Queensland covered pipeline system, and confirmation of transfer in Code Registrar Annual Report 2000-2001.

² QCA, Final Decision: Revised Access Arrangement for Gas Distribution Networks: Allgas Energy: May 2006, page 29.

3 Regulatory Environment for this Submission

3.1 Purchase of Allgas and Implementation of FRC Project

The APA Group purchased the Allgas gas distribution network business from the Queensland Government owned electricity business, ENERGEX, in November 2006, and immediately commenced work on preparing for FRC, due for commencement on 1 July 2007. As part of that process, APA Group understood that:

- Queensland gas FRC was to commence on 1 July 2007 using similar rules to Victoria;
- The legislative and regulatory regime in Queensland for market settlement, customer protection, metering and licensing was being extensively reviewed and would not be known with any certainty until close to the introduction of FRC;
- The Allgas business was not being sold as “FRC compliant” or “FRC ready”, as comparatively little work had been undertaken within Allgas to advance its readiness for FRC; and
- APT Allgas would initially continue to use the legacy ENERGEX IT system (“ACIS”) for its information technology requirements. It was acknowledged in the sale process that the system would not support FRC functions, and that the purchaser would need to procure, install and initialise a new system;³

Following the purchase of Allgas in November 2006, the APA Group commenced an intensive process to prepare the business for FRC readiness. This process necessitated the rapid assembly of a project team, identification of required operational, technical and system capabilities and the engagement of appropriate resources. This was undertaken while the market rules were still being developed.

While the work required to ensure FRC readiness has been significant, APT Allgas believes that it is now operationally prepared for the introduction of FRC. Further, APT Allgas believes that it has achieved this status at the lowest possible practical cost, reflecting an attention to financial prudence.

³ The Transitional Services Agreement (“TSA”) with ENERGEX allows APT Allgas to use ACIS for up to 18 months with three months notice required to exit. An automated FRC system is required due to the number and complexity of transactions. Under the circumstances, the option of modifying ACIS for FRC was not possible, nor would it be cost effective. APT Allgas was therefore required to purchase a new FRC compliant system and modify it for the Queensland market rules.

3.2 FRC Pass Through in the QCA's Final Decision and APT Allgas Access Arrangement

APT Allgas notes that the Final Decision made two specific references to costs associated with FRC⁴:

- *The Authority accepts that some of the foreseeable costs associated with the introduction of full retail contestability (FRC) cannot be forecast on a reliable basis at this stage. In recognition that these costs may be significant and would have been considered for inclusion had more detail on the implications of FRC been available, the Authority has decided to pre-qualify these costs for pass-through, subject to an assessment of prudence at the time the costs are known and presented to the Authority. Because of the particular circumstances relating to these costs and the timing of this review and the Government's announcement of the introduction of full retail contestability, the materiality threshold for cost pass-through will not be applied to these costs; and*

- *...the Authority notes the concerns of both Allgas and other stakeholders that the introduction of full retail contestability will result in costs that are foreseeable but remain undefined at this stage. As a forecast of these costs cannot be determined on a reasonable basis at this time, the Authority will accept prudent costs associated with the introduction of full retail contestability on the same basis as a cost pass-through. In this single circumstance, the materiality test will not be imposed. This provision will ensure that Allgas is not unfairly penalised simply due to the coincidence of timing in the introduction of retail contestability and the approval of its future access arrangement.*

APT Allgas takes from these statements that:

- FRC costs have been pre-qualified by the QCA as being capable of pass through on receipt of a pass-through application from APT Allgas;
- The costs must be prudent, and this prudence will be subject to an assessment by the QCA; and
- There will be no materiality provisions related to the FRC costs that may be accepted by the QCA, and passed through as part of reference tariffs.

⁴ QCA, Final Decision: Revised Access Arrangement for Gas Distribution Networks: Allgas Energy: May 2006, page 29 and page 36

In addition to the discussion on FRC costs outlined above, the Final Decision indicates that within the APT Allgas Total Revenue allowance, expenditure has been allowed for IT upgrades. The Final Decision⁵ states that:

ECG noted that Service Essentials, a subsidiary of ENERGEX, carried out a closed tender with software vendors capable of meeting the requirements of the Australian Electricity and Gas Market. The result of this tender was the identification of 'Peace' as the system that would best meet the needs of ENERGEX Retail, Ergon Energy Retail, ENERGEX Network Electricity and Allgas. From the total cost of \$9.5 million, an allocated cost to Allgas of \$4.2 million has been estimated by Allgas.

...ECG was of the view that Peace was an appropriate investment for Allgas, despite its cost and complexity, as the market rules and billing requirements that will apply under full retail contestability will require a sophisticated information management system. ECG noted that distributors in other States have adopted similar systems to Peace, such as SPL and Hansen, which are considered to be similar in terms of both cost and functionality. ECG accepted the forecast cost of the Peace system. The Authority acknowledges that Allgas will be required to replace its existing information management system and, having considered the allocation method used by Allgas to justify this apportionment, accepts this forecast cost.

The ECG Final Report⁶ is clear that the cost is associated with the implementation of a billing system which is required to comply with ring-fencing guidelines. The ECG Report⁷ does discuss FRC in the context of this cost but in the discussion the references to FRC are using the costs of recently installed FRC systems in other jurisdictions as a benchmark for the magnitude and allocations relating to the system proposed.

APT Allgas believes that in assessing this FRC cost pass-through application the QCA should not consider what capital costs were within the cost build-up for the Total Revenue calculation as those costs are clearly separate from FRC implementation costs. APT Allgas accepts that these other capital costs will be best examined at the next regulatory reset in 2011, when the capital base will be adjusted for any discrepancies in forecast versus actual capital expenditure.

Overall APT Allgas believe the focus of the QCA should be on assessing the prudence of the FRC costs incurred. Accordingly APT Allgas understands that this

⁵ QCA, Final Decision: Revised Access Arrangement for Gas Distribution Networks: Allgas Energy: May 2006, page 54

⁶ ECG, Allgas Energy Pty Ltd Capital and Operating Expenditure Review For Queensland Competition Authority 19 April 2006, page 6

⁷ ECG, Allgas Energy Pty Ltd Capital and Operating Expenditure Review For Queensland Competition Authority 19 April 2006, page 73

expenditure was intended for a new ring-fencing compliant billing system, rather than FRC related costs.

4 APT Allgas' FRC Project

4.1 APT Allgas' FRC Project

The APA Group mobilised its FRC Project at the time of the purchase of Allgas, with a prime objective to ensure that all systems were completely ready from the 1 July 2007 start date. Key activities which this required were:

- Select a FRC IT solution, and appropriate hardware;
- Select a Systems Integrator to deliver the final solution;
- Migrate from the current ENERGEX ACIS system to a new FRC IT solution;
- Design and document FRC business processes, such that these clearly communicate both the products and services that APT Allgas intends to offer, and the terms and conditions for such;
- Train both APA corporate staff and APT Allgas staff in the new system and processes required for FRC before the start date;
- Implement all IT and business systems and technical solutions ahead of FRC project timeframes; and
- Implement Interval Meter Data collection systems and processes, develop plans and implement a rollout of interval meter hardware for customers using in excess of 10 TJ per annum.

APA Allgas undertook the FRC Project on the basis that the project would:

- Comply with FRC timelines and obligations, including successful market testing;
- Minimise ongoing operational complexity and costs associated with FRC;
- Ensure that the FRC Project is delivered within budget and without material scope changes; and
- Meet operational requirements in relation to day-to-day business which, although impacted, must continue to comply with all external obligations.

4.2 Project Requirements

APT Allgas was required to ensure that systems and processes were prepared for the commencement of FRC in Queensland on 1 July 2007. Given that APT Allgas has a

range of obligations and responsibilities in the FRC environment, these required automated and compliant systems before 1 July 2007.

The QCA will be aware that VENCORP, the Victorian gas market operator, has been chosen as the market operator for gas in Queensland. As much as possible, therefore, Victorian market rules will therefore predominately apply in Queensland, and Business to Business transactions (B2B) will need to be sent to VENCORP in specified formats and timeframes that APT Allgas must comply with.

While APT Allgas believes that at the commencement of FRC the customer transfer rate will be relatively low compared to other states (estimated at perhaps less than 150 transactions per week resulting in an assumed customer transfer rate of 10% pa), it recognises that:

- existing retailers have capability to transfer at more than ten times that rate, as demonstrated in other jurisdictions; and
- It must have a system that can manage peaks in the service work flow. In fact, the strong driver for automated systems is from the large volumes of service orders requested by the various retailers that must be processed through the new market operator. These include connections, disconnections, special meter reads, routine meter reads etc. There are over 55 different service order types and the volumes are expected to average around 500 per week;
- Following the commencement of FRC, for the largest 120 customers that consume above 10TJ pa, APT Allgas is required to collect metering data in 30 minute intervals (interval metering). Currently only approximately 30 customer meters using more than 100TJ per annum have interval meter readings.
- The existing APT Allgas interval metering system and process is not scaleable and does not have the performance required to meet FRC obligations in terms of delivery timeframes. Accurate interval meter readings enable retailers to offer lower, less risky prices to large customers. In addition, even the smaller customers may benefit, because their price is determined using net system load profiling (NSLP). If the large customer meter reads are accurate, the remaining NSLP becomes more representative of the small customer class.

In order to implement a system that met all requirements, APT Allgas undertook a tender process for a FRC management IT system that would:

- Manage basic and interval meter data for the different retailers;
- Interface to the market operator for most transactions. These include B2B and Business to Market Operator (B2M); and

- Integrate with APA Group's financial systems (Finance1), and other systems such as SCADA (CiTec), GIS (ARCFM) and Works Management (Maximo) systems.

The project also encompassed:

- A data migration exercise using a data load sourced from the ENERGEX ACIS legacy system (extract files to be provided by ENERGEX's service provider, SPARQ Solutions); and
- The preparation and delivery of training in the new system and processes for APA Group and APT Allgas staff.

LogicaCMG was known to have significant experience in FRC in other Jurisdictions. This included a sound record in providing the gas market operator FRC IT solution in NSW and the ACT and also having worked as a Systems Integrator for various energy companies. LogicaCMG was initially contracted to assist APT Allgas:

- In the FRC IT system vendor selection process; and
- To develop an understanding of required business processes post FRC.

LogicaCMG was subsequently contracted to assist in the project as a Systems Integrator (SI), to ensure that the IT systems appropriately address the APT Allgas business needs.

There were four Vendors short listed in the tender process and following a detailed review, Hansen Technologies was selected, based on a matrix of capability, IT architecture and price. The Hansen "HUB" solution that is used by a distributor in Victoria was bought "off the shelf". There were minimal changes requested to interact with the Queensland market, APT Allgas' and APA Group's complementary systems.

The new Hansen HUB system will be hosted external to APA.

The new system must be ready for production use, including integration to VENCorp by 1 July 2007, and must have been integrated to a test environment in time for market trials commencing late April 2007. APT Allgas notes that even at the rate that it has been progressing this issue, not all back office automation is expected to be available by 1 July 2007, and a staged rollout will mean some of the back office interfaces will be manual for a period of a few months. APT Allgas made the prudent decision that it was not cost effective and did not warrant the extra cost to have finalised full back-office automation by 1 July 2007.

As well as new automated systems, a fundamental part of APT Allgas' project has been to change management processes within APT Allgas. Despite the automation of B2B, manual effort is still required to carry out the work, such as completing the

actual meter reads and other field work. In addition, FRC B2B processes will generate large numbers of “exceptions” that must be handled by people, as the cost to fully automate exception handling was considered to not be prudent expenditure.

The APT Allgas business processes have been, and will continue to be, modified to perform satisfactorily within the FRC environment. This includes a significant number of changes to peoples’ roles, as well as the establishment of a new group to deal with FRC.

4.3 APT Allgas’ FRC Project Plan

APT Allgas’ FRC Project Plan (shown as the Project Master Schedule in Appendix A) is the primary governance and activity schedule for the FRC Project. It reflects the compressed project timeframe following acquisition of Allgas and allowed the project to be delivered in the following phases of initiation, design, build, data migration, testing, and deployment:

- The Initiation phase, where APT Allgas confirmed the scope of the project and roles, responsibilities and resourcing, agreed project protocols such as reporting requirements, including frequency and format, project location and accommodation, and mobilised the project team;
- The Design phase, where APT Allgas provided the foundation for the whole project and was critical to its overall success, by conducting:
 - Gap and Impact Analysis workshops. A series of gap and impact analysis workshops were held to review the current business processes against existing processes configured in Hansen HUB versus desired APT Allgas processes, taking into account Queensland Gas FRC obligations;
 - Definition of the system architecture and design. The system architecture and design were documented, including infrastructure;
 - Data migration requirements analysis. Current ACIS data sets were analysed and requirements for data migration were documented;
 - Controlling specification. LogicaCMG and Hansen produced documentation for the analysis performed during this phase. This documentation set became the Controlling Specification by which the system was built, delivered and accepted;
 - Deployment plan. The high level plan for deployment was documented; and

- Master Test plan. The high level plan for the testing strategy and approach was documented and agreed.
- The Build phase, where APT Allgas scoped and conducted the
 - Core system build;
 - Configuration of application software ;
 - Development and modification of agreed customised code;
 - Interfaces;
 - Build and modification of all interfaces; and
 - Reports and development of reports.
- The Data Migration phase, where APT Allgas undertook all necessary activities to script, test, and execute the data migration routines required to complete all defined data migration requirements, including:
 - Specification and receipt of data extracts from ENERGEX;
 - Build and analysis of data import procedures;
 - Creation and testing of an end-to-end data migration process;
 - Provision of data quality reports and analysis tools; and
 - Execution of the process, loading ACIS data into Hansen HUB for testing and acceptance.
- The Test and Acceptance phase, where APT Allgas undertook the formal testing of the delivered system, including:
 - Development of agreed Test Plans and Cases;
 - Establishment and agreement of Factory Acceptance, Integration, User Acceptance and Market Trial Test environments, including test specifications;
 - Definition of Stress and Volume testing requirements was planned for, then not undertaken;
 - Execution of testing against the relevant and agreed test environment(s);
 - Test management, performed by LogicaCMG; and

- Planning and Execution of Market Trial testing.
- The Deployment phase, which focused on preparing the business for the deployment of the system and the production cutover of the solution to the users and IT operations including:
 - Identification of training requirements for administration and end users;
 - Provision of training material by LogicaCMG (business process training) and Hansen (HUB training);
 - Delivery of training;
 - Dress Rehearsal(s) conducted in real-time to ensure cutover would run smoothly;
 - Final cutover to production, including production of market data extracts for other participants (e.g. market operator); and
 - Rollout of the production software to end users.

As part of the program a central database was established to record key documentation and to ensure all resources had access and a common understanding. APT Allgas has summarised the FRC work program into the points above in order to protect its Intellectual Property and that of its suppliers. APT Allgas is able to provide greater detail on a confidential basis if the QCA requires further information to access the prudence of the FRC program.

5 Description of FRC Activities

The FRC project mainly comprises “one-off” costs related to the FRC IT system and associated internal and external interfaces. The relevant FRC costs also include costs associated with provision of interval metering systems to large customers. In addition to these costs, there are annual operating costs associated with the FRC IT system and ongoing management of the interval meter system.

A considerable portion of FRC costs were incurred through external contracts already signed, and outstanding costs can be forecast with some accuracy. However, APT notes that the final costs will not be any lower than contracted. Rather, there is capacity for increased work (and therefore costs) due to a number of events:

- Changes to the Vencorp “build pack” (currently being compiled), resulting in required changes for APT Allgas’ system;
- Any delays to the FRC date. Typical “burn rates” exceed \$100k per week in the event of a delay;
- “Fine tuning” of the FRC IT product after operations commence. Hansen has recently advised that approximately \$500k should be allowed for, to be expended in the first quarter;
- Additional costs of providing reports. APT Allgas will not know what reports are necessary until it has some experience with the live system; and
- Although APT Allgas preparations are going well, there is still the possibility that problems could be experienced before go- live.

Details of all costs are set out in Section 6 of this submission.

Typically FRC projects take from 9 to 18 months, due to the complexity of system and process redesign, whilst ensuring that there is ongoing “business as usual” during the project and no impact on customers. APT Allgas in effect had only 6 months to deliver its FRC project after completing its tender process. Under the circumstances, this compressed timeframe helped APT Allgas ensure costs were prudent.

5.1 Hansen Technologies IT System and Service arrangement

APT Allgas undertook a closed tender in order to ensure the solution was prudent. The tender process resulted in the selection of Hansen Technologies FRC system. The tender included a review of four potential suppliers. These were assessed based on a matrix of price, capability and technology. If necessary, APT Allgas can provide details of this process to the QCA if required. The selection process required formal submissions and a presentation/demonstration to APT Allgas management. APT

Allgas also evaluated the option of a joint project with Origin Energy Asset Management (OEAM) in order to deliver a single Queensland gas-solution.

The tender results indicated that two vendors were suitable, with Hansen Technologies “HUB” receiving the highest ranking. HUB is used in the Victorian gas market and minimal changes were required for Queensland. Three contracts were completed with Hansen. The first of these contracts, the “supply agreement” is covered in this section. Approximately two thirds of the Hansen supply contract is fixed price, with one third based on time and materials. This contract is for the supply and installation of the HUB system. This includes:

- Software Licence to operate the Hansen system;
- Third party software licences required for the Hansen interfaces;
- Hansen resources (Project Management, Architect, Migration, Business Analysts);
- Configuration of HUB and the gateway to the FRC market operator, VENCORP;
- Documentation and training of APT Allgas staff in using the new FRC systems and processes;
- Customisation for the Queensland gas market rules and interfaces to APA IT systems;
- Meter and customer data conversion and migration from ENERGETX;
- Full participation in Market trials run by VENCORP; and
- Hardware- both “production” and “disaster recovery” to run the Hansen FRC software.

5.2 LogicaCMG

LogicaCMG assisted APT Allgas with the FRC IT system tender process and were later selected by APT Allgas as the System Integrator. LogicaCMG services as the System Integrator included:

- Project management to ensure the overall program was delivered on time, within budget and meeting the business and market requirements;
- A Solution Architect to ensure that APT’s systems and processes were efficient and least cost;

- Development of Change Management to ensure that the new FRC system was used efficiently and effectively by APT Allgas staff;
- A Test Manager and Business Analysts to ensure that APT fulfilled all its obligations with the market operator and to ensure the Hansen system was delivered to its specifications; and
- Business consultants to assist APT in redesigning workflows under an FRC environment.

Given the nature of the project, LogicaCMG required the work to be based on a time and materials basis. APT Allgas reviewed these forecast costs and was satisfied that the allocated time and hourly rates were typical of industry standards.

5.3 Interval Meter Management System

APT Allgas is required to have remotely read interval meters for all large customers >100TJ by 1 July 2007 and all other large customers >10TJ within two years. In addition, all customers >10TJ who switch retailer will require an interval meter at that time.

APT Allgas short listed and evaluated four possible suppliers of equipment and selected AMPY EMAIL to provide the interval metering solution, based on technology, capability and price. APT Allgas considered capability to be particularly important because of unsatisfactory solutions in other jurisdictions. APT again demonstrated prudence by considering having OEAM provide the metering solution.

APT Allgas already has remotely read interval meters for its large customers >100TJ, however the current system is known not to be capable of meeting the standards required for FRC. In a FRC environment, it is critical to avoid a high level of meter read estimation so it was determined necessary to replace the existing equipment. This replacement did not include the majority of the meters themselves. The contract includes:

- Interval meter data loggers;
- Interval meter correctors;
- SCADA system modification;
- Interval meter data collection system; and
- Project management.

In a FRC environment, the interval meter data is required in a timely manner so retailers of large customers can manage their purchases. It is also helpful for small customers as the large meter interval data is subtracted from the total APT Allgas gas

delivered in order to determine the NSLP for the smaller customers. Although the existing large meters themselves were satisfactory, the associated data logging, correction and communication equipment was frequently failing. APT Allgas determined that the cost of reading manually was in fact more expensive than new remote communications and provided fewer benefits.

5.4 Internal and Other Costs

There are a number of costs associated with the FRC IT project that are directly related to the contracts discussed above. These costs are forecasts based on estimates from benchmarking other similar projects. They include:

- Escrow agreement for the Hansen HUB code. This protects the computer code for APT Allgas in the event that Hansen is no longer available;
- Test automation software. This is required to test that the new system and ongoing enhancements are performing satisfactorily;
- FRC Program Director, FRC Strategy Manager, APT Allgas FRC Change Management Manager, APT Allgas FRC Business analysts. These management representatives were responsible for planning, resolving issues and determining solutions for FRC matters;
- LogicaCMG assistance with Vendor evaluation- LogicaCMG assisted with preparing the Request For Quote (RFQ) and in the evaluation;
- Internal SMEs (Subject Matter Experts). Due to the small existing APT Allgas Queensland team, including APT Allgas staff, these were either employed under contract or seconded from within APT Allgas and backfilled with temporary resources; and
- Legal and regulatory. Legal advice was required on numerous contracts, including for Hansen Technologies (four contracts including the Escrow agreement), LogicaCMG, third party software suppliers, metering suppliers and the transitional Services Agreement with ENERGEX. Legal and regulatory advice was required for understanding associated regulatory changes and processes.

5.5 IT Integration Costs to APT Allgas

The new Hansen FRC system cannot operate effectively in isolation and is required to interface with existing APA systems. Some of this integration will be phased in after 1 July 2007. APT Allgas has determined its priority is to ensure that its interface to the VENCORP market operator is fully automated from 1 July 2007. Most internal interfaces will be manual at that time and will be automated over the three months following market start.

The internal interfaces include Works Management, GIS, Finance and Laptop & Desktop Integration. As an example, when retailers generate a service order for a customer connection, it will reach APT Allgas' Hansen system via the VENCORP hub. From 1 July, this job will be dealt with manually for action by APT Allgas field staff. After automation, the service order will automatically be sent to the works management system for scheduling etc. Transactions, that occur only infrequently, will continue to be performed manually.

5.6 GIS

At the FRC system design stage it was determined that in the FRC environment, it would be optimal to have the GIS as the central knowledge point for information such as address details. That is, the GIS would be used to populate other databases, including HUB and that the GIS would remain the "master" from which other databases would source customer site data. After some evaluation, APT Allgas determined that the current GIS was not adequate for this centralised role. Given the short timeframe to the start of FRC, it was decided it was not possible implement a new GIS sufficient to perform this function.

The Role of a GIS in FRC

GIS is increasingly being used in network or distribution electricity, gas and water companies as the "database of record" for the core assets and their network connectivity. The core assets include, in the case of a gas business, the pipes, valves etc. through to the customer connection or supply point and often meter. This then enables the GIS to record the network connectivity from bulk supply point to customer and for the network business to be able trace the flow of gas through the network. Thus, for managing outages, supply interruptions, network enhancements and extensions, the company can model their gas network and accurately assess customer impacts.

The second key functional area for a GIS is managing street addresses. Whilst this can be managed in a billing system, given the "spatial nature" of addressees, the management and maintenance of addressing in a spatial system or GIS is simpler, cheaper and more accurate. In addition, the Government mapping agencies typically maintain addresses in conjunction with the map data.

The third key functional area once the asset and map data is in the GIS is for it to be the best tool to maintain this data. It is as simple as the "picture being worth a thousand words". The GIS has the map interface that supports the accurate identification of location and existing assets and so enables ready, cost effective and accurate data maintenance regimes.

GIS Implementation costs

APT Allgas sought LogicaCMG's advice on the likely cost of a GIS. GIS implementation costs are typically very dependent on the size of the system and the extent of customisation and interfacing then affects the project time and so cost. A useful rule of thumb is to expect that the IT services charge from a vendor will be similar to the software licence charge. For example, if software costs are say \$500,000, one may expect a minimum of \$500,000 of implementation costs. To which one would add related IT infrastructure such as hardware, database etc. Internal costs are then determined by the number of staff on the team, number to be trained etc. APT Allgas would expect a GIS implementation with some customisation and interfacing to be of the order of \$2.1 million.

Data costs are more difficult to estimate. The initial data conversion costs are very dependent on the state of the records. As a useful rule of thumb:

- To licence the use of the underlying map base from the State Government mapping agency would usually be no more than \$1 per parcel or property;
- The input of the related utility assets while not directly related to the number of parcels/properties is estimated as between \$10 to \$15 per parcel. This figure can vary from less than \$10 for a minimal system to something more and depends on the state of the existing records, availability, and the number of attributes of each asset that is converted or captured and how much of the data is already in electronic form; and
- The additional cost of data correction – this is a key activity and crucial to the realisation of business benefits etc.

An estimated cost of the required modification to allow the GIS to be used in the above fashion has been included in the FRC costs. These GIS costs are indicative only and no GIS operating costs are included in the FRC costs. Following the successful implementation of the other FRC systems from 1 July 2007, APT Allgas plans to recommence planning for optimal integration of the GIS. The CAPEX cost recovery for the FRC-GIS modification has been scheduled for 2007-08, so that if the project costs change or if it does not proceed at all, then the costs recovery in that year may be modified accordingly.

5.7 Ongoing costs

Hansen Technologies were contracted under a standard service agreement for three years. APT Allgas evaluated options for operating the HUB system, including “in-house”, or out-sourcing. The specialised resources required were not readily available and were not required on a full time basis. Consequently APT Allgas determined that it was not the most cost effective option to operate internally. APT Allgas evaluated two options for hosting. The third Hansen contract was made after it was determined that Hansen would “host” the new system for three years.

Ongoing costs include adjustments for running the business in an FRC environment. Despite the automation delivered with the new system, experience on interstate FRC projects shows that there will be an increase in labour costs, not a decrease. This is due to management of the “exceptions” generated, i.e. the automated systems are designed for when everything works correctly, not for all scenarios. For example, if participants send data outside the required “time windows” or in unsuitable formats, they must be dealt with manually.

These operating costs include:

- Hansen annual licensing cost for use of their system (based on meter numbers);
- Ongoing third party annual software licensing (eg Oracle etc) required to make the Hansen system work in the APT Allgas environment;
- Annual Hansen Escrow Agreement; - ongoing cost to protect the Hansen code for APT Allgas.
- Hansen Hosting of the IT system at their site. It was determined to be the lowest cost and most effective option for running the Hansen FRC software;
- Additional APT Allgas FRC staff. Up to 19 FRC staff are required to deal with new workflows and exceptions management. This is expected to reduce over a three year period;
- APA internal IT support to ensure that technical issues with the new systems operation were resolved and did not compromise existing APA systems and met APA’s IT standards;
- Interval meter management; and
- GIS maintenance to ensure all meter customer records are adequate in order to avoid any barriers to competition.

6 FRC Cost Pass-Through

APT Allgas' FRC project mainly comprises:

- “Once-off” costs related to the FRC IT systems, processes and associated internal and external interfaces;
- Costs associated with provision of an interval metering system to large customers; and
- Annual operating costs associated with the FRC IT system and managing the interval meter system.

Although the FRC costs incurred by APT Allgas are substantial, APT Allgas' costs are relatively lower when benchmarked to FRC costs incurred by energy companies in other jurisdictions. APT Allgas submits its costs on the understanding provided by the Queensland Competition Authority (QCA) that there will be an annual adjustment or “true up” of actual expenditure incurred against these submitted costs. APT Allgas notes that the majority of these FRC costs will be incurred through external contracts that have already been signed, and are therefore expected to be accurate. Where contracts are not in place yet, or the scope is not confirmed, APT Allgas has reflected the likelihood of those costs being incurred.

As an example Envestra had FRC costs approved in South Australia and Victoria for approximately \$45 million and \$25 million respectively. In Queensland Energex has submitted FRC costs exceeding \$100 million and Envestra over \$20 million.

6.1 Capital Expenditure Costs

It is forecast the capital expenditure⁸ for the FRC project and related processes will be \$5.2 million in 2006/07 and \$3.3 million in 2007/08. This is set out in the table below:

⁸ FRC expenditure shown includes a 20% allocation of corporate overheads which also covers management time and FRC legal and regulatory costs. FRC expenditure also includes a contingency of 20% on the third party contracts. APT Allgas considers this number prudent based on typical IT and FRC projects and notes that at the time of this submission, FRC invoices for approximately only 20% of total project costs have been received and paid. APT has excluded all non-FRC work. In addition, for the works management system (Maximo), APT Allgas has allocated only 75% of the system costs to FRC. All direct forecast FRC costs will be subject to a “true-up” annually.

FRC Capital Expenditure - \$'000 Nominal					
	2006/07	2007/08	2008/09	2009/10	2010/11
Hansen IT System	2,966	576	0	0	0
Partial Integration Costs	486	245	0	0	0
GIS	0	1,908	0	0	0
Interval Meter system	606	606	0	0	0
Project Establishment	1,160	0	0	0	0
Total CAPEX	5,218	3,334	0	0	0

6.2 Operational Expenditure Costs

It is forecast the operations and maintenance expenditure⁹ for the FRC project and related processes will be \$4.0 million in 2006/07, reducing over time to \$2.2 million in 2010-11. This is set out in the table below.

FRC Operations and Maintenance Expenditure - \$'000					
	2006/07	2007/08	2008/09	2009/10	2010/11
LogicaCMG	2,127	339	0	0	0
Ombudsman Scheme	115	115	115	115	115
Hansen Software Licensing	0	151	153	154	157
Third party software licensing	0	58	58	58	58
Escrow agreement (Hansen code)	0	3	3	3	3
Hosting	144	415	415	415	415
Additional FRC staff	378	1,512	1,210	1,058	1,058
Brennan IT SOE support and mgmt	0	29	58	58	58
Interval Meters	0	341	341	341	341
Project Establishment	1,224	792	0	0	0
Total O&M	3,988	3,755	2,351	2,202	2,205

⁹ FRC expenditure shown includes a 20% allocation of corporate overheads which also covers management time and FRC legal and regulatory costs. FRC expenditure also includes a contingency of 20%. APT considers this number prudent based on typical FRC projects and on experience observed in other jurisdictions. All direct forecast FRC costs will be subject to a "true-up" annually.

6.3 Pass-Through Amounts

The APT Allgas Access Arrangement allows for a pass-through of prudent FRC costs. APT Allgas submits that its expenditure meets the prudency test by adoption of existing interstate FRC solutions and through tenders, benchmarking and tight budget control. APT Allgas has prepared its proposed cost pass-through amount on the basis of:

- The operations and maintenance costs of FRC;
- Return at the regulatory WACC on capital expenditure; and
- APT Allgas return of capital over a reasonable period (depreciation).

APT Allgas' estimated costs are \$20.32 million in present value terms, comprising:

- APT Allgas' nominal operation and maintenance costs, as set out in the table above;
- APT Allgas' return on capital, set at the QCA approved WACC of 8.75% on a regulatory asset base comprising the capital expenditure set out in the table above. APT Allgas applied this WACC to half of the capital expenditure in 2006-07 and 2007-08, and on the rolled forward capital for the remainder of the regulatory period; and
- APT Allgas' depreciation on the capital expenditure was calculated using a payback period of 1.5 years for IT and systems costs. As with the return on capital, APT Allgas applied the depreciation rate on only half of the capital expenditure in 2006-07, and on the rolled forward capital for the remainder of the regulatory period.

APT Allgas proposes to spread the material amount of its cost claim through to customers across both 2007-08 and 2008-09 in order to avoid a large price shock in 2007-08.

\$'000	2006/07	2007/08	2008/09	2009/10	2010/11
Return on capital	152.2	249.5	97.3	-	-
Recovery of capital	1,739.4	4,677.2	2,278.5	-	-
O&M expenditure	3,988.1	3,848.6	2,351.4	2,201.9	2,204.8
Less CPI escalator	(87.0)	(55.6)	-	-	-
Pass through (nominal)	5,792.69	8,719.69	4,727.19	2,201.85	2,204.76
Pass through (smoothed)	-	8,719.69	10,664.70	2,201.85	2,204.76

6.4 Customer Impact

APT Allgas is concerned to minimise FRC costs in Queensland and has adopted the lowest cost solutions available for FRC, and as much as possible, implemented a “vanilla” version of FRC IT systems, minimising expensive customisation.

The drivers of FRC costs are generally related to the existence of a meter, not to the amount of energy consumed by the customer. Thus FRC costs are most appropriately recovered by an additional standing charge, or similar charge, on a meter or end-user. APT Allgas is proposing to charge customers the cost of FRC as allocated to the customer groups.

In considering cost recovery options APT Allgas is mindful of the fact that the largest customers already have retail competition, and as such APT Allgas will not be subsidising the small customers with FRC charges on large customers (any FRC charges on large customers will be related to costs directly attributable to this customer group).

On current figures the recovery of FRC costs from Tariff V customers (using less than 10TJ per annum) is as follows:

	2007-8	2008-9	2009-10	2010-11
\$ recovered per day (ex GST)	\$0.33	\$0.39	\$0.07	\$0.07
\$ recovered per year (ex GST)	\$119.02	\$141.83	\$25.77	\$24.84

The recovery of FRC costs from Tariff D customers (>10 TJ per annum) is:

	2007-8	2008-9	2009-10	2010-11
\$ recovered per day (ex GST)	\$18.90	\$29.53	\$8.66	\$8.66
\$ recovered per year (ex GST)	\$6,899	\$7,495	\$3,160	\$3,160

In other jurisdictions, FRC project costs of less than \$25 million are uncommon and over \$100 million has been expended in some cases. An FRC system for 75,000 customers is likely to require a capital expenditure of much the same as one for 750,000 customers. In this case unfortunately it means that in the smaller businesses, consumers will have a higher burden in covering the cost.

6.5 Commencement of Cost Recovery

APT Allgas has calculated the new tariffs on the basis that FRC cost recovery commences on 1 July 2007. APT Allgas understands from discussions with the QCA secretariat that the full review process for the submission will not be completed in time for final approval by 1 July 2007. While providing a longer period for assessment of APT Allgas' submission, an earlier submission would have involved significantly greater uncertainty regarding the accuracy of the forecast costs. Even at this stage only approximately 20% of the FRC costs have been invoiced and paid. A large percentage of the remaining FRC expenditure will be incurred during the QCA review period, with contract payments being due by early July 2007.

APT is supportive of the introduction of FRC as it will have long term benefits for customers. However, unlike most other expenditure on the network, the FRC readiness and its resulting costs have been mandated for industry. In view of this, APT Allgas submits that it is reasonable for APT Allgas to recover the FRC costs as soon as practicable.

Under the circumstances, APT Allgas suggests that it would be appropriate to adopt an interim arrangement for FRC pass-through until the QCA makes its final decision. For example this may involve the QCA allowing an interim tariff increase from 1 July 2007, until the final tariff is formally approved. Any material difference between the interim and final amounts could be taken into account at that time. In the event that even an interim tariff cannot be accommodated by 1 July 2007, APT Allgas seeks to have it apply as soon as possible thereafter.

APT Allgas considers adoption of such an approach has benefits for all parties. For APT Allgas, it will address in a timely manner the significant adverse cashflow impact over the previous six months from FRC expenditure. This will include over \$10 million expenditure by 1 July 2007 and another \$3 million during the expected QCA review period. APT Allgas submits that it is appropriate that a suitable mechanism be found to address this cashflow risk as soon as practicable, while allowing the QCA the necessary period of time to fully assess APT Allgas' submission.

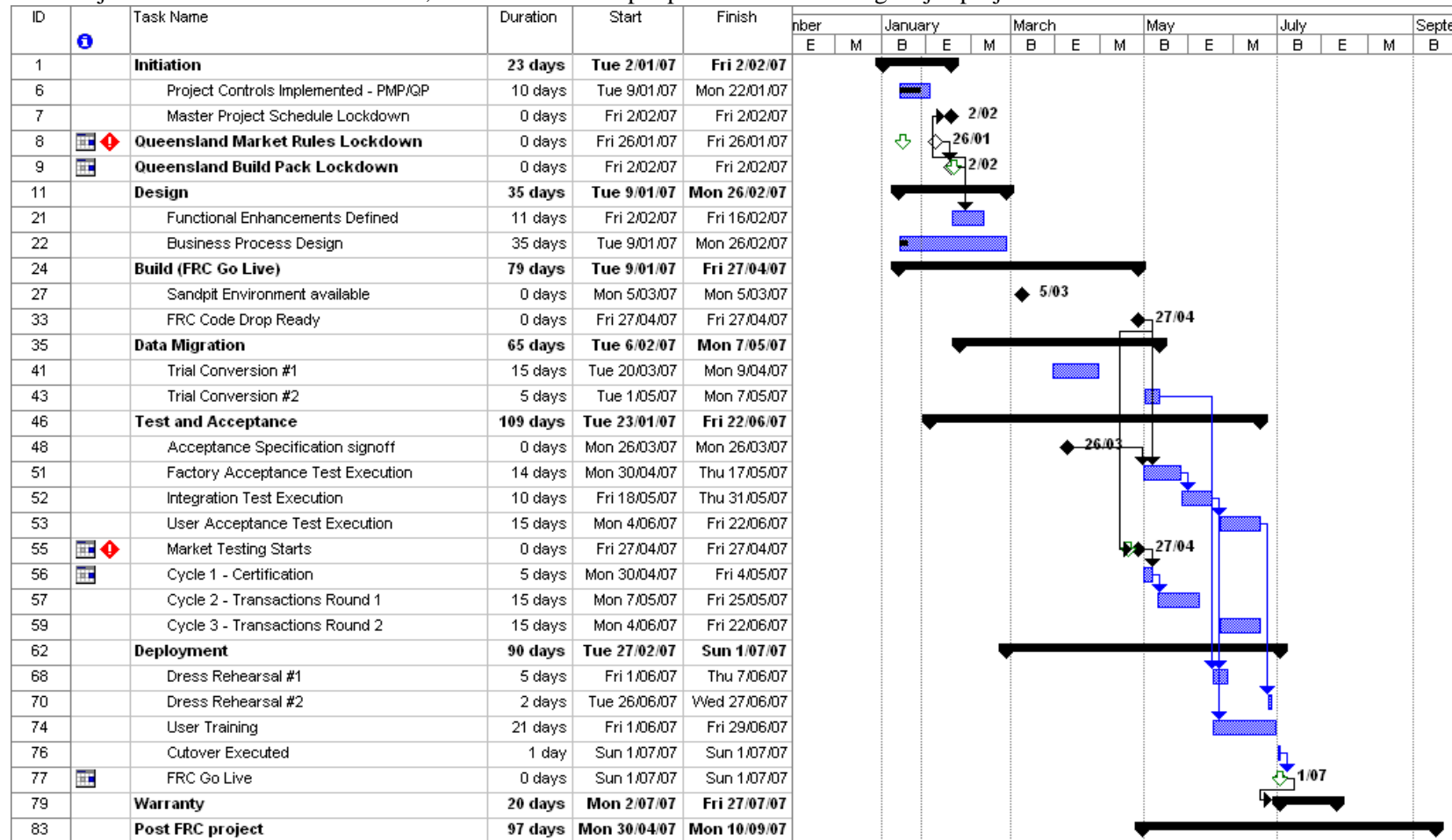
Customers will also benefit as this approach will 'smooth' the price changes, and reduce interest and depreciation costs, therefore overall cost impact will be lower.

APT Allgas would like to further discuss the matter of an interim arrangement with the QCA.

Appendix A - Approach and Work Breakdown structure

A.1 Work Breakdown Structure and Lifecycle Milestones

Refer to the Project Master Schedule for details, below is a rolled up representation showing major project tasks and milestones.



Appendix B - FRC Project Methodology

LogicaCMG used its proven project methodology CORTEX, which is certified to AS/NZS ISO9001.

B.1 Planning

Project planning is a key activity as it provides both the details of what will happen when and hence the resources required to achieve the deliverables. The Project Management Plan /Quality Plan and Project Master Schedule will provide the framework and data.

B.2 Design

A series of analysis tasks encompassed the definition and documentation of system and business requirements and the mapping of existing functionality against desired processes. The forum for this activity was a series of workshop sessions with LogicaCMG, Hansen and APT Allgas Subject Matter Experts (SME) with the output documented in the Controlling Specification.

The Controlling Specification defines the overall solution and with the system and business process baseline, defines the gap analysis. The gap analysis determines how each requirement within the stream of work is met.

B.3 Deployment

The installation and commissioning of this project was carried out according to the Transition Plan which was initially documented in the Design Phase and had its final version approved before the implementation of the system into the production environment, in line with the Project Master Schedule.

The existing data in the ACIS system will be migrated and converted to the defined and agreed data model by Hansen.

The installation and commissioning of this project was carried out according to the Deployment Plan which was initially documented in the Design Phase and had its final version approved before the implementation of the system into the production environment, in line with the Project Master Schedule.

B.4 Management processes

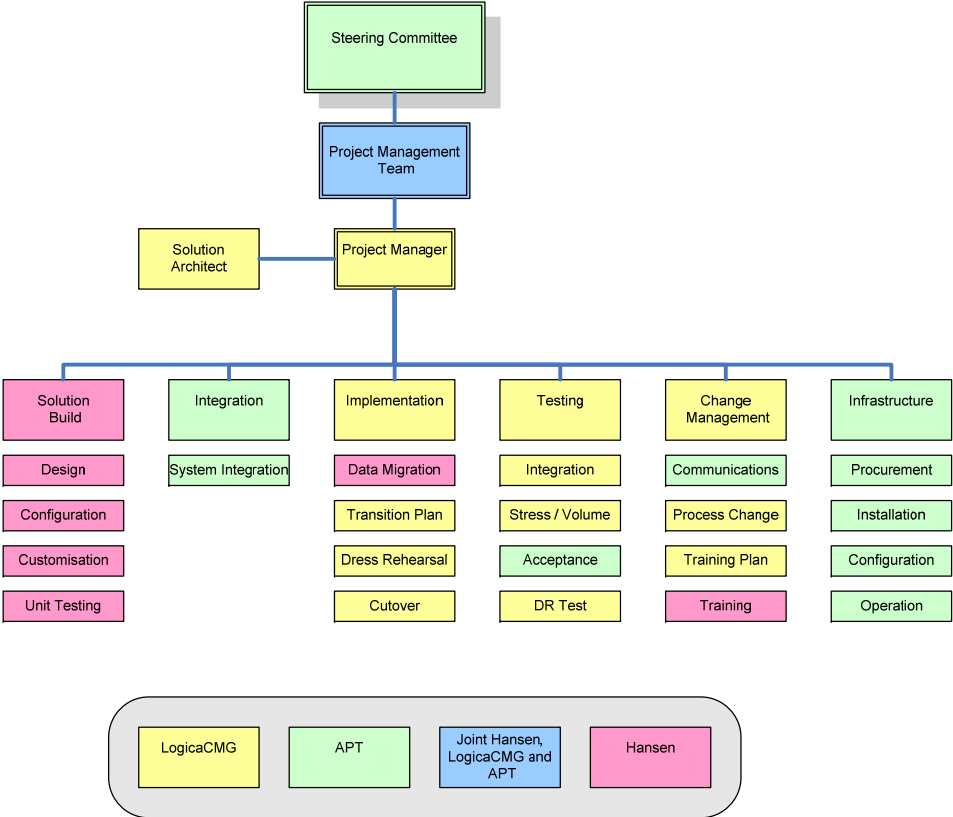
The Project Master Schedule is used throughout the lifecycle of this project as the main progress tracking tool. After the project enters the integration and system testing phase, progress tracking will be supplemented with test tracking matrices.

B.5 Risk management

Project risks have been defined within the overall project risk register. The project risk register is the responsibility of LogicaCMG and is updated weekly, and reported on in the weekly Project Management Team meetings.

B.6 Team structure

The following diagram shows the high-level team structure for FRC



B.7 Key Roles And Staffing

The table below sets out responsibilities and roles for the key LogicaCMG project Personnel.

Role	Key Responsibilities
Project Manager	Overall commercial responsibility Project resource and schedule management Quality management Financial and status reporting To obtain APT Allgas agreement/acceptance of all deliverables Management of the Risk register, including definition and implementation of risk mitigation strategies and contingency plans for the Project Management of all deployment activities, including handover to Operations
Solution Architect	Overall technical design authority for the Project To develop and maintain the overall System and Technical Architecture Vision and document the Controlling Specification required to deliver the project To ensure that the performance of the system meets requirements
Change Manager	Definition and documentation of business processes Organisation Change Management activities Training Needs Analysis and Training Plan development
Test Manager	Deliver System Test Plans and Specifications Manage execution of System and End-to-end Integration tests

B.8 Development infrastructure resources

Development infrastructure is being provided for the HUB software and for interface development.

B.9 Quality assurance

The assurance function is designed to ensure that commercial, technical and quality risks are understood and appropriately managed.

B.10 Change management and training

Training will fall into two categories. These are:

1. System training which will be developed and delivered by Hansen Technologies
2. Business Process training which will be developed and delivered by LogicaCMG and the Change Management team.

B.11 Proposed New FRC Structure

