Review of governance structures and processes for capital expenditure

JEMENA GAS NETWORKS

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Contents

Abbreviations and definitions

Term	Definition
AA	Access Arrangement
AER	Australian Energy Regulator
APM	Association of Project Management
CPMC	Capital Program Management Committee
DFA	Delegations of Financial Authorities
the Guidelines	Jemena Gas Networks (JGN), Project Governance Guidelines, March 2014
JGN	Jemena Gas Networks
MCPGC	Major Capital Project Governance Committee
NGR	National Gas Rules

Executive summary

From Jacobs SKM's review of JGN's governance processes, Jacobs SKM concludes that JGN has in place a capital investment governance framework that is robust in its support of prudency and efficiency in the identification, planning and delivery of its capital program. JGN's focus on capital investment governance provides it the opportunity of being a leader in this field

Capital investment governance is concerned with decision-making in respect of Jemena Gas Networks ("JGN") investments in programs and projects. JGN has made and has a program to continue to make improvements in its capital investment governance in keeping with industry trends in this area and good industry practice including:

- Introducing greater formality into the major projects delivery phase;
- Improving the clarity around roles and responsibilities in the project delivery area;
- Updating the Project Pipeline delivery framework to further support movement towards a best practice approach in project planning, development and delivery.
- Ensuring key stakeholders are fully engaged throughout the delivery of major projects;
- Introducing the Major Capital Projects Governance Committee;
- Improved monitoring and control of major projects.

There are also opportunities to enhance JGN's capital investment governance, including:

- Strengthening the concept of a single point of accountability through the application of governance structures, particularly the naming of a project sponsor, earlier in the Project Pipeline delivery framework;
- Providing for a clearer mechanism for appointing project sponsors for non-Major Capital Projects;
- Providing for project portfolio governance at the board level to help strengthen the linkage to corporate objectives and policy;
- Improving governance-related documentation in areas of consistency, clarity, and completeness.

JGN will realise the following benefits from the above opportunities to enhance its capital investment governance process:

- Executives accountable for the network performance and outcomes will have greater control and visibility over the investments that determine those outcomes;
- Project and program outputs will be aligned to the required business and network outcomes with greater certainty;
- Programs and projects will have more robust investment justification;
- More efficient use will be made of senior management time; and
- Regulatory approval of planned capital programmes will be more readily obtained.

It is recommended that JGN pursues these opportunities as part of a continuing improvement of its capital investment governance.

Notwithstanding the above improvement suggestions Jacobs SKM concludes that, JGN has in place a capital investment governance framework that is robust in its support of prudency and efficiency in the identification, planning and delivery of its capital program.

Disclaimer

The sole purpose of this report and the associated services performed by Jacobs SKM is to review and provide an opinion on the adequacy, consistency with good industry practice and suitability of Jemena Gas Networks (the Client) governance structures and processes for capital expenditure in accordance with the scope of services set out in the contract between Jacobs SKM and the Client. That scope of services, as described in this report, was developed with the Client.

In preparing this report, Jacobs SKM has relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, Jacobs SKM has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

Jacobs SKM derived the data in this report from information sourced from the Client (if any) and/or available in the public domain at the time or times outlined in this report. The passage of time, manifestation of latent conditions or impacts of future events may require further examination of the project and subsequent data analysis, and re-evaluation of the data, findings, observations and conclusions expressed in this report.
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1. Introduction

Jemena Gas Networks (NSW) Ltd (“JGN”) is the principal gas distribution service provider in New South Wales. JGN provides gas transportation services which deliver approximately 100 PJ of natural gas per annum to over 1 million homes, businesses and industries across the State. It is wholly owned by SGSP (Australia) Assets Pty Ltd, a company which trades as Jemena.

As a regulated entity, JGN is required to propose revisions to its Access Arrangements (“AA”) for consideration by the Australian Energy Regulator (“AER”) on a 5 year cycle. JGN’s current AA will expire on 30 June 2015 and development of an AA proposal for the period 1 July 2015 to 30 June 2020 is ongoing. The submission date of the proposed AA, including supporting documentation, is 30 June 2014.

Jacobs SKM has been engaged by JGN to provide a review (“Review”) of JGN’s governance structures and processes for capital expenditure. The purpose of the Review is to assess the governance process of JGN against utility good practice. It is intended to be included in the JGN AA submission as supporting information to be reviewed by the AER. In particular, the Review will provide an opinion on whether JGN’s governance structure and processes support prudency and efficiency in capital expenditure in accordance with rules 74 and 79 of the National Gas Rules (“NGR”).

The outline of the Report is:

- Section 2 – Provides a brief summary of the Review scope
- Section 3 – Introduces the requirements under Rules 74 & 79
- Section 4 – Outlines the approach followed by the Review
- Section 5 – Provides the review of JGN governance principles and documentation
- Section 6 – Provides the review of JGN governance structure and processes
- Section 7 – Compares JGN governance with industry standards
- Section 8 – Provides guidance questions relevant for the AER review

The full scope of the Review is provided in the Terms of Reference which are included in Appendix A.

This Review includes analysis of project governance processes that have been developed and are in use by Jemena on a business wide basis as well as those processes developed and used solely by JGN. Our commentary and opinion is therefore differentiated by the use of the name Jemena or JGN as appropriate.

2. Scope

The scope of the Review is as follows:

1. Review and provide an opinion on the adequacy and suitability of JGN's governance structures and processes for capital expenditure, including for identifying and managing mid-project changes, as a means of ensuring and demonstrating the prudency and efficiency of capital expenditure that will be subject to assessment by the AER in accordance with Rules 74 and 79.
2. Recommend changes or improvements to the structure and processes that, in the consultant's opinion, would enhance their suitability for that purpose.

2.1 Exclusions

The scope of work does not include reviews of:

- Unit cost methods or application
- Methods of project cost estimating
- Demand or volume market forecast methods
- Underlying investment plans

3. Requirements of Rules 74 and 79

3.1 CAPEX forecasts and estimates

Rule 74 provides the requirements for all forecasts and estimates included as part of the proposed AA. Forecasts relevant for this Review are forecast of future unit costs to apply during the term of the proposed AA. Estimates relevant for this Review are capital cost estimates.

74 Forecasts and estimates

(1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.

(2) A forecast or estimate:

must be arrived at on a reasonable basis; and

must represent the best forecast or estimate possible in the circumstances.

3.2 New capital expenditure criteria

The NGR sets out the criteria that must be satisfied for capital expenditure to be classified as ‘conforming capital expenditure’ and therefore eligible for inclusion in JGN’s Regulatory Asset Base (“RAB”). The criteria for conforming capital expenditure are provided under rule 79 of the NGR as follows:

79 New capital expenditure criteria

(1) Conforming capital expenditure is capital expenditure that conforms with the following criteria:

(a) the capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services;

(b) the capital expenditure must be justifiable on a ground stated in sub-rule (2).

(2) Capital expenditure is justifiable if:

(a) the overall economic value of the expenditure is positive; or

(b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or

(c) the capital expenditure is necessary:

(i) to maintain and improve the safety of services; or

(ii) to maintain the integrity of services; or

(iii) to comply with a regulatory obligation or requirement; or

(iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or

the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).

Table 1 summarises the requirements of Rule 79. Conforming capital expenditure must meet the efficiency and prudency requirements in item 1 as well as be justified on one or more of the grounds in items 2 through to 7 as appropriate.

Table 1 - Conforming Capital Summary Requirements

Item	Requirement	Clause	
1	• Prudency & Efficiency	79 (1)	Must be met
2	• Value (wide scope)	79 (2)(a)	Must be justified on one or more of these grounds
3	• Value (narrow scope)	79 (2)(b)	
4	• Safety	79 (2)(c)(i)	
5	• Service Integrity	79 (2)(c)(ii)	
6	• Regulatory	79 (2)(c)(iii)	
7	• Existing Demand	79 (2)(c)(iv)	

3.3 Demonstration of efficiency

For the purposes of the Review, particular emphasis is placed on the efficiency and prudency requirements of 79 (1):

> "..capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services."

A demonstration of the existence of and adherence to suitable decision-making processes and asset management processes would provide evidence supporting JGN's prudency, efficiency, and adherence to good industry practice in its capital expenditure.

Whilst perhaps an oversimplification, the above may generally be captured, at least in part, as a requirement for CAPEX planning forecasting and estimating processes to be in keeping with good industry practice, and to achieve, demonstrably, efficient outcomes.

4. Approach

4.1 Review of JGN project governance

Jacobs SKM has been engaged to review the suitability of the capital decision-making governance at JGN particularly in the area of capital expenditure decisions.

In performing the review, Jacobs SKM has first focused on JGN's five key project governance principles:[1]

- Scalable and adaptable – to ensure the right amount of governance, depending on the risks, complexity and strategic importance and be able to accommodate changes in those factors as a project progresses
- Staged – to allow focus on the right things at the right time and ensure incremental investment, management of risks and project management rigour.
- Inclusive – to support project and program success as well as contribute to organisational success
- Aligned – to ensure consistency with corporate policies and authorities as well as JGN's legal, regulatory and commercial obligations
- Continuous improvement – to encourage frank internal disclosure of project information and allow continuous improvement of project management and project governance

The review included both the decision-making process and the decision and development process for capital expenditure projects both before and after the capital expenditure decision was made. The purpose of the more holistic review was to understand the context in which the capital decision-making process operates.

4.2 Comparisons to industry standards

Jacobs SKM has reviewed JGN governance structure and processes by comparison of such against two industry sources. For the Review, Jacobs SKM uses the governance approach developed by the Association for Project Management ("APM"). APM is a UK based organisation which promotes the disciplines of project and program management and related to this has a group that focuses on governance. The key feature of Directing Change[2] which makes it a suitable basis for comparison is its emphasis on the governance of project management as distinct from project governance. Governance of project management deals with how project management capability of an organisation is governed overall whereas project governance is concerned with how a specific project is governed. This comparison is provided in section 7.1.

As an additional element of Review, Jacobs SKM has compared resulting project level governance with the approach detailed in Ross Garland's *Project Governance, A practical guide to effective project decision-making*. This book is principally concerned with the governance of specific projects and it provides application examples for projects of various complexities. This comparison is provided in section 7.2.

4.3 Comparison to AER requirements

Jacobs SKM has compared the reviewed JGN governance structure and processes against typical questions that are posed by the AER in assessing prudency, efficiency, and reasonableness. From this review, it is possible to determine the extent to which the adopted governance structure and process support a prudent, efficient, and reasonable identification, prioritisation and implementation of capital projects.

[1] JGN Project Governance Guidelines, March 2014, p7.
[2] Directing Change: A Guide to Governance of Project Management, APM Governance of Project Management Specific Interest Group

4.4 Material reviewed

Jacobs SKM has been provided access to a number of governance documents including the following:

- *Jemena Gas Networks (JGN), Project Governance Guidelines,* March 2014
  - Includes Jemena's Capital Project Gating Pipeline with template gate certificates and associated approval documentation
- *Delegations of Financial Authority,* 9 October 2012
- *Delegations of Financial Authority,* 21 February 2014
- *Jemena Gas Networks (JGN), Asset Management System,* March 2014
- *Major Capital Project Governance Committee Charter,* 1 November 2012
- *Jemena Gas Networks Asset Management Plan,* 1 July 2014 to 30 June 2020 (Draft)
- *Jemena Group Risk Management Manual,* April 2013
- *Jemena Risk Management Policy,* April 2013
- Example capital project documentation (see Appendix B for project list)

4.5 Client interviews

Jacobs SKM conducted a series of interviews with Jemena staff. Information gathered from these meetings was compared with the example project material to review for consistency.

Session	Date	JGN Attendees	
New Connections	17 March 2014	Danielle Bienart Frazer Hill Warwick Tudehope	
Asset Management	17 March 2014	Peter Harcus Phil Colvin Lisa Ruffatt	Veronica Wieckowski Mark Dragar
Works Delivery	24 March 2014	Craig Farrugia Mark Jones David Anthonisz	George Christodoulou Alex McPherson
Delegated Financial Authorities	26 March 2014	Russel Dawson Phil Colvin Ana Dijanosic	
Report Page Turn	10 April 2014	Phil Colvin, Warwick Tudehope Ana Dijanosic	Alex McPherson
Processes for CAPEX	9 May 2014	Phil Colvin, Warwick Tudehope Ana Dijanosic	

5. Governance principles and documentation

JGN has created a formal set of Project Governance Guidelines (the Guidelines) contained within a single document. The Guidelines are to apply to all capital infrastructure projects undertaken by JGN. The version used for this review is dated March 2014. The purpose of the Guidelines is stated as follows:

- Define the principles and requirements related to capital project governance, and
- Identify the key roles and the associated accountabilities of those roles to ensure the effective implementation of project governance.

The Guidelines are designed to apply to all project capital expenditure, irrespective of time or cost to implement, and hence provide the framework in which all project capital expenditure occurs. By necessity, therefore, they are deliberately flexible in their application to projects of various sizes and complexities as well as capital programs. Within this framework, the capital expenditure related to, for instance, a basic connection will have a particular level of program governance which will not include oversight by the Major Capital Project Governance Committee (“MCPGC”) whereas a large capital project may be overseen by that committee. In this way, each project, or element of a program, will be developed within an appropriate governance framework. However, both will operate within the wider governance framework provided by the Guidelines.

In this way, the Guidelines provide the principles and requirements for the governance of project and program management. Figure 1 provides a Venn diagram illustration of the Guidelines in the governance hierarchy. The Guidelines provide for the flexibility to apply the appropriate level of governance for each capital project or program.

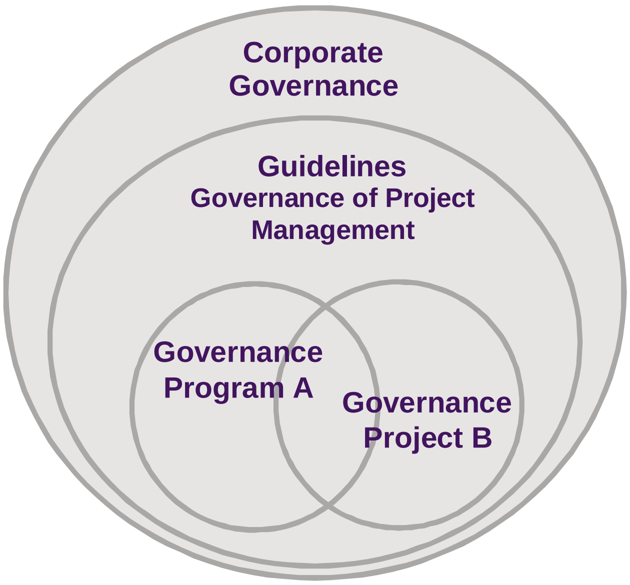


Figure 1 - Guidelines in Governance Hierarchy

5.1 Governance of project management

The concept of governance in general as opposed to corporate or project governance is a reflection of activities that are most easily identified with governments. This provides a useful starting point in that governance is something that occurs at a high level, whether in relation to countries, corporations, or projects. Mark Bevir, professor of political science at the University of California defines governance as:

> "all processes of governing, whether undertaken by a government, market or network, whether over a family, tribe, formal or informal organisation or territory and whether through laws, norms, power or language."[3]

Emphasis on corporate governance practices has become more prevalent during the past 15 years in part as a response to the Asian Financial Crisis of the late 1990's and the more recent Global Financial Crisis. Principles for corporate governance centre on transparency, recognition and inclusive treatment of a greater number of stakeholders, protection of shareholder rights, and ethical behaviour, particularly at the board level, but also in areas of the corporation, such as procurement, which can be subject to compromise.

Corporations have also become more likely to adopt formal project management methodologies. PRINCE2[4] and the Project Management Institute project management systems provide fully developed approaches to project management and PRINCE2 does provide guidance on project governance. Projects, however, have historically tended to operate without a clear governance framework.

In the past two to three years, and in keeping with industry trends and good practice, JGN has made continuous improvements in governance structures and processes related to capital expenditure, a process which is on-going as JGN continues to drive improvements in the efficiency and prudency of the delivery of capital projects, in keeping with good industry practice in the sector in which JGN operates. This includes more detailed governance documentation, implementation of higher level governance for major capital projects, and improved line of sight between corporate level policy and capital projects. Recognition of the benefits of these improvements was a common view expressed during client interviews. A central element of this work is the Jemena Gas Networks Project Governance Guidelines, March 2014, ("the Guidelines").

The Guidelines are applied broadly;

> "All capital infrastructure projects delivered by Jemena are required to have a level of project governance commensurate with their strategic importance, risk and complexity"[5].

In this instance, the term "projects" is used generally and includes "capital projects [that] exist as part of a program or portfolio"[6]. In this case, 'program' means a program of projects eg a meter replacement program taking place over several years. The Guidelines represent a formalised process of governance for projects that fit the PMBOK[7] 'project' definition of "a temporary endeavour undertaken to create a unique product, service or result". It is not, however, to apply to basic and standard connections which are managed on a program of activities basis.

[3] Bevir, Mark. *Governance: A very short introduction*, p

[4] Projects in Controlled Environments, version 2 is a project management methodology developed by the UK government agency Office of Government Commerce and is used extensively within the UK Government and government agencies such as the Ministry of Defence, Defence Estates, as the de facto project management standard for public projects. The methodology encompasses the management, control and organisation of a project. PRINCE2 is also used to refer to the training and accreditation of authorised practitioners of the methodology who must undertake accredited qualifications to obtain certification.

[5] JGN Project Governance Guidelines, March 2014, p6.

[6] JGN Project Governance Guidelines, March 2014, p6.

[7] Project Management Institute's *Project Management Book of Knowledge* (PMBOK)

5.2 JGN governance principles and processes

The following project governance principles are established in the Guidelines:

- Scalable and adaptable – to ensure the right amount of governance, depending on the risks, complexity and strategic importance and be able to accommodate changes in those factors as a project progresses
- Staged – to allow focus on the right things at the right time and ensure incremental investment, management of risk and project management rigor.
- Inclusive – to support project and program success as well as contribute to organisational success
- Aligned – to ensure consistency with corporate policy and authorities as well as Jemena's legal, regulatory, and commercial obligations
- Continuous improvement – to encourage frank internal disclosure of project information and allow continuous improvement of project management and project governance.

5.2.1 Scalable and adaptable

There is recognition within the Guidelines that JGN manages a range of capital projects and programs from a few thousand to over $100M and that there is a full range of sizes in between. Governance structures provided are therefore flexible in application to allow for the proper level of Governance to suit the project risks associated with the different complexities of projects and project values.

Methods for classifying capital works by, particularly, cost and complexity, were discussed in interviews with Network Development, Asset Management, and Works Delivery. Low cost works, such as a basic connection to a new home, are managed as non-project based activities under programs which have their own works methodology. It is understood that these programs are not governed under the Guidelines. This is distinct from a program of related projects. The term 'program' used in the Guidelines refers to programs of related projects rather than programs of non-project activities.

The intent of the Guidelines to apply to both projects and programs appears as follows;

> "The role of project governance is to provide a structured and transparent decision –making framework that is logical, robust, and repeatable to govern JGN's projects and to ensure continuous improvement for future project and programs."[8]

Adaptability is also seen in the Guidelines. Project Sponsors are provided with the authority to choose different levels of governance depending on the requirements of a project. They are further provided with the ability to change these levels of governance to adapt, to changes in a project's requirements over its life to account for changes in risk profile, or other characteristics.

Conclusion

This is a useful principle, particularly given the large number and broad range of projects that are managed by JGN. Adherence to this principle can be seen most clearly in sections 5 and 6.2 of this Review.

5.2.2 Staged

JGN has adopted a Project Pipeline which has seven stages over a project life-cycle. A gate review is conducted at the completion of each stage. The Guidelines provide for confirmation by the Sponsor, or, if

[8] JGN Project Governance Guidelines, March 2014, p5.

applicable, the Steering Committee that the need the project is addressing is still relevant and is supported by a justifiable opportunity brief or business case[9].

Adjustments to the governance of the project by the Sponsor are encouraged where required by the complexities and risks that characterise future project stages. The review gates also provide opportunity for the review of project cost performance against budget as well as expected future costs. In cases where updated budgets exceed the original project budget, the project must be reapproved based on the appropriate delegation of financial authority for the total project costs. Details of the Project Pipeline are provided in section 6.3.

Conclusion

A staged approach to project management and governance is a common feature of project delivery mechanisms. The Project Pipeline adopted by JGN is well aligned with good industry practice. Further, the linkage of JGN governance processes to each post-FEED stage gate in the Project Pipeline provides for robust project delivery governance.

5.2.3 Inclusive

There is only minor discussion of inclusiveness in the Guidelines and the term is somewhat vague. This could be either internally focused (ensuring the appropriate JGN staff representation), externally focused (ensuring that the right stakeholders are engaged in the appropriate way) or both.

Recommendation

JGN should reconsider either the appropriateness of this principle or the clarity of its definition.

5.2.4 Aligned

The Guidelines focuses on project governance. There is a stated requirement there to operate in conjunction with and subordinate to various corporate policies. The alignment to these occurs primarily in the Asset Management System and it is this system which supports the origination and development of projects through to the approved business case.

The relationship between the Guidelines and corporate governance is provided as follows:

> "Jemena's project governance and project management framework is aligned to the organisation's broader governance framework including:
>
> - Funding and finance approval limits (eg SGSPAA Delegation of Authority);
> - Corporate policies and procedures;
> - Corporate strategy, strategic direction and objectives; and
> - Legislative, regulatory and licence obligations."[10]

Conclusion

The alignment with corporate policies and authorities, including legal, regulatory, and commercial obligations is fundamental to appropriate project governance. This alignment is most clearly demonstrated in JGN's asset management system and the Guidelines.

[9] A business case is not prepared until gate 3.
[10] JGN Project Governance Guidelines, March 2014, p6.

5.2.5 Continuous improvement

Continuous improvement was discussed during interviews with both Asset Management and Works Delivery as a focus area of work. The Guidelines require a project Completion Report and Completion Certificate at gate 7 of the Project Pipeline. The report provides information on how effectively the project was managed and governed, overall project performance, and any lessons learned during the project life. Where appropriate, recommendations are made which can be applied to similar projects in the future.

Further, there is a requirement on various governance bodies, such as the MCPGC, to maintain and, where appropriate, improve on defined governance processes such as the MCPGC charter.

Conclusion

Continuous improvement is an industry best practice goal for project governance and is observed throughout JGN activities and documentation related to capital expenditure, including through the activities of various governance bodies such as the MCPGC.

5.3 Documentation

Some key documents listed in section 4.3 are recent drafts and are reflective of JGN's goal of improving its project governance and asset management processes. It is expected that there will be inconsistencies in some areas between the new and existing documents. It is also expected that there will be some internal inconsistencies in early versions or lack of clarity on particular issues. These shortcomings have been seen in the documents and it is known from client interviews that this is also recognised by JGN and will be addressed as the documents evolve.

One of the more difficult issues to resolve is clarity of terminology. Elimination of the colloquial use of terms such as 'project' and 'program' is difficult given that there are different views on the formal meaning and the terms are used in every day speech. In this case, as in the document issues above, there was widespread recognition during client interviews that these terms are not always used in a formal sense. Other examples are 'approved' versus 'reviewed'. However, Jacobs SKM recognises that this is not untypical during development and improvement stages of an organisation's project governance processes.

5.4 Governance recommendations

The following sets out Jacobs SKM's recommendations following its review of JGN's Project Governance Processes. This list has been developed from Jacobs SKM's review of Governance documentation.

- Consideration of portfolio level governance at the Board level
- Greater consistency is required in the documentation, for example between the Guidelines and Major Capital Project Governance Committee Charter
- Greater consistency is required in terminology across documents and in the workplace

6. Governance structures and processes

6.1 Governance of Major Capital Projects

6.1.1 Major Capital Projects

JGN's recently adopted project governance principles allow for the level of governance applied to be "scalable and adaptable" depending on the risks, complexity and strategic importance of a project. As an improvement to the governance of large projects, JGN has applied this principle through the creation of the MCPGC (in 2012). The MCPGC provides high level oversight of the performance of Major Capital Projects.

JGN defines Major Capital Projects as:

- Complex project that are discrete, one-off and/or substantially different from any other activity recently undertaken by Jemena
- Related to construction/commissioning, enhancement or replacement of assets and property
- Not Information Technology (IT) projects: and
- Either of
  - A business case/DFA value greater than $1M, or
  - Material importance to Jemena (as determined by there being a risk related to the project assessed as High or Extreme) regardless of business case /DFA value.

This definition allows for flexibility in determining Major Projects by considering the characteristics of a projects as well as its dollar value.

During client interviews it was stated that there are 15 to 20 projects that are currently being managed under the MCPGC.

6.1.2 Major Capital Project Governance Committee

The MCPGC is made up of the following senior Jemena staff:

- EGM Networks and Pipelines (Chair)
- GM Electricity Networks
- GM Gas Asset Management
- GM Business Finance Partner
- EGM Works Delivery
- GM Electricity Operations
- GM Gas & Water Operations

For Major Capital Projects which are routine and have a relatively low risk of failure, MCPGC will decide to place the project with a Capital Program Management Committee (CPMC) which oversees a program of similar projects. There are several CPMCs, and each operates under a charter approved by the MCPGC.

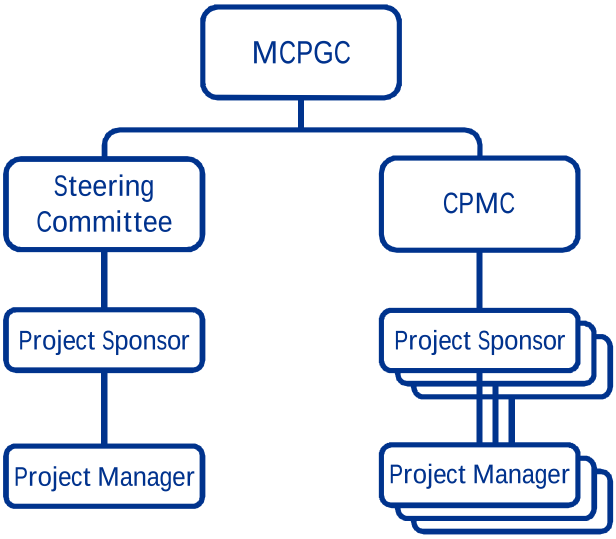
For less routine, higher risk Major Capital Projects, the MCPGC will appoint a steering committee and project sponsor to provide an individual governance structure. The steering committee will be required to produce a project charter for approval by the MCPGC.

Meetings of the MCPGC occur approximately every 6 weeks. Each steering committee and CPMC must report project status to the MCPGC. Each report is required to follow a standard format which uses traffic light assessments along with a suitable level of supporting information for time, cost, and risk.

The MCPGC reports to the Jemena Leadership Team on the MCPGC activities and MCPGC related performance of its Major Capital Projects. The Jemena Leadership Team is made up of all direct reports to the Jemena Managing Director. This provides a senior management forum for the monitoring and performance of JGN's capital project delivery.

The governance structure that applies for Major Capital Projects is shown in Figure 2.

Figure 2 - Major Capital Project Governance Structure



The improvement in the Major Capital Project governance structure created by the MCPGC over that which was previously in place is significant. For Major Capital Projects, it allows for:

- Greater standardisation in policies and practices to be applied
- Higher level oversight for the allocation of resources including the selection of project sponsors and steering committee members
- Appropriate level of monitoring of schedule, budget, scope, and quality criteria
- The centralised communication of project delivery effectiveness to the senior Leadership Team
- Standardise analysis to identify weaknesses or negative trends in delivery

However, the following is not clear from the documents reviewed, particularly the *Major Capital Project Governance Committee Charter*:

- The stage prior to the business case approval at which a project begins to be governed under the MCPGC.

6.2 Governance of non-Major Capital Projects

Projects which are not Major Capital Projects use a similar project governance structure as Major Capital Projects although they do not have the oversight of the MCPGC. A project sponsor, typically a GM or higher in the organisation, is nominated in the project business case and is accountable for the project outcomes detailed in the business case. Acceptance of this responsibility is through the sponsor's endorsement of the business case.

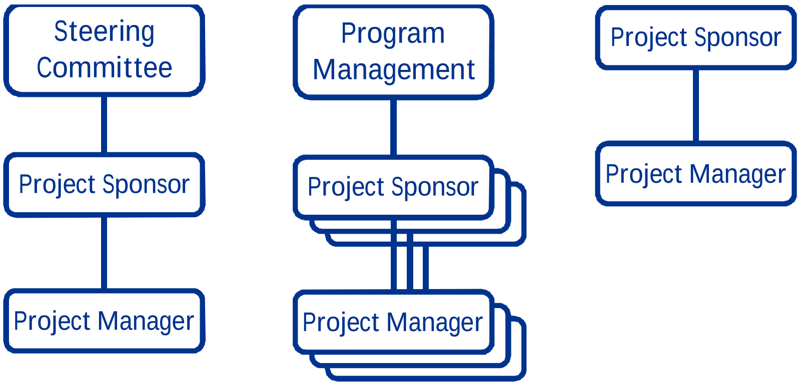
The sponsor is accountable for determining, implementing and managing the appropriate management, oversight, and governance arrangement for the project. There are three governance structures from which the sponsor may choose, (i) form, and chair, a steering committee, (ii) embed the project into the governance arrangement for related projects through the program management arrangements, or (iii) govern the project directly.

In each case, the project sponsor is responsible for the selection of a project manager with experience and skills consistent with the requirements of the project.

If a steering committee is formed, its membership will be determined by the sponsor and is limited to four individuals plus the sponsor and project manager. Members are selected to provide a broad base of experience and skills relevant for the project. Whatever the steering committee makeup, the sponsor remains the single point of accountability.

The governance structures which apply to non-Major Capital Projects are shown in Figure 3.

Figure 3 - Non-Major Capital Project Governance Structures



6.2.1 Governance structure

The non-Major Capital Project governance structure provides flexibility in delivering the level of governance appropriate for a project's characteristics. However, the following points are not clear from the documents reviewed, particularly the *JGN Project Governance Guidelines*:

- The responsibility for selecting a project sponsor
- The specifics of the program management arrangements
- The governance applied prior to nomination of the sponsor as part of the business case
- The accountability and reporting requirements of the project sponsor

6.3 Stage-gate approach

The key project processes are included in the 7-gate Project Pipeline shown in Figure 4. The Project Pipeline, which applies to both Major Capital Projects and non-Major Capital Projects, divides project delivery into distinct stages separated by management decision gates.

The structure of each stage is similar and provides for:

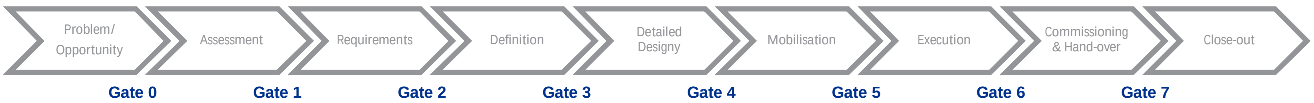
- Standardised activities to be undertaken that reduce project uncertainties and risk
- Mandatory reviews of the stage outputs
- Creation of stage deliverables as the formal demonstration of completed activities and reviews

At the end of each stage is a gate decision point which allows for assessment of the project against the project objectives. The gates provide the opportunity for appropriate governance decisions to be made due to changes in project risks, requirements, or needs. Common measures for reviewed at each gate include quality, scope, schedule, budget, and risk. The JGN governance process also allows for decisions to be made at any time during a stage. Each gate requires:

- Deliverables, as a subset of stage deliverables, that are used in the gate review and includes an action plan and list of deliverables for the next stage
- Reviews of the stage deliverables from a project management and project governance perspective. Review is provided by the sponsor and steering committee
- Decision of go, kill, hold, or recycle as decided by the project sponsor

The project business case is developed during the Definition stage and is approved at gate 3. It is at this point that the governance for non-Major Capital Projects begins in accordance with Section 6.2. It is not clear to Jacobs SKM from the documentation reviewed or from discussions with JGN staff if governance under the MCPGC begins for Major Capital Projects prior to approval at gate 3.

Figure 4 - Project pipeline



7. Comparison to Industry Standards

7.1 Association of Project Management

7.1.1 APM introduction

The Association of Project Management (APM) is a UK based organisation founded in 1972 that has over 20,000 members and 500 corporate members. Its purpose is the development and promotion of project and program management. APM claims to be the largest professional body of its kind in Europe.

The APM governance special interest group has produced a governance guide call *Directing Change: A Guide to Governance of Project Management* which focuses on four main components of the governance of project management[11]:

- Portfolio direction
- Project Sponsorship
- Project management effectiveness and efficiency
- Disclosure and reporting

A key difference in the APM approach and that followed by most organisations, including JGN, is that the overall responsibility of project governance is placed with the company Board which views projects at the portfolio level. The purpose is to have all projects as a whole evaluated against an organisation's objectives and constraints and for the board to be responsible for ensuring this. The Board has the responsibility for developing the project portfolio direction and for the project sponsors. This Board level responsibility parallels the Board's overall responsibility for corporate governance.

[11] In the APM guide, the term 'project management' is inclusive of the management of programs of projects.

7.1.2 APM principles and comparison

Table 2 provides a comparison of JGN project governance with APM governance of project management principles.

Table 2 - Comparison with APM governance principles for project management

APM Principles	JGN Guidelines	Comments and Recommendations
The board has overall responsibility for governance of project management.	Ownership of the Guidelines is held by the Executive General Manager, Asset Management. The MCPGC has overall responsibility for major projects and has oversight of the Guidelines and is responsible for the review and update of the Guidelines. Reporting on project governance is provided to the Leadership Team.	The Jemena Board does not directly carry overall responsibility for the governance of project management. This role has been delegated through the leadership team to the Major Capital Project governance Committee. The Chair of the MCPGC reports through to the Leadership Team which in turn is responsible to the Jemena Board. **It is recommended that JGN consider board level oversight of project governance on a portfolio basis.**
The organisation differentiates between the projects and non-project based activities	While the Guidelines are not explicit, there is a process for determining which activities are to be run as standalone projects and which are to be run as programs of non-project activities (general works). Non-project activities include the most common JGN activities such as basic and standard connections.	During client interviews, there was a clear understanding of whether network activities are considered project or are managed as general works. The details about how projects are differentiated from non-projects given that the material reviewed was project related. **It is recommended that details on the determination of projects versus non-projects should be included within the Guidelines.**

APM Principles	JGN Guidelines	Comments and Recommendations
The roles, responsibilities and performance criteria for the governance of project management are clearly defined.	The Guidelines provides key role descriptions and responsibilities related to project governance. This is expanded for Major Capital Projects in the MCPGC Charter.	The way in which project sponsors are selected for non-Major Capital Projects is not clear in the Guidelines. Performance criteria for governance are not clear although a review of the governance is suggested as part of a project completion report. **It is recommended that performance criteria be added to the Guidelines and MCPGC Charter**
Disciplined governance arrangements, supported by appropriate methods and controls, and are applied throughout the project lifecycle.	The Guidelines are to apply “in a continuum from concept inception, in conjunction with the project management methodology.” The 7-step stage-Gate approach provides appropriate methods and controls for sponsor and/steering committee governance including the review and adjustment, if necessary, of project governance requirements. The naming of the project sponsor for non-Major Capital Projects, however, occurs at gate 3.	Methods are in place for initiating projects with an appropriate governance structure in place. For instance, activities can only be recognised as projects once a project sponsor has been assigned. There are set governance activities that must occur at each gate in the Project Pipeline to be carried out by either the sponsor or the project steering committee. Methods are also in place at project closeout to review the project performance and to provide a review for lessons learned. **It is recommended that the project sponsor be named at Gate 1 of the Project Pipeline.**
Every project has a sponsor	Yes. Although for non-Major Capital Projects the naming of a sponsor occurs at gate 3.	There is no described process for selecting a sponsor for non-major capital projects. It is recommended that • the project sponsor be named at Gate 1 of the Project Pipeline • the responsibility for naming the sponsor should be included in the Guidelines

APM Principles	JGN Guidelines	Comments and Recommendations
There is a demonstrably coherent relationship between the overall business strategy and the project portfolio	The Guidelines does not provided for this link although it is captured in the Asset Management System. This document provides for the origination and early project development and is therefore the appropriate place for this linkage.	Consistent, although: **It is recommended that the project governance structure be put in place for stage 1 of the Project Pipeline**.
All projects have an approved plan containing authorization points at which the Business Case is reviewed and approved. Decisions made at authorization points are recorded and communicated.	The 7-step stage-Gate approach adopted by Jemena provides clear requirements for moving projects from one activity to the next. Each gate provides a decision point allowing the project to move from one activity to the next. Passing through each gate requires the production of gate deliverables, a management review of the deliverables which includes assessment of quality, rationale, and action plan, and a decision on the project. Decisions can be either go, kill, hold, or recycle.	Fully consistent
Members of delegated authorization bodies have sufficient representation, competence, authority and resources to enable them to make appropriate decisions.	It is appropriately the responsibility of the sponsor, or in the case of Major Capital Projects, the MCPGC to ensure sufficient representation of delegated authorisation bodies in steering committees. Such bodies are also kept informed through their inclusion in stage activity signoffs	Fully consistent
The project business case is supported by relevant and realistic information that provides a reliable basis for making authorization decisions.	The business case requirements include all elements of project review to demonstrate efficiency and prudency in proposed business cases. Project description and purpose is documented, options are reviewed, financial estimates are provided to suitable accuracy, risk assessment is summarised, and project schedule is provided.	Fully consistent
The board or its delegated agents decide when independent scrutiny of projects and project management systems is required, and implement such analysis accordingly.	This role is provided by the sponsor and steering committee except in the case of major projects in which case this may be provided by the MCPGC.	The MCPGC is not directly a delegated agent of the Board. It does, however, have reporting requirements to the Leadership Team and can therefore be considered a delegated agent of the senior executive team. **It is recommended that JGN consider a more direct project governance role for the Board.**

APM Principles	JGN Guidelines	Comments and Recommendations
There are clearly defined criteria for reporting the project status and for the escalation of risks and issues to the levels required by the organization.	The project manager is responsible for monitoring risk and notifying the sponsor of any changes to risk profile. The sponsor and steering committee/MCPGC are responsible for proactively monitoring risks that are identified as “Significant” or higher and to take appropriate actions to manage these. The Jemena Risk Management Policy and Group Risk Management Manual are followed as part of the requirements in the Guidelines.	Fully consistent
The organization fosters a culture of improvement and of frank internal disclosure of project information.	The work of continuous improvement was a theme repeated several times during client interviews. A closeout report is produced for each project which includes a section on “Lessons Learnt and Recommendations”. An example closeout report is included as an appendix to the Guidelines. This example provides a thorough review of a $1.3M project and provides recommendations for improvement in future projects.	Fully consistent
Project stakeholders are engaged at a level that is commensurate with their importance to the organization and in a manner that fosters trust.	Allowance is made for a Stakeholder Management plan to be developed during project initiation and endorse by the project sponsor and, if applicable, the steering committee. While many organisations include stakeholders in project steering committees, JGN prefers to manage stakeholder issues outside of steering committees. However, client commitment to stakeholder engagement was clear during client interviews	Fully consistent
Projects are closed when they are no longer justified as part of the organisation’s portfolio.	Projects have a clear close out process and at each gate the sponsor confirms that the need the project is addressing is still relevant and that there is continued business justification.	Fully consistent

7.1.3 APM comparison summary

The primary difference between the APM and JGN approaches is the lack of governance at the portfolio level in the Guidelines and the involvement of the Board in governance of project management. JGN governance provides for a similar approach to major capital projects through the MCPGC although it is not clear that the MCPGC reviews all major projects at a portfolio level.

The three key recommendations are:

- Provision of a board level governance role for the JGN project portfolio
- Application of a project governance structure earlier in the Project Pipeline
- Modifications to Guidelines and MCPGC Charter to create greater consistency between the two documents (for example in the use of terminology and definitions) and to provide for changes to board level governance or the timing of the application of project governance structure

7.2 *Project Governance* by Ross Garland

7.2.1 Introduction to *Project Governance*

The book, *Project Governance: A Practical Guide to Effective Project Decision-making,* by Ross Garland, identifies 4 principles of effective project governance. These are:

- Ensure a single point of accountability for the success of the project. This ensures clarity of leadership, plus clarity and timeliness of decision-making.
- Service delivery ownership determines project ownership. This places the business at the heart of project delivery and ensures the project governance framework maintains a service delivery focus.
- Ensure separation of stakeholder management and project decision-making activities. This will prevent decision-making forums from becoming clogged with stakeholders, which would result in laboured on ineffective decision-making.
- Ensure separation of project governance and organisational governance structures. This will reduce the number of project decision layers, since the project decision path will not follow the organisational line of command. Confusing them results in organisational role accountabilities sitting uneasily alongside project governance accountability needs.

These principles are to apply to the governance of a particular project as opposed to the APM principles which apply to the governance of project management for all projects in the organisation. Section 7 compared the governance described in the Guidelines with the APM principles as a measure of governance of project management provided. In this section, *Project Governance* principles are compared with the level of project governance that should result from application of the Guidelines.

7.2.2 Comparison to *Project Governance* principles

***Project Governance* Principles**	**JGN Guidelines**	**Comments and Recommendations**
Ensure a single point of accountability for the success of the project.	The project sponsor is accountable for project outcomes.	Consistent although it is recommended that the project sponsor be named during stage 1 of the Project Pipeline
Service delivery ownership determines project ownership.	Project ownership begins with Asset Management (as part of Networks and Pipelines) and, at gate 3, transfers to Works Delivery. This is described in *Major Capital Project Governance Committee Charter* and confirmed through interviews.	While the governance approach provided in the Guidelines is not consistent with the *Project Governance* principles, it is considered to be suited to the JGN business. Works Delivery is an in-house project delivery specialist and Asset Management is well placed to provide project origination and early development.
Ensure separation of stakeholder management and project decision-making activities.	While recognising the importance of stakeholder management and providing for a formal Stakeholder Management Plan where required, the Guidelines is clear on the need to avoid "an array of stakeholders or interested parties in the Steering Committee", as this is where project decisions are made.	Fully consistent
Ensure separation of project governance and organisational governance structures.	This principle addresses the need to have project decision-making self-contained within the project management and project governance structures without reliance on the organisational structure or decision-making policies. The Guidelines provides clearly for this separation in all project work.	Fully consistent

7.2.3 *Project Governance* comparison summary

The Guidelines provide for project level governance that complies with the four project governance principles in *Project Governance* except in the case of project ownership. The need to establish the project governance structure earlier in the Project Pipeline is evident in this comparison as it was with the APM comparison.

8. AER assessment

Governance structures and processes should generally be aimed at supporting business objectives of prudent, cost efficient and reasonable investments. The Australian Energy Regulator (AER) has indicated that it will be assessing investment proposals against these objectives and it is therefore expected that the AER will examine whether JGN's governance structure and processes support the business in achieving these objectives.

For clarity the objectives can be defined as follows:

Prudency

- That the need for capital and operating expenditures is thoroughly investigated, clearly defined, justified and documented, and that evidence of the need for the project, including all reference material that demonstrates the need are well documented and available.

Cost Efficiency

- That all feasible investment options have been identified and analysed and that the least cost option has been selected. To this extend an appraisal process should be in place to allow for consistency and transparency in approach.

Reasonableness

- That the project cost is in keeping with market conditions, accurate (to the level of engineering completed), capable of verification, and variations to previous plans is explained. The costing of individual projects and programs are transparent, capable of verification and replication, and internally consistent with the business costing method.

Typical questions the Regulator may consider in assessing JGN's governance regime as it relates to projects and programs are provided below. These questions have been developed while working on a number of recent assignments in support of Electricity and Water Utility submissions.

8.1 Prudency

Is there a sound planning and forecasting process for deriving total capital and operating expenditure forecasts based on realistic growth and demand assumptions:

- Is there a clearly defined planning process and criteria (investment triggers) for system and non-system investments
- Does the planning process provide for a clear documentation and justification of the need of proposed investments, including all reference material that demonstrates the need
- Is there a clear governance link to the costing process providing for appropriate reviews, approvals and authorisations
- Is there evidence and can it be demonstrated that these planning and governance processes are being implemented.
- Are key outcomes from previous investments identified and assessed against the original objectives

8.2 Cost Efficiency

Is there a sound investment appraisal process that is based on cost-benefit analysis and does not require a level of analysis that is disproportionate to the scale and likely impact of each of the credible options? Is the process able to be applied in a predictable, transparent and consistent manner?

- Has the investment appraisal process and method been explained and documented

- Does the appraisal process require identification and assessment of reasonable investment scenarios
- Does the appraisal process provide guidance on the number and type of scenarios to be considered
- Does the appraisal process provide a cost-benefit analysis method(s) to be applied
- Does the appraisal process require the selection of the least cost credible option that maximises net present value
- Does the appraisal process require clear documentation providing evidence that all feasible options that have been identified and analysed and that the least cost option has been selected
- Is there a clear governance link to the planning process providing for appropriate reviews, approvals and authorisations
- Is there evidence and can it be demonstrated that the investment appraisal process and method is being implemented.
- Are benefits from previous investments determined and quantified (where possible)

8.3 Reasonableness

Is the costing method sound and has it been based on a logical, consistent and estimating system.

- Is the costing of projects and programs transparent, capable of verification and replication, and internally consistent with costing method
- Is there a clear governance link to the planning and costing process providing for appropriate reviews, approvals and authorisations
- Is there evidence and can it be demonstrated that the cost method is being implemented.

8.4 Governance support for AER assessment

The following table provides the Jacobs SKM's view on whether JGN's governance structure and processes provides support for the AER assessment of prudency, efficiency, and reasonableness as set out above.

Table 3 - Governance Support of AER Assessment

Area	Requirement	Supported
Prudency	Clearly defined planning process and criteria (investment triggers) for system and non-system investments	Yes. Provided through the Project Pipeline and Asset Management System
	Planning process provides for a clear documentation and justification of the need of proposed investments, including all reference material that demonstrates the need	Yes. Provided as part of the Asset Management System
	Clear governance link to the costing process providing for appropriate reviews, approvals and authorisations	Yes. Requirement for this is provided in the Guidelines and Project Pipeline
	Evidence and ability to demonstrate that planning and governance processes are being implemented.	Yes. There are ongoing reporting requirement for project sponsors for both Major Capital Projects and non-Major Capital Projects
	Key outcomes from previous investments identified and assessed against the original objectives	Yes. Requirements for this is included in the Guidelines and discussed in sections 6 and 7
Cost Efficiency	Investment appraisal process and method are explained and documented	Yes. The Project Pipeline and Asset Management Systems provide sufficient documentation to demonstrate this
	Appraisal process requires identification and assessment of reasonable investment scenarios	Yes. A requirement of the business case which specified in detail in the Gridlines
	Appraisal process provides guidance on the number and type of scenarios to be considered	Yes. This is specified in the business case requirements
	Appraisal process provides a cost-benefit analysis method(s) to be applied	Yes. This is specified in the business case requirements
	Appraisal process requires the selection of the least cost credible option that maximises net present value	Yes. A requirement of the business case which specified in detail in the Gridlines
	Appraisal process requires clear documentation providing evidence that all feasible options that have been identified and analysed and that the least cost option has been selected	Yes. A requirement of the business case which specified in detail in the Gridlines

Area	Requirement	Supported
	Clear governance link to the planning process providing for appropriate reviews, approvals and authorisations	Yes. Provided in the Project Pipeline and Asset Management System
	Evidence and ability to demonstrate that the investment appraisal process and method is being implemented	Yes
	Benefits from previous investments determined and quantified (where possible)	Yes
Reasonableness	Is the costing of projects and programs transparent, capable of verification and replication, and internally consistent with costing method	Yes. Sufficient documentation is required through the Project Pipeline to demonstrate this
	Is there a clear governance link to the planning and costing process providing for appropriate reviews, approvals and authorisations	Yes. Provided through the Project Pipeline, Guidelines, and Asset Management System
	Can it be demonstrated that the cost method is being implemented	Yes. Sufficient documentation is required through the Project Pipeline to demonstrate this

8.5 AER assessment summary

Based on Jacobs SKM experience with recent AER reviews, JGN's capital projects governance regime as it is applied today provides a level of oversight consistent with the requirements of rules 74 and 79. Processes in place, particularly those related to the Project Pipeline gate approvals and the MCPGC reporting will allow for a straightforward demonstration of the suitability of JGN's governance practices.

However, it is worth noting that it is possible to meet the rule requirements and yet still not have opportunities for improvement to achieve good industry practice with respect to project governance. For example it is not a function of the rules to set out, in precise terms, what constitutes good capital project governance practice.

Appendix A. **Terms of Reference**

Expert Terms of Reference

Jemena Gas Networks (NSW) Ltd
2015-20 Access Arrangement Review

Review of Jemena Gas Networks' governance structures and processes for capital expenditure

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Contents

1 Background

Jemena Gas Networks (NSW) Ltd (**JGN**) is the principal gas distribution service provider in New South Wales. JGN owns more than 25,000 kilometres of natural gas distribution system, delivering approximately 100 petajoules of natural gas per annum to over one million homes, businesses and large industrial consumers across NSW.

JGN is currently preparing its revised Access Arrangement (**AA**) proposal with supporting information for the consideration of the Australian Energy Regulator (**AER**). The revised AA will cover the period 1 July 2015 to 30 June 2020 (July to June financial years). JGN must submit its revised AA proposal to the AER by 30 June 2014.

When considering JGN's revised AA proposal, the AER must have regard to the National Gas Objective, which is:

> "to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas."

The AER may also take into account the pricing principles in section 24(2) of the National Gas Law, and must do so when considering whether to approve a reference tariff:

> A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in—
>
> a) providing reference services; and
>
> b) complying with a regulatory obligation or requirement or making a regulatory payment.

Rule 72 of the National Gas Rules provides that, amongst other things, the supporting information to be submitted with a full AA proposal (**AA Information**) must include forecasts of both conforming capital and operating expenditure over the AA period, and the basis for these forecasts.

Some of the key rules that JGN must comply with in submitting its revised AA proposal are set out below.

Rule 74 of the National Gas Rules:

(1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.

(2) A forecast or estimate:

(a) must be arrived at on a reasonable basis; and

(b) must represent the best forecast or estimate possible in the circumstances.

Rule 79 of the National Gas Rules:

(1) Conforming capital expenditure is capital expenditure that conforms with the following criteria:

(a) the capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services;

(b) the capital expenditure must be justifiable on the ground stated in subrule (2).

(2) Capital expenditure is justifiable if:

(a) the overall economic value of the expenditure is positive; or

(b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or

(c) the capital expenditure is necessary:

(i) to maintain and improve the safety of services; or

(ii) to maintain the integrity of services; or

(iii) to comply with a regulatory obligation or requirement; or

(iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or

(d) the capital expenditure is an aggregate amount divisible into 2 parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).

Accordingly, JGN seeks the independent opinion of Sinclair Knight Merz Pty Limited as a suitably qualified expert (**Expert**), as to whether or not JGN's governance structures and processes for capital expenditure are consistent with delivering capital expenditure that complies with the requirements of the National Gas Law and Rules, including as highlighted above.

2 Scope of work

The Expert will:

a) review and provide an opinion on the adequacy and suitability of JGN's governance structures and processes for capital expenditure, including for identifying and managing mid-project changes, as a means of ensuring and demonstrating the prudency and efficiency of capital expenditure that will be subject to assessment by the AER in accordance with rules 74 and 79 referred to in section 1 above, and

b) recommend changes or improvements to the structure and processes that, in the Expert's opinion, would enhance their suitability for that purpose.

3 Information provided by JGN

The Expert is encouraged to draw upon information which JGN will make available including:

- The Jemena Delegations of Financial Authority Manual
- Jemena's Capital Project Gating Pipeline, gate certificates and other associated documentation
- Major Capital Projects Governance Committee charter
- Jemena Project Management System documentation.

4 Other information to be considered

The Expert is also expected to:

- consider recognised standards/frameworks and such other information that, in Expert's opinion, should be taken into account to address the scope of work; and
- consider and document the approach that the AER has taken to the assessment of actual capital expenditure in recent gas decisions and in particular the criticisms (if any) it has made of the capital expenditure governance practices that the relevant Service Providers have relied upon to demonstrate the prudency and efficiency of their expenditure.

5 Deliverables

At the completion of its review the Expert will provide an independent expert report which:

- is of a professional standard capable of being submitted to the AER;
- includes an executive summary which highlights key aspects of the Expert's work and conclusions;
- lists the facts, matters and assumptions on which the Expert's opinions are based and the source of those facts, matters and assumptions, and lists all reference material and information on which the Expert has relied;
- summarises JGN's instructions and attaches these term of reference; and
- identifies and summarises the experience and qualifications of, and includes a curriculum vitae for, each person who was involved in preparing the report or in carrying out any research or test for the purposes of the report.

The Expert's report will include the findings for each of the two parts of the scope of work defined in Section 2.

The Expert is required to present its draft findings and report to JGN for discussion prior to finalising them.

6 Timetable

The Expert will deliver its required output to JGN as follows:

- draft findings and recommendations and draft written report, by 15 January 2014; and
- final written report by 24 January 2014.

7 Terms of engagement

The terms on which the Expert will be engaged to provide the requested advice shall be in accordance with the Consultancy Agreement between Jemena Limited and the Expert dated 5 September 2013.

Appendix B. **Project Review List**

Table 8.4 : Project Review List

Project Type	Project ID	Project Name	Project Description	Value AUD (2013)
Table 1. Market Expansion				
Mains CAPEX	3	Mains – New Estate	Routine mains for new homes	127,394
Services CAPEX	17	Connection – Infill - Residential	Routine connections for E-G	216,693
Meters CAPEX	36	Meters – Home units/villas	Routine meters for medium density	92,102
Market Expansion projects	43	Menangle Park	BAB-407-000005; N54511 SMEC Landcom Menangle Park Master	5,424
Table 2. Growth Capacity Development				
	169	Northern Primary Main Stage 1	Lay ~4.1km of 350mm ST (primary standard) to operate at secondary pressure from 250mm ST cnr of Twin Rd and Cressy Rd, North Ryde to 250mm ST near M2 at Macquarie Park. Requires crossing of underground railway near Macquarie Park Station and M2 case bore and Epping Rd crossing. Allow for future extension and upgrade to primary with Stage 5 (Pymble PRS).	17,923

Project Type	Project ID	Project Name	Project Description	Value AUD (2013)
Table 3. Mains and Services Renewal				
	1	Capital for Minor Services Renewal	Renewal of individual services that pose unacceptable risk or have reached their economic life.	11,033
Table 5. SIB Facilities and SCADA				
Minor Capitals	2	Line Valves	Minor capital works	1,998
Trunk Mains	20	L3 Integrity management program	3 digs in FY16 & FY17. After pigging planned for 2018, carry out 3 digs in FY21, 2 in FY22 and 1 dig onwards until next ILI in 2028. This is for L3,7 & 8a. Location on which pipeline to be determined.	3,721
Secondary Mains and Services	2	SDRS upgrade	Replacement of ~6-7 Cocons per yr.	37,395
Table 6. Meter Renewal & Upgrades				
	1,2	Planned replacement of aged I&C Diaphragm gas meters & <15 kPa meter sets/regulators		95,579
Table 7. Government Authority Works (GAW)				
	1	GAW relocation projects	Capitals for mains re-locations at JGN cost.	10,615
Table 8. Planning Costs				
	1	TPC - Steel		6,824
	2	TPC - Plastic		6,824
	3	TPC - Facilities		6,824

Project Type	Project ID	Project Name	Project Description	Value AUD (2013)
Table 9. Motor Vehicles				
	1	Motor Vehicles	Replacement	64,020
	2	New vehicles for trainees	Source: included in the approved FY14 Fleet Replacement BC	1,218
	3	GST Tech vehicles	Source: included in the approved FY14 Fleet Replacement BC	600
	4	Additional Fleet Vehicles	Source: approved JGN Additional Fleet Vehicles, signed by P.Harcus on 5/9/13	617
Table 10. Leasehold Improvements, Buildings & Land				
	1	New Depot Replacing SOP - Land acquisition & Stamp duty Includes Training Facility	Land component & stamp duty	3,930
	2	New Depot/Training Facility replacing SOP - Buildings incl fitout & IT	Building component	13,530
	3	New Office Replacing SOP & Nth Sydney - Office fitout	Building component	32,987
	4	New Office Replacing SOP & Nth Sydney - IT setup & Response Centre	Building component	675
	5	Meter Management Centre - Land Acquisition	Land component	831

Project Type	Project ID	Project Name	Project Description	Value AUD (2013)
	6	Meter Management Centre - Building Fitout	Building Component	5,295
	7	New Cardiff Depot - Land Acquisition	Land component	1,800
	8	New Cardiff Depot - Building Fit-out	Building Component	2,197
	9	"Storage Capacity Upgrades - Post SOP exit Seven Hills, Brookvale, Riverwood	Building improvements	600
	10	"New items for years FY16-FY32 - Base allowance SOP/Nth Syd replacement leasehold"	Building improvements	2,250
	11	"New items for years FY13-FY32- Base allowance other JGN leased buildings	Building improvements	3,000
	12	New items for years FY13-FY32 - Base allowance other JGN owned buildings	Building improvements	2,950
	13	Bathurst Upgrade/Relocation	Building improvements	150
	14	Horsely Park - Construction Of Storage Facility		200
	15	HP sites - Upgrades to Septic & Fire Safety Systems	Building improvements	300

Project Type	Project ID	Project Name	Project Description	Value AUD (2013)
	16	120 Smith St, Wollongong - Upgrade Storage Racking		26
	17	New Victorian Head Office (50% JGN)	Building component	36,831
	18	Profession Services supporting ID1, ID2 & ID3		5,456
	19	Profession Services supporting ID17		8,184
Table 12. SCADA & Communications (Non-distribution)				
	2	GENe SCADA System Replacement	Replacement of SCADA system to ensure alignment and cost effective integration of technologies deployed by the industry and Jemena as a whole	12,000

Appendix C. **Qualifications**

The relevant qualifications of the consultants undertaking this work are provided below:

Charles Allen – Project Manager

Charles has extensive experience in energy related commercial negotiations for electricity generators and large energy users. Charles has been Project Manager for energy project developments, acquisitions, feasibility studies, and due diligence. He has also supplied advice during power contract disputes. Charles has extensive experience in financial modelling for large power users and suppliers and has worked with a number of clients in developing optimal power use models. Previous industry experience includes work in private energy related consulting, banking sector energy and infrastructure development and finance, aluminium smelter power contract management, and contracts manager for a US utility.

Years exp: Over 20

Qualifications: **BSc (Electrical Engineering), MBA**

Stephen Hinchliffe – Project Director

Stephen is a Chartered Professional Engineer and a Fellow of the Institution of Engineering and Technology (UK) and a Registered Professional Engineer of Queensland. Stephen operates in the strategic consulting and renewable energy markets. Stephen's specialisations in the strategic consulting arena include CAPEX/OPEX planning review, development of strategic asset plans, demand forecasting, non-network solution, option development and review, utility licensing compliance reviews and audits, power project technical and commercial feasibility analysis, multi-criteria analysis, strategic asset management and planning.

Example Previous Project Governance Roles:

- Utilities Commission:, Northern Territory, review of capital project governance procedures of Power and Water Corporation's Generation, Power Networks, Gas and Water businesses;
- Queensland Competition Authority: as part of periodic regulatory price reset support, review of project governance and prudency and efficiency of capital projects for: Queensland Urban Utilities; LinkWater; Allconnex; SeqWater, SunWater, Aurizon Network
- ActewAGL: Support in the development of project governance documentation to support regulatory bid submission

Years exp: Over 20

Qualifications: **MEng (Electrical and Electronic), MBA, LMM (Commercial Law), PhD (Engineering)**