Jemena Asset Management Pty Ltd

AAD FY17 Delivery Plan

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1. EXECUTIVE SUMMARY

The total Capital PoW value for AAD FY17 is $20.26M. FY17 program expenditure is 21% and 35% lower respectively, in comparison to FY15 and FY16. The reduction is primarily driven by a lower programmed expenditure for CDP. SIB has also reduced from FY16 by 31%. In contrast, ME expenditure is forecasted to have a marginal increase, up by 7% from FY16.

Assessment of the Market Expansion activities shows a reasonably consistent routine works is forecasted for FY17 compared to the past years. The volume of metering related ME activities are forecasted to continue an increasing trend. The increment in meter ME is attributed to the higher volume of Tariff Meters and Meter Reading Devices, which experiencing 8% and 12% raise respectively from FY16.

The CDP program expenditure forecasted for FY17 shows a relatively significant reduction in comparison to FY15 and FY16. The fall in expenditure associates to the projected completion of the Molonglo Secondary CDP Stage 1 ($4.9M) and Moncrieff Secondary CDP ($4.2M) in FY16. The next Stage 2 Molonglo Secondary CPD not starting until FY18 with only $0.2M budgeted in FY17 for preliminary project work. The primary CDP expenditure for FY17 is primarily $2.1M Secondary Main at West Belconnen scheduled for construction in FY17.

For SIB activities, a 48% drop in the Reinforcement, Renewal and Replacement expenditures from FY16 is projected. This is mainly contributed by a decline in Fixed Plant Distribution expenditure, from $5.2M in FY16 to $1.6M in FY17. Meter Replacement and Upgrades expenditures are expected to maintain a steady increase of about 14%. The main increase involves planned replacement of residential aged gas meters expenditure, which rises from $0.5M in FY16 to $0.7M in FY17. $0.2M expenditure on Non System on GIS Upgrade is projected in FY17.

The delivery strategy for this program will continue to be based on the use of service contractors with Jemena staff providing some of the contractor management services. Routine Market Expansion works are delivered by established external strategic (long-term) contractor, ZNX, on unit rates and have a low carry-over risk. Routine CDP projects are delivered by established external service contractor, Zinfra, on agreed quotes that are largely based on pricing from historical projects. High complexity and high value CDP projects are project managed by Jemena internal resources. The program delivery strategy will continue to be based on outsourced construction activity under service contracts, or preferred vendor arrangements, in accordance with individual project requirements.

Overall delivery assessment of the FY17 program shows a low deliverability risk based on the following key reasons:

a. Large percentage of the program is made up of routine high volume works that will be delivered by ZNX. ZNX has been a reliable long term strategic partner in delivering all the routine works in AAD with proven historical record. The routine work is also projected to be comparable to previous years hence further reduces the need for resource rescaling and

b. Aside the routine ME and SIB, the remaining program is made up of a medium size project of Secondary Main at West Belconnen and replacement program of 100kPa Ring Mains / Customer inlet piping. These projects are governed by Jemena Project Management Methodology and related prudent procurement and outsourcing strategies.

c. The key risks in the deliverability of the FY17 program focus around the certainty of the program and the accuracy of the project cost and schedule. Changes to project start date can shift the program forecasted expenditure significantly. However as stated above, the bulk of the program involves routine works and as the overall FY17 program value is lower than previous years, the deliverability risk is low.

2. GENERAL

2.1 PURPOSE

The purpose of this Delivery Plan is to assess and formulate the delivery strategy for ActewAGL Distribution (AAD) Network's Capital Program of Works (PoW) for Financial Year[1] (FY) 2017.

This document incorporates the following key areas:

- Capital Program of Works;
- Delivery Assessment; and
- Risk and Mitigation Plans

The report analyses of the ability of the business to deliver the program of work and including the delivery approach. This Delivery Plan provides the framework that will be used to deliver the projects specified in the Asset Management Plan (AMP) and an assessment of the deliverability of the Capital PoW including the delivery approach. This Delivery Plan provides the basis for the deliverability of the FY17 program.

2.2 SCOPE

This Delivery Plan focuses on assessment of the delivery of the network Capital PoW, delivery strategy, the associated delivery agent directly involved in this works such as external service contractors, internal resources, vendors and panels and the associated deliverability risks and mitigation plans. Non-distribution projects, including IT related projects are managed separately by ActewAGL and thus are not covered as part of the network Capital PoW and are therefore not included in this Delivery Plan.

The network Capital PoW is based on the program "AAD - Capex Forecast Model – v10 - 10 Mar 15" for ACT and "ActewAGL Nowra Network FY15 POW Release Mar 2015 v1.00" for Nowra, released on March 2015. These program are controlled by Jemena Asset Investment department. In the event of an updated program is released, this Delivery Plan will be revised and reissued accordingly.

All costs provided in this Delivery Plan refer to escalated Direct Cost in real 2015 dollars ($2015). These are direct escalated costs where the impact of material, labour cost movement, overheads and other add-on costs have been incorporated. All costs are provided in a consistent real 2015 dollars to provide true comparison of program magnitude between years hence movements of capital activity are not masked by the inflationary impact of nominal dollars.

Program values are inclusive of the Construction Management Fee. The fee is spread across the key categories - Market Expansion, Growth Capital Development and Stay In Business respectively at 63.1%, 5.4% and 31.5%.

The network Capital PoW and Delivery Plan cover both the regulated ACT and unregulated Nowra networks.

[1] 1 July to 30 June.

3. ACTEWAGL NETWORKS

3.1 ACTEWAGL DISTRIBUTION NETWORKS

ActewAGL Distribution (AAD) includes the following networks:

- ACT Network; and
- Nowra Network.

This Delivery Plan covers the programs for both ACT and Nowra Networks.

Diagram 1 AAD Networks Map

3.1.1 ACT NETWORK

ACT Network includes Australian Capital Territory (ACT), Queanbeyan and Bungendore gas networks (ACT Network). The ACT Network is covered under the economic regulation. The ACT Network includes assets in both the ACT and NSW and both state technical regulatory requirements are taken into consideration in the assessment

The network has approximately 130,000 connections and delivers approximately 8.1 Petajoules (PJ) of gas per annum. Other network features are shown in the Table 1 below.

Asset	Quantity
Trunk Mains	30 km
Primary Mains	38 km [2]
Mains <=1050kPa	4,464 km
Trunk Receiving Stations (inc. POTS)	2
Primary Regulating Stations	5[3]
District Regulator Sets	89
Residential Gas Meters	117,368
Residential Water Meters	9,004
I & C Meter Sets	4,976

Table 1 ACT Network Statistics[4]

3.1.2 NOWRA NETWORK

The Nowra gas network is not an economically regulated or covered network. It is a relatively smaller network in comparison with ACT Network and has fairly stable customer base. The network has around 3,400 (homes and business) connections and delivers approximately 2.4 PJ of gas per annum. It is dominated by one large industrial customer. Other network statistics are shown in Table 2 below.

Asset	Quantity
Trunk Mains	N/A
Primary Mains	12 km
Mains <=1050kPa	150 km
Trunk Receiving Stations (inc. POTS)	2
Primary Regulating Stations	2
District Regulator Sets	3
Residential Gas Meters	3,050
I & C Meter Sets	111

Table 2 Nowra Network Statistics

[2] Includes 5.6 km of primary main currently operated at secondary pressure

[3] Includes Hume PRS which is currently not yet in operation.

[4] Source Information: Connection is defined as Delivery Point Identifier (DPI). All Mains lengths were sourced from ActewAGL GIS as of 30 Jun 2013. Station numbers were determined from "Trunk and Primary Pipeline Distribution System Line Diagram (12-JGNGEN-PID-P-001)". All other data are from GASS report as of 04 Feb 2014.

4. AAD FY17 CAPITAL PROGRAM OF WORKS

The AAD Capital PoW is divided into the following key categories:

- Market Expansion (ME);
- Growth and Capital Development Project (CDP); and
- Stay In Business (SIB).

The total Capital PoW value for AAD FY2017 is $20.26M. Diagram 2 provides the value and percentage breakdown of the Total AAD FY17 Capital PoW in accordance to the key categories.

Diagram 2 FY17 PoW by Key Categories

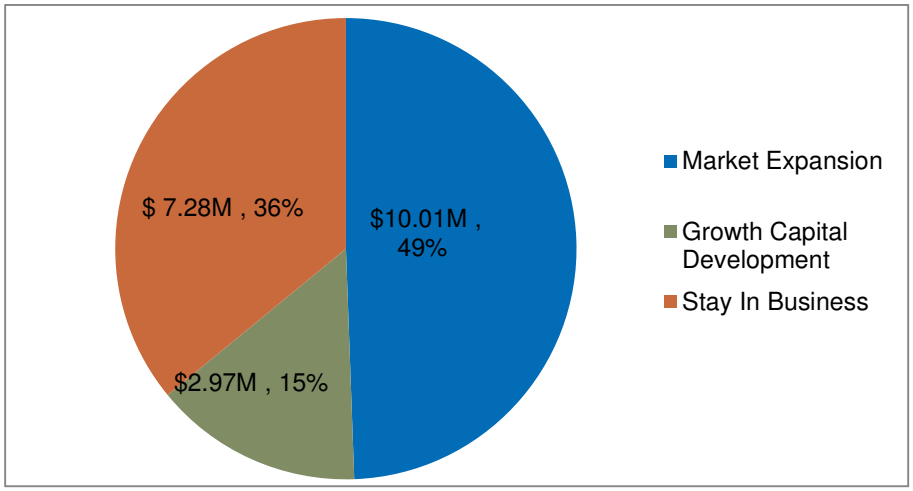
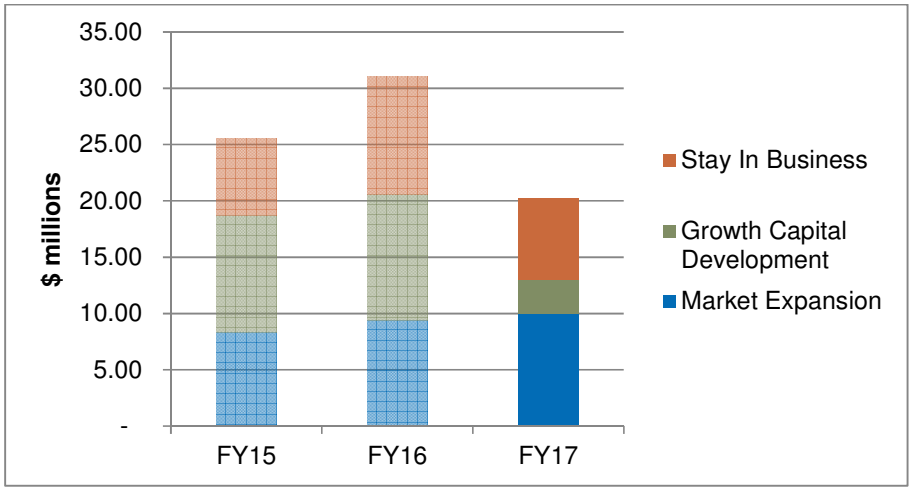


Diagram 3 shows the FY17 Capital PoW in comparison with the FY15 and FY16 programs.

Diagram 3 FY17 PoW in Comparison to FY15 and FY16



	FY15	FY16	FY17
Market Expansion	8.29	9.39	10.01
Growth Capital Development	10.40	11.12	2.97
Stay In Business	6.88	10.49	7.28
Total	25.57	31.00	20.26

Table 3 FY17 in Comparison to FY15 and FY16

FY17 program expenditure is 21% and 35% lower respectively, in comparison to FY15 and FY16. The reduction is driven primarily by a lower programmed expenditure for CDP. SIB has also reduced by 31% from FY16. In contrast, ME expenditure is forecasted to have a marginal increase, up by 7% from FY16.

4.1 MARKET EXPANSION

ME refers to routine new mains, new service connections and new metering facilities driven by the market. The program is subjected to external influence such as economic, marketing and government initiatives but generally involves high volume works that is maintained at pretty constant level. ME includes new service connections, mains and meters that are typically high volume and routine.

Diagram 4 Market Expansion Expenditure in comparison to FY15 and FY16

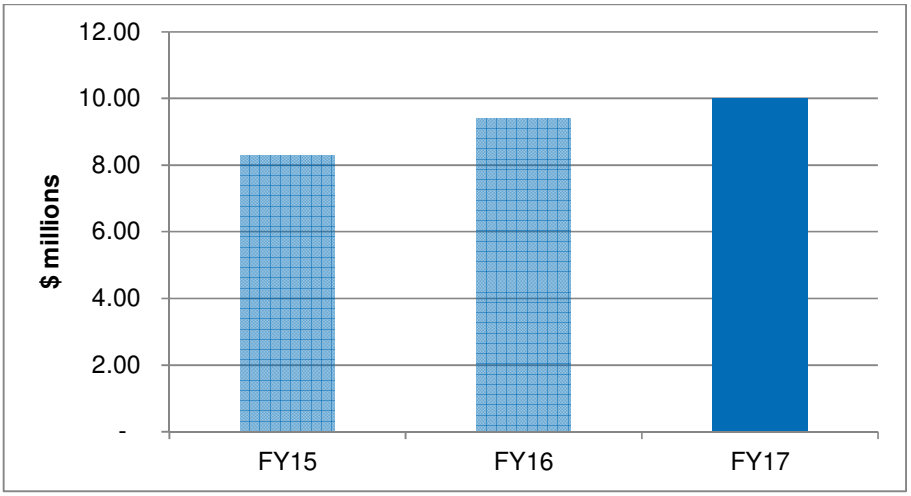
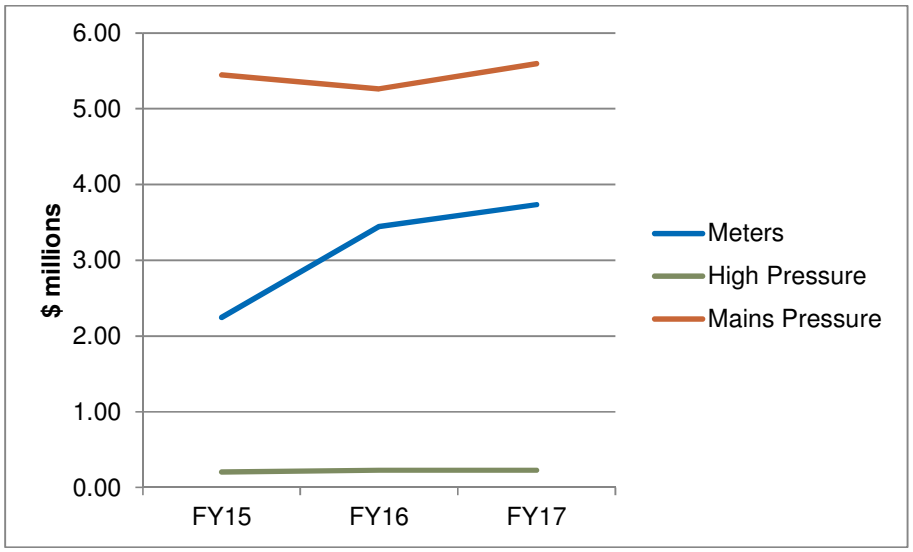


Diagram 5 Market Expansion Expenditure Breakdown



Broken down further into asset type, the program for FY17 is forecasted to remain reasonably consistent with FY16 for high pressure and mains pressure ME activities, as shown in the Diagram 5 above. The volume of meter related ME activities are forecasted to continue an increasing trend in FY17. The increment in meter ME is attributed to the higher volume of Tariff Meters and Meter Reading Devices, which experiencing 8% and 12% raise respectively from FY16, as illustrated in the Table 4 below.

	FY15	FY16	FY17
Meters	**2.24**	**3.45**	**3.73**
Contract Meters	0.00	0.14	0.14
Meter Reading Devices	0.40	0.38	0.42
Tariff Meters	1.84	2.92	3.17
HP	**0.21**	**0.23**	**0.23**
HP Mains	0.00	0.01	0.01
HP Services	0.21	0.22	0.22
MP	**5.45**	**5.26**	**5.60**
MP Mains	1.84	1.74	1.87
MP Services	3.60	3.52	3.73

Note: Figures include ACT but not Nowra

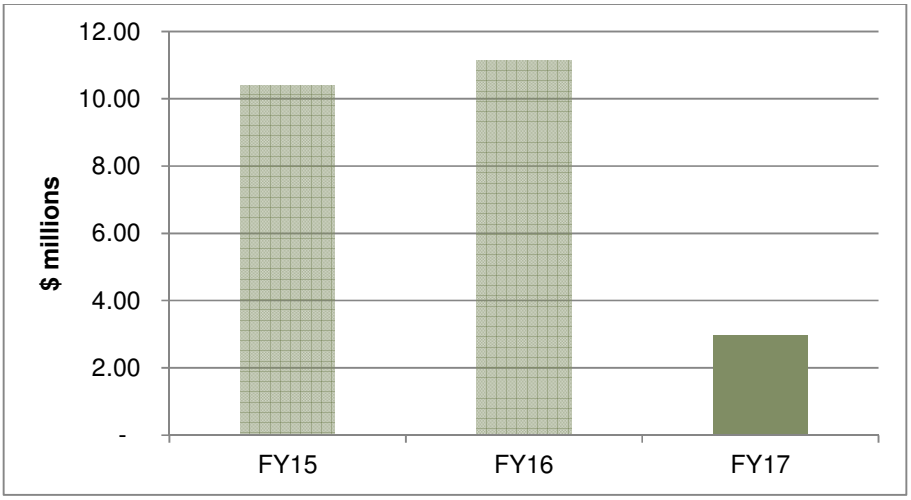
Table 4 Market Expansion Expenditure Breakdown

4.2 GROWTH CAPACITY DEVELOPMENT

CDP refers to network projects that are undertaken to support the ongoing network growth on the ActewAGL primary, secondary and medium pressure networks. These projects have been identified through the network validation and planning process. Timing of the capacity development projects is based on current organic load growth forecasts and committed contract loads, and is annually revised. A risk assessment approach has been followed to determine the timing of these projects. The projects are scheduled when the risk of loss of supply

becomes unacceptable. Capacity developments for large industrial loads, which are received as part of the Transportation Requests for Service process, are assessed on a case-by-case basis.

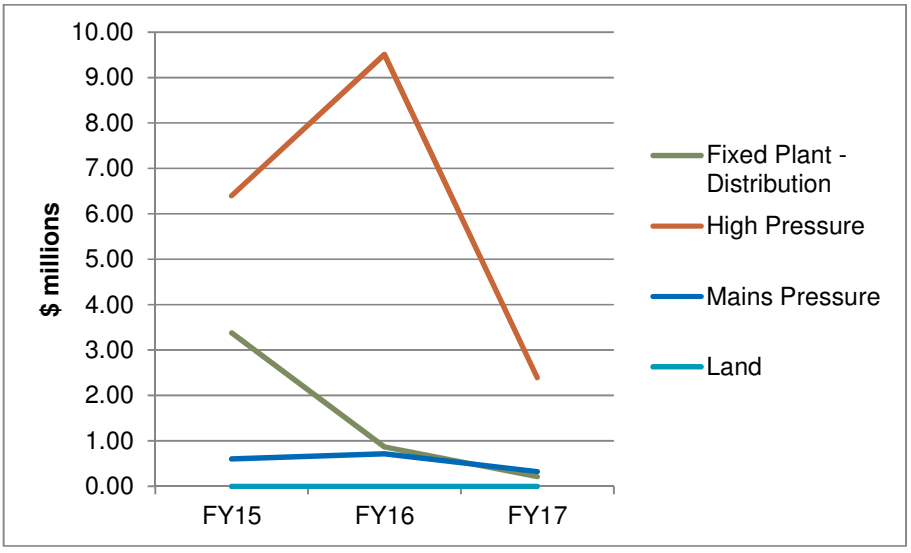
Diagram 6 FY17 Growth Capital Development Expenditure in comparison to FY15 and FY16



The CDP program expenditure forecasted for FY17 shows a relatively significant reduction in comparison to FY15 and FY16. The fall in expenditure associates to the projected completion of the Molonglo Secondary CDP Stage 1 ($4.9M) and Moncrieff Secondary CDP ($4.2M) in FY16. The next Stage 2 Molonglo Secondary CPD not starting until FY18 with only $0.2M budgeted in FY17 for preliminary project work.

The primary CDP expenditure for FY17 is primarily $2.1M Secondary Main at West Belconnen scheduled for construction in FY17.

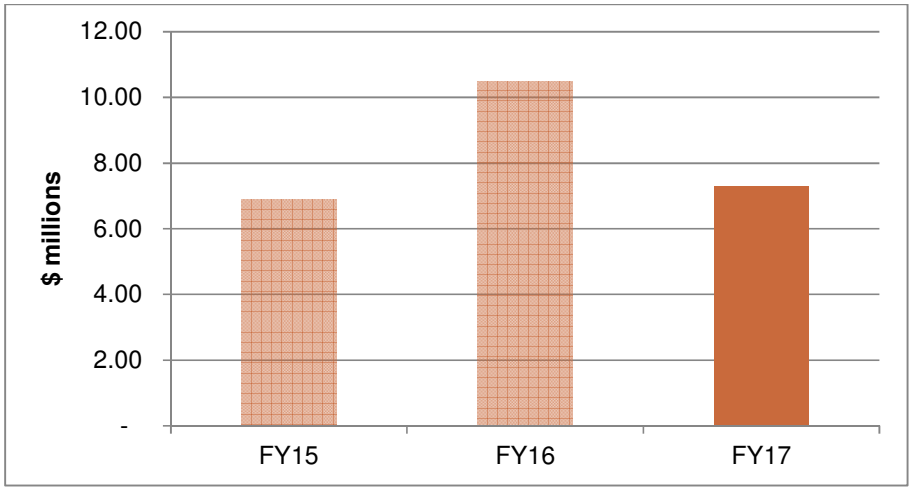
Diagram 7 Growth Capital Development Expenditure Breakdown



4.3 STAY IN BUSINESS

SIB refers to routine replacement and upgrade of network assets, metering and SCADA facilities to ensure the integrity, safety and supply reliability of key metering components of the gas distribution system. SIB includes planned aged meter, turbine, residential regulators and water meter replacements.

Diagram 8 FY17 Stay In Business Expenditure in comparison to FY15 and FY16

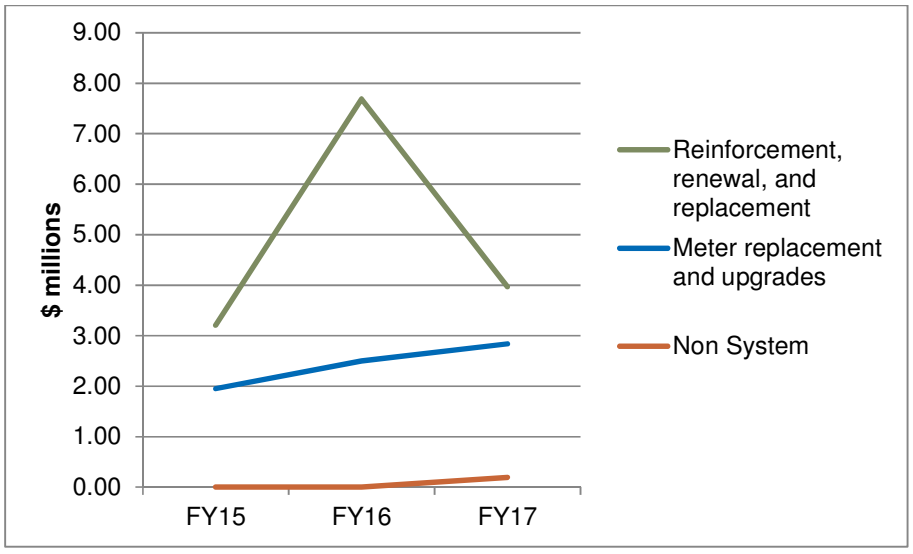


SIB consists of three main workgroups:

- Reinforcement, renewal, and replacement;
- Meter replacement and upgrades; and
- Non System.

Expenditure in accordance to the workgroups is illustrated in the Diagram 9 below.

Diagram 9 Stay In Business Expenditure by Workgroups



A 48% drop from FY16 in Reinforcement, Renewal and Replacement expenditures is projected for FY17. This is mainly contributed by a decline in Fixed Plant Distribution expenditure, from $5.2M in FY16 to $1.6M in FY17.

Meter Replacement and Upgrades expenditures are expected to maintain a steady increase of about 14%. The main increase involves planned replacement of residential aged gas meters expenditure, which rises from $0.5M in FY16 to $0.7M in FY17.

The main expenditures for SIB include $1.7M expenditure on 100kPa Ring Mains / Customer inlet piping rectification and $0.77M expenditure on Hoskinstown CTS Upgrade that is scheduled to be completed in FY17.

$0.2M expenditure on Non System on GIS Upgrade is projected in FY17.

5. DELIVERY ASSESSMENT

5.1 CURRENT DELIVERY ARRANGEMENTS AND PERFORMANCE

ZNX, under strategic (long-term) arrangement is contracted to undertake routine high volume unit rates based works in the ME and significant portion of SIB.

For other works, typically major projects, not performed by ZNX, Jemena adopts a specific approach in relation to its available delivery channels. Jemena utilises Zinfra as the primary sources supported by internal project management resources as part of its delivery strategy of AAD programs. Some large projects may also

Table 5 provides a summary of the allocation of AAD program categories to established delivery channels.

Program	Delivery Channel
Market Expansion	ZNX, Zinfra and Preferred Vendor
Growth Capital Development	Jemena Internal Resource, ZNX, Zinfra and other vendor via market tender
Stay in Business	Jemena Internal Resource, ZNX, Zinfra and other vendor via market tender

Table 5 Programs and Delivery Channels

External delivery channels are implemented through competitive processes in accordance with Jemena procurement policy where applicable. Jemena implements routine and proactive review of the contractors' performances and regular audits to ensure performance and efficiencies are in line with the standard and requirement.

Table 6 provides details of Jemena's delivery channels.

Delivery Channels	Description
Internal	Jemena's employees are engaged in the following operational delivery activities: – procurement – planning and scheduling – design and commissioning – construction and maintenance – project and contract management Jemena also Project Manage Capital Development projects that are either high complexity or construction for projects valued over $0.5M.

Delivery Channels	Description
Service Contractors	ZNX account for most of the routine market expansion, construction and maintenance works. Its portfolio involves mostly low complexity, largely uniform, high volume capital activities based on unit rates set in contracts, with the majority applicable for the FY16-FY20 period. These unit rates relate to main and service construction for projects less than $0.5 million. Depending on economic and strategy assessment by Jemena, assessed on case-by-case basis, a number of the high complexity or construction for projects valued over $0.5M may be delivered by Zinfra or other suitable service providers.
Preferred Vendor	The preferred vendor model engages pre-qualified vendors based on panel arrangements. This approach is best suited to medium complexity work, such as secondary steel mains construction and meter programs, which are based on standard designs but which require a degree of contractor specialisation and which warrants the establishment of deeper relationships. This approach also facilitates Jemena's ability to manage volumes to best support the operation of a sustainable, competitive market to support delivery of this work

Table 6 Delivery Channels Summary

5.2 FY17 DELIVERY STRATEGY

The objective of the FY17 Delivery Strategy is to ensure that the AA2017 program is delivered safely and efficiently.

The current portfolio of internal and external resources will continue to underpin the AA2017 Delivery Strategy for the FY17 program. Historically this approach has successfully provided an optimal mix of resources with the capability and capacity to deliver.

An important consideration is that FY17 program work volumes are generally consistent with the recent past. In the case of the Meter Replacement program where FY17 volumes are significantly above recent trend, Jemena has engaged in preliminary commercial discussions with its contracting base and has developed a delivery strategy to provide capacity to meet the increase in demand.

An associated factor is that the relative complexity of the programs, which also remain generally consistent with recent past. Importantly, 60 to 80 per cent of the work depending on the year is low complexity, largely uniform, high volume activities that are delivered via established service contractors and preferred vendor arrangements. Internal management resources associated to project management of Growth Capital Development have remained relatively consistent over the program period.

Outsourcing arrangements also provide the required flexibility to align delivery resources to the variable volumes. Contract exclusivity arrangements on unit rate based militate against risk of variation in resourcing requirement to meet peak demand.

The Delivery Strategies for the three (3) groups of works are further illustrated in the section below.

5.2.1 MARKET EXPANSION

The delivery strategy for this program will continue to be based on the use of service contractors with Jemena staff providing some of the contractor management services. Service contracts' resources have historically managed any inter or intra-year variations.

Market expansion works are delivered by established external strategic (long-term) contractors on unit rates and have a low carry-over risk.

5.2.2 GROWTH CAPITAL DEVELOPMENT

Routine Growth Capital Development projects are delivered by established external service contractors on agreed quotes that are largely based on pricing from historical projects. High complexity and high value Growth Capital Development projects are project managed by Jemena internal resources.

The program delivery strategy will continue to be based on outsourced construction activity under service contracts, or preferred vendor arrangements, in accordance with individual project requirements.

Outsourcing of construction is the most efficient delivery model for AAD, which appropriately positions construction risk with contracting businesses. Jemena retains technical, project planning, and contractor management capabilities to ensure that time, cost and quality objectives are met where some of the project planning and management will be performed by the Jemena Projects Group.

5.2.3 STAY IN BUSINESS

The delivery strategy for these projects will continue to be based on outsourced construction activity under preferred vendor arrangements, in accordance with individual project requirements. Jemena retains technical, project planning, and contractor management capabilities to ensure that time, cost and quality objectives are met.

The Meter renewal and Upgrade program will continue to be based on the use of service contractors with Jemena staff providing some of the contractor management services. The program represents a step change from FY17 onwards and a plan is being put in place by the service contractor to manage this change. Service contracts' resources have historically managed any inter or intra-year variations.

5.3 MATERIALS

Jemena will continue with existing material supply arrangements, which have successfully supported delivery of previous programs, which includes:

- Jemena has contracts in place to source Nylon pipe, PE Pipe and Steel pipes from a number of suppliers both local and international manufactures;
- ZNX and Zinfra have been identified in these contracts as related parties where Jemena, ZNX or Zinfra can use these contracts when purchasing materials; and
- Meters are a commodity item supplied by a number of vendors depending on meter types. Based upon ongoing commercial discussions and briefings, Jemena is satisfied that suppliers will have the capacity to meet forecast volume requirements.

6. RISK ASSESSMENT

The key deliverability risks of FY17 program are underpinned by the lack of certainty in the program schedule and the maturity of the project affecting its forecasted true values.

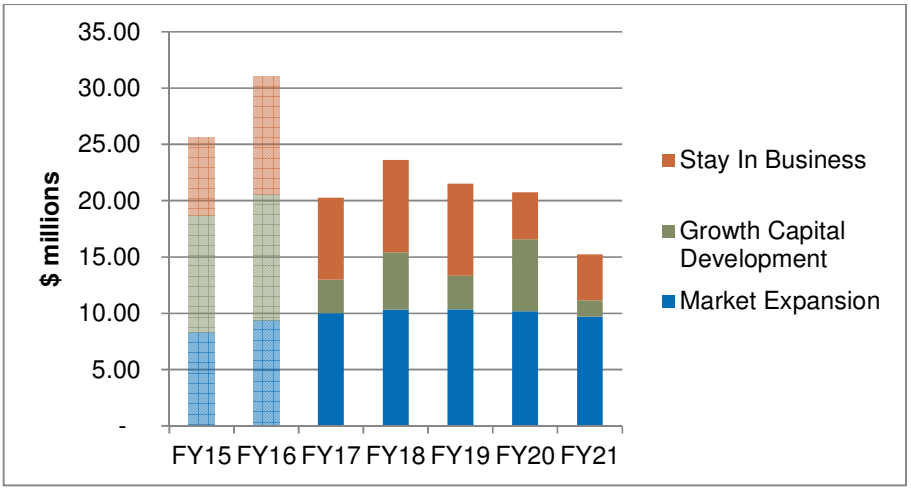
6.1 PROJECT MATURITY

For the non-routine components, all projects and replacement programs identified in the FY17 PoW are in early project mandate stage. While all these projects will be managed in accordance to Jemena Project Management Methodology which provides good governance, these projects carry high uncertainty in terms of the costing and schedule.

6.2 PROGRAM FLUCTUATION

Diagram 10 below provides a snapshot of the program value over the next five years period. It illustrated a visibly lower program in comparison with the past years. These are mainly driven by lower expenditures forecasted on the non-routine works. AAD services contractors, ZNX and Zinfra will need to be made aware of the change hence appropriate resourcing strategy can be implemented.

Diagram 10 FY15 to FY21 AAD Capital PoW



7. CONCLUSION

Overall delivery assessment of the FY17 program shows a low deliverability risk based on the following key reasons:

d. Large percentage of the program is made up of routine high volume works that will be delivered by ZNX. ZNX has been a reliable long term strategic partner in delivering all the routine works in AAD with proven historical record. The routine work is also projected to be comparable to previous years hence further reduces the need for resource rescaling and

e. Aside the routine ME and SIB, the remaining program is made up of a medium size project of Secondary Main at West Belconnen and replacement program of 100kPa Ring Mains / Customer inlet piping. These projects are governed by Jemena Project Management Methodology and related prudent procurement and outsourcing strategies.

f. The key risks in the deliverability of the FY17 program focus around the certainty of the program and the accuracy of the project cost and schedule. Changes to project start date can shift the program forecasted expenditure significantly. However as stated above, the bulk of the program involves routine works and as the overall FY17 program value is lower than previous years, the deliverability risk is low.