APA Group

Response to SEPS Coverage Application:

Background material provided to the NCC

16 January 2013

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1. Introduction

APA Group (APA) has prepared the following background material to assist the National Competition Council (NCC) in the preliminary stages of its assessment of Kimberley-Clark Australia's (KCA) application for coverage of the South Eastern Pipeline System (SEPS) and is structured as follows:

- Section 2 contains a description of the physical attributes of the SEPS;
- Section 3 sets out the ownership and operational history of the SEPS;
- Section 4 provides an overview of the SEPS transportation agreements and the negotiations that have been carried out with KCA over the last 18 months;
- Section 5 examines the utilisation of the SEPS over the last five years; and
- Section 6 contains further detail on the South East South Australia (SESA) Pipeline, which, in conjunction with the SEA Gas Pipeline, is used to supply gas from the offshore fields in the Otway Basin into the SEPS.

2. Physical Attributes of the SEPS

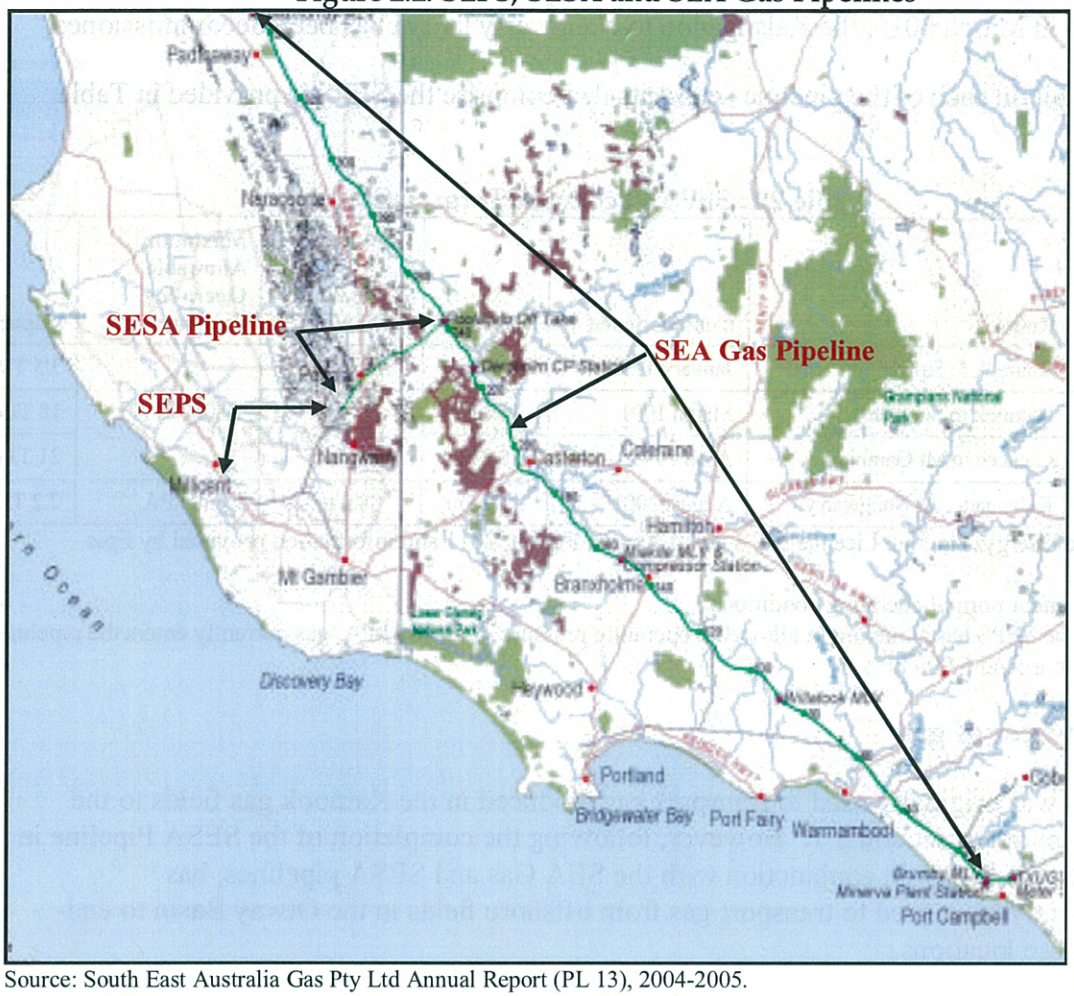
The SEPS is a transmission pipeline[1] located in the south eastern corner of South Australia that can be used to transport gas supplied into the pipeline at Katnook to end-users in the Penola, Snuggery, Mt Gambier and Nangwarry regions. The location of the SEPS and the regions it services are illustrated in the map below while Figure 2.2 illustrates the relationship between the SEPS, SESA and SEA Gas Pipelines.

Figure 2.1: Map of the SEPS*

*While not shown in this figure, the SESA Pipeline connects into the SEPS at Katnook.

[1] It is worth noting in this context that the primary purpose of the SEPS is to convey gas to various locations in the south east corner of South Australia and *not* to reticulate gas within the locations serviced by the pipeline. It is for this reason that the pipeline was originally classified as a transmission pipeline in schedule A of the *National Third Party Access Code for Natural Gas Pipeline Systems* (Gas Code).

Figure 2.2: SEPS, SESA and SEA Gas Pipelines



Source: South East Australia Gas Pty Ltd Annual Report (PL 13), 2004-2005.

The remainder of this section provides further detail on:

- each of the pipeline segments that comprise the SEPS; and
- the sources of gas supplied into the SEPS.

2.1 SEPS pipeline segments

The SEPS consists of the following pipeline segments:

- the Katnook to Safries lateral;
- the Katnook to Snuggery pipeline;
- the Glencoe to Mt Gambier pipeline; and
- the Kalangadoo to Nangwarry lateral.

The first three of these pipeline segments were constructed and commissioned by the South Australian Government in 1990-1991 while the Kalangadoo to Nangwarry lateral was constructed and commissioned by Epic Energy in 2001[2] to enable gas to be transported to

[2] Epic. Energy, Pipeline Licence No. 3 and 4 Annual Report, 2011

Carter Holt Harvey Ltd's (CHH) timber mill at Nangwarry. Following the closure of CHH's timber mill in March 2010, the Kalangadoo to Nangwarry lateral has been decommissioned.[3]

Further detail on each of the pipeline segments that comprise the SEPS is provided in Table 2.1.

Table 2.1: SEPS - Technical Information

Pipeline Licence	Route	Commissioned	Length	Pipeline Diameter	Maximum Allowable Operating Pressure	Capacity*
SA: PL 3	Katnook to Safries	January 1991	4.5 km	60.3 mm	10,000 kPA^	3.5 TJ/day
SA: PL 4	Katnook to Snuggery	March 1991	46.1 km	168.3 mm		18 TJ/day
	Glencoe to Mt Gambier	April 1991	18.9 km			21 TJ/day
	Kalangadoo to Nangwarry	August 2001	11.5 km	88.9 mm	9,850 kPA	2.2 TJ/day

Source: Epic Energy, Pipeline Licence No. 3 and 4 Annual Report, 2011 and information provided by Epic Energy.
* Measured under normal operating conditions.
^ Although the SEPS has a maximum allowable operating pressure of 10,000 kPA, gas currently enters the pipeline at Katnook at around 5,000 kPA.

2.2 Sources of gas

The SEPS was originally used to transport gas produced in the Katnook gas fields to the locations set out in section 2.1. However, following the completion of the SESA Pipeline in early 2005, the SEPS, in conjunction with the SEA Gas and SESA pipelines, has predominantly been used to transport gas from offshore fields in the Otway Basin to end-users in these locations.

It is worth noting in this context that the SESA Pipeline was developed by Origin Energy in response to a greater than anticipated fall in the deliverability of gas from the Katnook and Ladbroke Grove gas fields,[4] which it was operating at the time. Three years after constructing the SESA Pipeline, Origin Energy sold its interests in the Katnook and Ladbroke Grove fields and gas plants to Adelaide Energy.[5] Beach Energy subsequently acquired these upstream interests when it took over Adelaide Energy in early 2012.[6]

Gas production in the Ladbroke Grove gas fields ceased in December 2006[7] and while gas is still being produced in the Katnook gas fields, the volumes produced have been quite small and for the last five years, proven and probable reserves have remained around 1 PJ.[8] In terms of production, publicly available estimates indicate that the Katnook gas plant produced just 0.4 PJ – 1 PJ pa of gas between 2008 and 2011 and no gas in 2012 (see Table 2.2). To put the volume of gas produced by the Katnook Gas Plant between 2008 and 2011 into perspective, it is worth noting that in 2004, the Katnook and Ladbroke Grove gas fields were producing

3 Although this lateral has been decommissioned, Epic Energy still maintains the lateral in accordance with its obligations under AS2885.

4 Note that production from the Katnook and Ladbroke Grove gas fields fell from around 9 PJ in 2004 to 1 PJ in 2006.

5 Sydney Morning Herald, Adelaide Energy buys Katnook fields, 7 July 2008.

6 Beach Energy, Media Release – Beach completes acquisition of Adelaide Energy through compulsory acquisition, 10 February 2012.

7 Adelaide Energy, Annual Report – Petroleum Production Licence No. 62, 168 and 202, 2010 Annual Report, p5.

8 EnergyQuest, EnergyQuarterly, February 2008, February 2009, February 2010, February 2011 and November 2012.

around 9 PJ of gas, which is 22.5 times greater than the volume of gas produced between 2008 and 2011.

Table 2.2: Katnook Gas Production

2008	2009	2010	2011	2012*
0.4 PJ	0.4 PJ	1.0 PJ	0.4 PJ	0 PJ

Source: Origin Energy, Annual Report – Petroleum production licence No. 62, 168 and 202, 2008 and Adelaide Energy, Annual Report – Petroleum production licence No. 62, 168 and 202, 2009-2011. * EnergyQuest, EnergyQuarterly, November 2012.

Finally, it is worth noting that gas produced in the Katnook gas fields has a higher moisture content (ie, higher CO_2 levels) than gas supplied from offshore fields in the Otway Basin. It is also worth noting that based on SEPS metering data, it would appear that Origin Energy has not sought to transport any gas from the Katnook gas fields into the SEPS since October 2011. Because Epic Energy is not a party to Origin Energy's upstream gas supply agreements, it is unable to comment on why Origin Energy has ceased to supply gas from the Katnook gas fields into the SEPS.[9]

[9] It is worth noting in this context, that it is the responsibility of the shipper to determine the source of its gas and as long as the gas meets the appropriate gas quality specification, it will be transported by the pipeline owner and operator.

3. Ownership and Operational History of the SEPS

The SEPS was originally constructed and commissioned by the South Australian Government in 1990-91 to enable gas from the South Australian Gas Company's (SAGASCO)[10] upstream interests in the Katnook gas fields to be transported to end-users in the Penola, Snuggery and Mt Gambier regions.

The SEPS was initially operated by the Pipelines Authority of South Australia (PASA), on behalf of the South Australian Government. However, in July 1995 the South Australian Government sold the assets operated by PASA (the SEPS and the Moomba to Adelaide Pipeline System (MAPS)) to Tenneco Gas Australia (later Tenneco Energy), a subsidiary of the US based company, Tenneco Inc.[11]

In December 1996, Tenneco Energy transferred its pipeline assets (which at this time included the MAPS, South West Queensland Pipeline (SWQP) and SEPS) into a new investment vehicle: Epic Energy. Tenneco then sold its interest in Epic Energy to a consortium of investors, which included El Paso Energy (30%), CNG International (30%), Allgas Energy (10%), AMP Investments (10%), Axiom Funds Management (10%) and Hastings Funds Management (10%).[12]

In June 2004, Hastings Funds Management acquired a 100% interest in all but one of Epic Energy's assets (the Dampier to Bunbury Natural Gas Pipeline) and then rolled these assets into a new fund, the Hastings Diversified Utilities Fund. The Hastings Diversified Utilities Fund (HDUF) was listed on the Australian Securities Exchange (ASX) on 13 December 2004.[13]

On 17 December 2012, APA assumed control of the Epic Energy assets following its acquisition of HDUF.[14] As a result of this transaction, Epic Energy South Australia Pty Ltd (which owns the SEPS) and Epic Energy Corporate Shared Services Pty Ltd (which operates the SEPS) are now both owned by the APA Group.

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[10] At the time the SEPS was developed, SAGASCO was owned by the South Australian Government and had interests in the retail, distribution and upstream production segments of the gas supply chain

[11] Epic Energy website (http://www.epicenergy.com.au/index.php?id=18).

[12] *ibid.*

[13] *ibid.*

[14] APA Media Release, Hastings Diversified Utilities Fund – Change to Name and Corporate Information, 17 December 2012.

4. SEPS Gas Transportation Agreements

The development of the SEPS was underwritten by a foundation agreement between PASA and SAGASCO. SAGASCO's upstream production, distribution and retail interests were sold by the South Australian Government to Boral in 1993[15] and in early 2000, Boral transferred its upstream production and gas retailing interests to Origin Energy.[16,17] As a result of these transactions, the transportation rights under the foundation agreement were transferred from SAGASCO to Boral and then to Origin Energy.

The foundation agreement ('the Katnook Gas Haulage Agreement'), which was entered into in 1995,[18] provided for the transportation of up 22 TJ/day (the entire capacity of the pipeline) of gas on a firm forward haulage basis on the Katnook to Safries, Katnook to Mt Gambier and Katnook to Snuggery pipeline segments over a 15 year period, from 1 January 1996 to 31 December 2010.

In 2000 the Katnook Gas Haulage Agreement was amended to enable Origin Energy to transport gas to CHH's timber mill in Nangwarry. The Nangwarry lateral amendment provided for the transportation of up to 2.2 TJ/day (the entire capacity of the lateral) on the Kalangadoo to Nangwarry lateral from August 2001 until August 2015. Following the closure of CHH's Nangwarry timber mill in early 2010, Epic Energy ceased supplying the services specified in the Nangwarry lateral amendment. Although these services are no longer being provided, the Nangwarry lateral amendment remains in place.

The Katnook Gas Haulage Agreement (excluding the Nangwarry lateral amendment) expired on 31 December 2010 and on 23 December 2010 Origin Energy entered into a new gas transportation agreement with Epic Energy. This new transportation agreement provides for the transportation of 11.5 TJ/day (approximately 55% of the capacity of the pipeline) of gas on the Katnook to Safries, Katnook to Snuggery and Glencoe to Mt Gambier laterals over the period 1 January 2011 to 1 January 2014. The volume of gas that Origin Energy's gas transportation agreement enables to be supplied on each of the laterals (ie, contracted capacity) is as follows:

- 7.7 TJ/day on the Katnook to Snuggery pipeline, which is equivalent to 43% of the capacity of this pipeline segment;
- 0.6 TJ/day on the Katnook to (Safries) in the Penola region, which is equivalent to 17% of the capacity of this lateral; and
- 3.2 TJ/day to Mt Gambier, which is equivalent to 15% of the capacity of this pipeline segment.

Apart from Origin Energy, KCA is the only other prospective shipper that has sought access to the SEPS over the last 21 years. Further detail on the services sought by KCA and the negotiations that have taken place between Epic Energy and KCA in the last 18 months is provided below.

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15 Origin Energy website (http://www.originenergy.com.au/233/History).

16 Origin Energy was demerged from Boral Ltd and became a separately listed entity on 1 March 2000.

17 Boral's distribution interests were transferred to Envestra, which was also demerged from Boral Ltd and became a separately listed entity on the ASX.

18 The agreement was formalised prior to the sale of the SEPS.

4.1 KCA and Epic Energy negotiations

In late 2011, KCA approached Epic Energy seeking the following services:

- a firm transportation service with a maximum daily quantity (MDQ) of [redacted] TJ/day commencing on [redacted]. KCA later scaled back its firm transportation service request to [redacted] TJ/day;
- an interruptible transportation service of [redacted] TJ/day commencing on [redacted]; and
- a 3,600 kPA pressure service commencing on [redacted]. It is worth noting in this context that at the time KCA approached Epic Energy, the delivery pressure at KCA's custody transfer point was just 850 kPA. The pressure service sought by KCA therefore represented a significant change in the nature of the service provided by the SEPS and would have involved:
  - the construction of a new meter/regulating station at KCA's delivery point;[19] and
  - the sterilisation of approximately 3.6 TJ/day capacity on the Katnook to Snuggery pipeline, which is required to guarantee the higher delivery pressure.

Epic Energy responded to the first two elements of KCA's request by offering to charge KCA the same[20] firm and interruptible transportation tariffs (escalated by CPI) as those payable under Origin Energy's 2011 – 2014 gas transportation agreement. In relation to the 3,600 kPA pressure service, Epic Energy's offer to KCA was based on both:

- the costs associated with sterilising 3.6 TJ/day on the Katnook to Snuggery pipeline, which was to be recovered through a monthly pressure service charge. The pressure service charge proposed by Epic Energy was calculated by applying the same firm transportation tariff as that applying under Origin Energy's gas transportation agreement to the 3.6 TJ/day sterilised capacity; and
- the costs of constructing and operating a new meter/regulating station, which were to be recovered through a monthly delivery point capital charge and a monthly delivery point operating charge. At the time this proposal was made, no front end engineering and design (FEED) work had been carried out for the new meter/regulating station. Epic Energy proposed therefore to determine the value of the delivery point charges once the FEED work had been carried out.

KCA expressed a number of concerns with Epic Energy's pressure service proposal and suggested that Epic Energy should commit to constructing the new meter/regulating station for a fixed cost of $2 million and by a fixed completion date of [redacted]. Epic Energy's own desk top analysis revealed that the meter/regulating station could cost between $2.5 million and $4 million to construct. Epic Energy was not therefore willing to take on the risk of constructing a new meter/regulating station for a fixed cost of $2 million without any FEED work to support the estimate.

Although Epic Energy rejected KCA's counter offer, it did try and allay some of the concerns that KCA had expressed about the uncertainty surrounding the precise value of the delivery point charges and the need to have the service in place by [redacted], by offering to undertake

[19] This work was required because the the existing meter station could not be modified to supply gas at the higher pressure.

[20] Provision was also made for these tariffs to be escalated by inflation.

the FEED work at the same time as commencing some aspects of the work. This offer was, however, rejected by KCA.

Following its rejection of Epic Energy's offer in April 2012, KCA decided to install its own compressor at the custody transfer point to increase the pressure of the gas received at this point from 800 kPA to around 3,200 kPA. No further negotiations have been carried out between KCA and Epic Energy on the firm or interruptible transportation services.

Finally, it is worth noting that Epic Energy has no visibility over the wholesale gas supply arrangements that KCA currently has in place, or that it is proposing to enter into from 1 January 2014, because it is not a party to these arrangements. Epic Energy is also unaware of any negotiations that KCA may have had with Origin Energy regarding the transportation of gas to its Snuggery delivery point from 1 January 2014.

5. Utilisation of the SEPS

Origin Energy (formerly Boral and SAGASCO) has been the only shipper on the SEPS for the last 21 years and over this period has acted as both:

- a retailer of gas, supplying gas to households, small commercial and small industrial customers in the Mt Gambier region via Envestra's gas distribution network; and
- an aggregator supplying gas on a delivered basis to larger end-users in the region, such as:
  - KCA at its pulp and paper mill in Snuggery;
  - McCain (Safries Pty Ltd) at its potato processing plant in the Penola region; and
  - CHH at its timber mill in Nangwarry. It is worth noting in this context that following the closure of CHH's timber mill in March 2010, gas ceased to be supplied to Nangwarry via the SEPS.

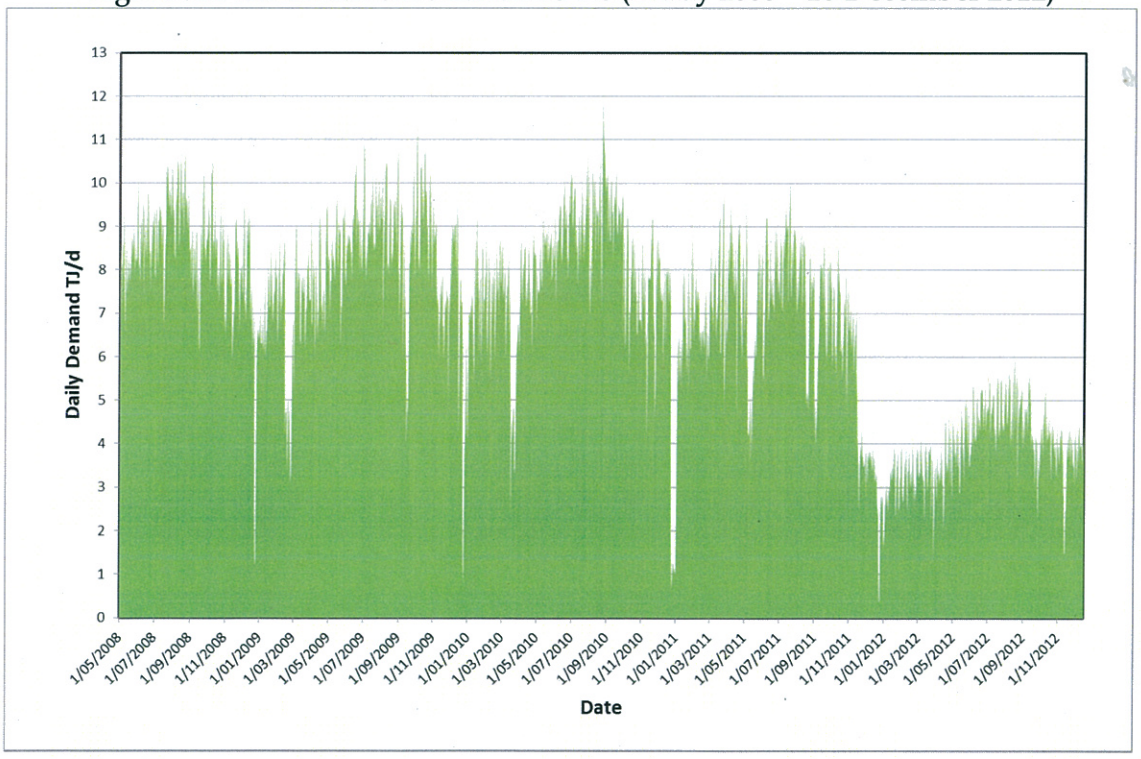
Table 5.1 sets out the volume of gas that Origin Energy has transported on the SEPS over the last five years, while Figure 5.1 illustrates the daily demand profile over the period 1 May 2008 – 16 December 2012.

Table 5.1: SEPS Annual Throughput (PJ pa)

	2008	2009	2010	2011	2012 to 16/12/2012
Total	**2.86**	**2.91**	**2.88**	**2.44**	**1.39**

Source: Metering data provided by Epic Energy.

Figure 5.1: Cumulative Demand Profile (1 May 2008 – 16 December 2012)



To put the volume of gas transported on the SEPS pipeline into context, it is worth noting that:

- the 2.4-2.9 PJ of gas transported on the SEPS between 2008 and 2011 represented just 2.5-3%[21] of the volume of gas consumed in South Australia over the same period; while
- the 1.4 PJ of gas transported between 1 January 2012 and 16 December 2012, represented less than 1.4% of the volume of gas consumed in South Australia over the same period.[22]

While not shown in Table 5.1 or Figure 5.1, it is worth noting that over the last five years, KCA has accounted for the greatest proportion of gas transported by Origin Energy on the SEPS (on both an annual throughput and peak demand basis), followed in declining order by the Mt Gambier township, McCain (Safries) and the CHH Nangwarry mill.

Another interesting point to note from Table 5.1 and Figure 5.1 is that the volume of gas transported on the SEPS has dropped significantly over the last two years, with annual throughput and peak demand falling by more than 50% between 2009 and 2012. While part of the reduction can be attributed to the closure of CHH's timber mill in early 2010, the majority stems from the substantial reduction in demand for gas by KCA's pulp and paper mill that has occurred over the last 12 months. As a result of this reduction in volumes, the SEPS is currently operating at less than 20% of its capacity when measured on an annual throughput basis and less than 30% of its capacity when measured on a peak demand basis.

[21] According to Table A.3 of AEMO's 2012 GSOO, 96 PJ – 108 PJ of gas was consumed into South Australia between 2008 and 2011.

[22] According to data obtained from the National Gas Market Bulletin Board (http://www.gasbb.com.au), 101 PJ of gas was transported on both the SEA Gas Pipeline and MAPS between 1 January 2012 and 16 December 2012.

6. Overview of the SESA Pipeline

The SESA Pipeline was constructed by Origin Energy in early 2005 to enable gas from offshore fields in the Otway Basin to be transported via the SEA Gas Pipeline to the Ladbroke Grove Power Station and the entry point of the SEPS.[23] As noted in section 2, the SESA Pipeline was developed by Origin Energy in response to a greater than anticipated fall in the deliverability of gas from the Katnook and Ladbroke Grove gas fields.[24]

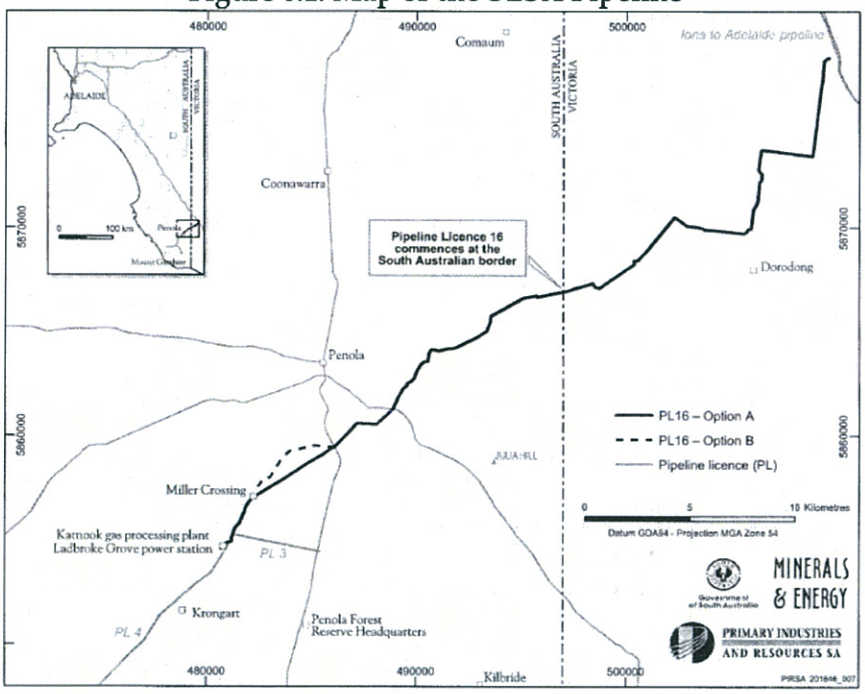
The technical specifications of the SESA Pipeline are set out in Table 6.1 while Figure 6.1 illustrates the location serviced by the SESA Pipeline.

Table 6.1: SESA Technical Information

Pipeline Licence	Route	Commissioned	Length	Pipeline Diameter	Maximum Allowable Operating Pressure	Capacity*
SA: PL 16 Vic: PL 255	Offtake point on the SEA Gas Pipeline (near Poolaijelo in Victoria) to Katnook Gas Plant and Ladbroke Grove Power Station	May 2005	45 km (22 km Vic 23 km SA)	219.1 mm	10,200 kPA^	40 TJ/day

Source: APA Group, Pipeline Licence No. 16 Annual Reports, 2010.
* Design capacity (maximum free-flow capacity of 70 TJ/day, subject to inlet conditions).
^ Normal pipeline operating pressure, 9,300 kPA.

Figure 6.1: Map of the SESA Pipeline



Source: PIRSA, Pipeline Licence PL 16.

23 Origin Energy, Media Release – Gas glows through new South East South Australia (SESA) Pipeline, 30 May 2005.

24 Note that production from the Katnook Gas Plant fell from around 9 PJ in 2004 to 1 PJ in 2006.

Two years after the SESA Pipeline was commissioned, Origin Energy sold its interest in the SESA Pipeline and a number of other pipelines to APA (APT Pipelines (SA) Pty Ltd). APA became the official owner and operator of the SESA pipeline on 2 July 2007.

At the same time that the SESA Pipeline was sold to APA, Origin Energy entered into a 15.5 year gas transportation agreement with APA. This agreement commenced on 2 July 2007 and provides for the firm transportation of gas from the entry point of the SESA Pipeline on the SEA Gas Pipeline to the Ladbroke Grove Power Station and the entry point of the SEPS. As a result of this agreement, the existing capacity of the SESA Pipeline has been reserved, in its entirety, by Origin Energy.

Origin Energy is currently the only shipper utilising the SESA Pipeline and over the last five years, has transported 2.2 PJ pa – 4.7 PJ pa of gas on this pipeline (see Table 6.2). Of the 2.2 PJ pa – 4.7 PJ pa of gas transported on the SESA Pipeline over this period, 1.4 PJ pa – 3.2 PJ pa was supplied into the SEPS and the remaining 0.8 PJ-1.6 PJ was supplied to the Ladbroke Grove Power Station.

Table 6.2: SESA Pipeline Annual Throughput (PJ pa)

	2008	**2009**	**2010**	**2011**	**2012**
Supplied into SEPS	2.46	2.70	3.21	1.92	1.41
Supplied to other locations along SESA	1.98	1.96	1.57	1.16	0.77
Total	**4.44**	**4.66**	**4.78**	**3.08**	**2.18**

Source: APA Group Metering Data.