

31 January 2017

Manager Companies  
Companies Announcements Office  
Australian Securities Exchange Limited

## Quarterly report for the three months to December 31, 2016

### Highlights

- Key engineering contract awarded to accelerate development of Leigh Creek Energy Project
- Scoping Study completed and progressing towards Syngas Pre-Commercial Demonstration (PCD)
- R&D “Advance Finding” granted by Innovation Australia
- Continued instability of the South Australian energy market reflects major opportunity
- Pre-Feasibility Study begun, on track to become a large, reliable energy supplier

Leigh Creek Energy Limited (LCK) is pleased to provide an update on the development of the Leigh Creek Energy Project (LCEP) in South Australia for the three months to December 31, 2016.

### Leigh Creek Energy Project Syngas Pre-Commercial Demonstration Update

LCK has continued to make progress with the development of the LCEP Syngas Pre-Commercial Demonstration (PCD). Baseline environmental studies for the PCD continue and relevant documentation around production approvals are being collated. LCK can confirm that a further two monitoring wells were drilled during the quarter. These wells are being completed for the purpose of groundwater baseline monitoring. The technical findings will be documented in environmental assessment reports central to the approval process, which includes extensive consultation with relevant stakeholders and the local community. LCK has begun letting out sections of the construction with a focus on local manufacturers.



*Figure1: Drill rig on Leigh Creek minesite in October, collecting baseline environmental data for the demonstration site.*

The first of these, for the detailed design and construction of a thermal oxidiser and cold vent, was awarded to Gasco Pty Ltd as announced on 15 November 2016. It is expected that the remaining detailed engineering

and fabrication packages will be let during the March 2017 quarter. Prior to fabrication a series of detailed risk assessments will be finalised for the South Australian Regulators to ensure project compliance.

Successful operation of the PCD will provide the data and knowledge required to finalise the commercial phase facility feasibility and designs. The PCD will use commercial scale ISG equipment and be operated at commercial production rates. For this reason the transition from pre-commercial to commercial will only require replication.

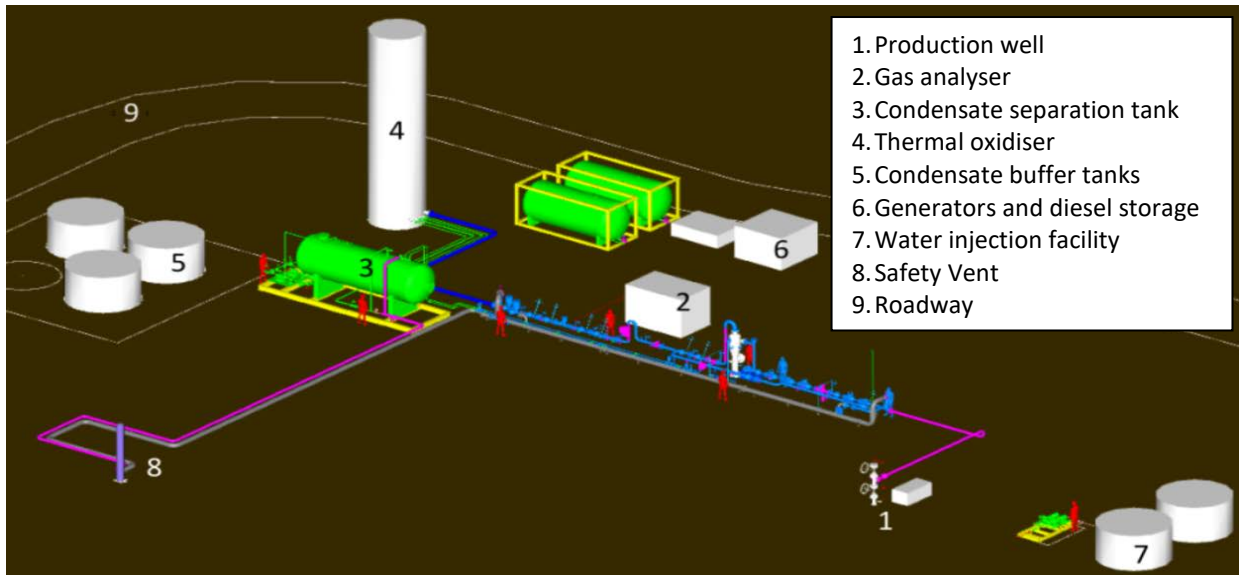


Figure2: Indicative view of the PCD plant components

## Scoping Study

During the quarter LCK completed a positive Scoping Study for the LCEP (see Resource Compliance Statement below). The options covered syngas fired electricity generation and natural gas production studies. The results give confidence to proceed to the next phase and the Company has now commenced a Pre-Feasibility Study for the LCEP. Scoping Study highlights include the following:

- The Study covered a number of development cases for further processing of syngas produced from In-situ Gasification (ISG) at the LCEP with the focus being on the cases for electricity generation and natural gas production.
- Several possible options involving a scaled approach, in order to minimise up-front capital, were reviewed. The scope of those options included a power generation case ranging from 150MW to 550MW and a natural gas production case ranging from 20PJpa to 80PJpa. There are no guarantees that a specific option can be supported by the Company's current 2C Syngas Resource of 2,964PJ (see Resource Compliance Statement below).
- Based on the results of the Study, it is anticipated that a major portion of the current 2C Contingent Syngas Resource could be converted to a 2P Syngas Reserve upon completion of the Pre-Commercial Demonstration and analysis of results.
- The Study concluded that the cases for both syngas fired electricity generation and natural gas are sufficiently robust technically and financially to support advancing to the Pre-Feasibility Study (PFS) phase and pre-commercial demonstration facility.
- The LCK Board has approved the immediate commencement of a Pre-Feasibility Study on the LCEP.

## **Refundable Research and Development tax offsets**

During the quarter Innovation Australia awarded the Company a “Certificate for Advance Finding” for LCEP. The Advance Finding provides certainty over current and forecast Research and Development claims for up to three years commencing FY 2015/16, for total anticipated expenditure of approximately \$21m to be incurred on the Pre Commercial Demonstration stage of the Project.

Eligible expenditure currently entitles LCK to claim a refundable tax offset, or cash rebate, at the rate of 43.5% of costs incurred. The refund is claimable by the Company following lodgement of its annual income tax return. Approximately \$1.8m of such expenditure was incurred in FY 2015/16 with the Company receiving a cash rebate of \$0.8m during the current quarter. A significant component of expenditure on the Project in the current financial year will also be eligible for a cash rebate.

## **Operating Environment**

Leigh Creek Energy is focussed on the production of energy from its 2,964PJ of 2C Syngas Resources at Leigh Creek, South Australia (see Resource Compliance Statement). Energy output options include both electricity and pipeline quality natural gas. The markets for both gas and electricity are currently severely supply constrained.

### **Instability in the South Australian electricity market**

South Australia experienced a “Condition Black” event on 28 September 2016. Under this event the whole of South Australia suffered a blackout, which in some regions lasted up to five days.

Where previously the focus of the power debate in South Australia had been around pricing, the key focus has now moved to reliability of supply. Both the Federal government in Canberra and the State government in Adelaide have begun to emphasise that the priority for the power network is reliability over sustainability.

Whilst high power prices may make businesses less competitive, an unreliable power supply makes many businesses unfeasible. This is in addition to the direct social impacts of unreliable power supply. South Australia has a very effective and supportive regulatory framework but the power crisis may weaken the state’s industrial base.

With the closure of baseload power stations, these problems are unlikely to be resolved quickly. In November 2016 Engie announced closure of Hazelwood Power Station by the end of March 2017 which is a major power supplier in Victoria and leaves South Australia with less available power for import when the wind turbines are not generating.

### **Rising Prices for Gas**

The media continues to highlight the shortage of gas in the east coast of Australia. There is a limited number of transactions in the gas market, but those reported highlight increasing tightness in the market. Rising prices further exacerbate the South Australian electricity problems as remaining peaking capacity in the state is now solely from gas fired generators. As the cost of gas continues to increase so does the cost of power produced by these generators.

## **Finance**

During the period LCK has been in discussions with financial intermediaries in regard to funding options which will enable the Company to bring forward access to refundable Research and Development tax offsets. Such a facility will provide additional working capital on an incremental basis as eligible Research and Development expenditure is incurred e.g. quarterly in arrears. It is anticipated that negotiation and first draw down under such a facility will be completed in the first quarter of 2017.

At the end of the quarter, 31 December 2016, LCK's cash balance was \$3.0 million. A summary of the cash flows for the quarter are attached in the Appendix 5B

## Tenements

As of 31 December 2016, LCK had a 100% interest in the licences listed below, all in South Australia, through LCK's wholly owned subsidiary ARP TriEnergy Pty Ltd.

- Petroleum Exploration Licence 650
- Gas Storage Exploration Licence 662
- Petroleum Exploration Licence Application 582
- Petroleum Exploration Licence Application 643
- Petroleum Exploration Licence Application 644
- Petroleum Exploration Licence Application 647
- Petroleum Exploration Licence Application 649

## We are an Emerging Energy Company

LCK has a certified PRMS 2C Syngas Resource of 2963.9 PJ of syngas. The syngas produced from the ISG process can be utilised for various purposes including electricity generation, pipeline quality natural gas and fertiliser production. With ongoing studies determining the most appropriate pathway to commercialisation, LCK is ideally situated to take advantage of the current and future anticipated market volatility.

Each of the potential pathways to commercialisation hold in common that the first and immediate step is completion of the Pre-Commercial Demonstration plant (PCD).

The difficulties in the energy markets in Australia were brought into sharp focus by the Condition Black event in South Australia. On 30 November 2016 there was another large outage in South Australia. Since September LCK has been the subject of numerous approaches from the perspective of both an electricity producer and a gas supplier. We are in active discussions with potential customers and partners with regard to the future development of the LCEP.

Commenting on the quarterly progress, Executive Chairman Justyn Peters said:

*"We made good progress during the December quarter towards delivery of the PCD this year and transitioning the company to full scale LCEP in South Australia. There is growing recognition of the extremely serious need for new reliable supplies of energy which LCK is well placed to satisfy. The immediate focus remains completing the baseline environmental report, gaining regulatory approvals and confirmation of required funding. These steps will facilitate the construction of the PCD."*

For further information contact:

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### About Leigh Creek Energy

*Leigh Creek Energy Limited (LCK) is an emerging gas company focused on developing its Leigh Creek Energy Project (LCEP), located in South Australia. The LCEP will produce high value products such as methane, electricity and potentially fertiliser from the remnant coal resources at Leigh Creek utilising In Situ Gasification (ISG) technologies, and will provide long term growth and opportunities to the communities of the northern Flinders Ranges and South Australia.*

*The Company is committed to developing the LCEP using a best practice approach to mitigate the technical, environmental and financial project risks.*

## **Leigh Creek Energy – bringing reliable energy to South Australia.**

### **Resource Compliance Statement**

*The information in this announcement that relates to the estimate and reporting of the Inferred Coal Resource for the LCEP was detailed in an announcement lodged with ASX on 8 December 2015 and is available to view at [www.lcke.com.au](http://www.lcke.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.*

*The information in this announcement that relates to the 2C Contingent Syngas Resource was detailed in an announcement lodged with ASX on 8 January 2016 and is available to view at [www.lcke.com.au](http://www.lcke.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. All estimates are based on the deterministic method for estimation of petroleum resources.*

### **Cautionary Statements**

*The Scoping Study referred to in this announcement has been undertaken to ascertain whether a business case can be made to proceed to more definitive studies on the viability of the LCEP. The Scoping Study is a preliminary technical and economic study of the potential viability of the LCEP. It is based on a Contingent PRMS Syngas Resource and underlying Inferred Coal Resource and on low-level technical and economic assessments. As such, the Study is not sufficient to support the estimation of coal or gas reserves, production targets, costs of production, or revenue, or to provide assurance of an economic development case. Further exploration and evaluation work and appropriate studies are required before the Company will be in a position to do any of those things.*

*The Scoping Study has been carried out entirely on the basis of a Contingent PRMS Syngas Resource and underlying Inferred Coal Resource, each of which have a low level of geological confidence. These resources should not be relied on by investors when making investment decisions.*

### **Forward Looking Statements**

*This announcement may contain forward looking statements. Forward-looking statements include, but are not limited to, statements concerning the Company's planned mining and exploration programs and other statements that are not historical facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements.*

*In addition, estimates of resources could also be forward-looking statements. Although the Company believes that its expectations reflected in these statements are reasonable, they may be affected by a variety of changes in underlying assumptions which could cause actual results or trends to differ, including but not limited to: price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates amongst other items, and the cumulative impact of items.*

*For a more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any forward-looking statement to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.*

## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

### Name of entity

LEIGH CREEK ENERGY LIMITED

### ABN

31 107 531 822

### Quarter ended ("current quarter")

December 2016

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation	(1,832)	(3,283)
(b) development		
(c) production		
(d) staff costs	(591)	(1,733)
(e) administration and corporate costs	(737)	(1,452)
1.3 Dividends received (see note 3)		
1.4 Interest received	10	22
1.5 Interest and other costs of finance paid	(1)	(1)
1.6 Income taxes paid		
1.7 Research and development refunds	791	791
1.8 Other (provide details if material)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(2,360)</b>	<b>(5,656)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(36)	(58)
(b) tenements (see item 10)		
(c) investments		
(d) other non-current assets		



Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment		
	(b) tenements (see item 10)		
	(c) investments		
	(d) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	<b>Net cash from / (used in) investing activities</b>	<b>(36)</b>	<b>(58)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares		
3.2	Proceeds from issue of convertible notes		
3.3	Proceeds from exercise of share options		
3.4	Transaction costs related to issues of shares, convertible notes or options		
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (Government Grant)	20	20
3.10	<b>Net cash from / (used in) financing activities</b>	<b>20</b>	<b>20</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	5,420	8,738
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,360)	(5,656)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(36)	(58)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	20	20
4.5	Effect of movement in exchange rates on cash held		
4.6	<b>Cash and cash equivalents at end of period</b>	<b>3,044</b>	<b>3,044</b>

5.	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	3,044	5,420
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>3,044</b>	<b>5,420</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Current quarter \$A'000
116
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**7. Payments to related entities of the entity and their associates**

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

Current quarter \$A'000



## Mining exploration entity and oil and gas exploration entity quarterly report

8.	<b>Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end</b>	<b>Amount drawn at quarter end</b>
		<b>\$A'000</b>	<b>\$A'000</b>
8.1	Loan facilities		
8.2	Credit standby arrangements		
8.3	Other (please specify)		
8.4	Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

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9.	<b>Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1	Exploration and evaluation	749
9.2	Development	
9.3	Production	
9.4	Staff costs	586
9.5	Administration and corporate costs	618
9.6	Other (provide details if material)	
9.7	<b>Total estimated cash outflows</b>	<b>1,953</b>

10.	<b>Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced				
10.2	Interests in mining tenements and petroleum tenements acquired or increased				

### **Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:   
Company secretary

Date: 31 January 2017

Print name: Jordan Mehrtens

### **Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.