

13 October 2020

ASX ANNOUNCEMENT (ASX:LCK)



Quarterly Report - September 2020

Leigh Creek Energy Limited (“LCK” or “the Company”) provides this operations update for the three months to 30 September 2020.

Company Highlights

- **Final stage preparation of PPL, PFS**
 - The company continues to progress the Pre-Feasibility Study (PFS) for the development of a fully integrated urea production facility at the Leigh Creek Energy Project
- **LCK is well placed to participate in the Federal Government’s Technology Investment Roadmap**
 - LCEP addresses the four ‘big technology challenges’ outlined in the Low Emissions Technology Statement 2020
 - LCK will aggressively target Federal Government funding based on its proven capabilities and its ability to produce hydrogen for less than half the Government target price

LCK is embarking on an important period as it works toward achieving key milestones on its path to becoming a successful syngas and urea producer.

LCK Managing Director Phil Staveley commented on the September 2020 quarter’s activities:

“The company continues to progress the development of the Leigh Creek Energy Project (LCEP) via the use of In-Situ Gasification (ISG) technology to create the ability to produce both nitrogen-based fertiliser and hydrogen products for local and international markets. The LCEP will be the lowest-cost domestic producer of urea, providing supply security to a critical product for the Australian agricultural sector. The LCEP can also produce hydrogen at half the cost of the Federal Government’s target as it seeks to develop a market for Australian produced hydrogen, both domestic and export, for growing Australian and international markets for greener energy.”

Behind the scenes management has been working tirelessly to progress development of the LCEP by pursuing opportunities for funding from both industrials and the Australian Government. In parallel, work continues on the downstream stage PFS for the proposed urea production plant and selection of upstream stage EPCM contracting partners for above ground and subsurface engineering. All of which is expected to be completed in coming months.”

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Final stage preparation of PPL, PFS and EIS

Substantial progress has been made in finalising three key milestones and reports expected in coming months.

The downstream stage Pre-Feasibility Study (PFS) and upstream stage Environmental Impact Statement (EIS) stages are well underway and progressing well. The LCEP has already demonstrated exemplary environmental credentials through the pre-commercial demonstration process and in the 12 months monitoring since.

In parallel, the upstream production licence approval process remains on track for completion in Q4 2020, when it is expected that a Petroleum Production Licence (PPL) will be granted by South Australian government. The Company will keep the market informed of progress towards approval of a PPL. Achieving the award of a PPL will be a significant value milestone for LCK, its shareholder and partners.

Federal Government Low Emissions Technology Statement

On 22 September 2020 the Federal Government released its “Technology Investment Roadmap – First Low Emissions Technology Statement 2020” (the Statement) outlining its plans to prioritise development and funding of five low emission technologies:

- Clean Hydrogen;
- Energy Storage;
- Low Carbon Materials;
- Carbon Capture and Storage; and
- Soil Carbon

LCK is aligned with the Statement priorities as it can potentially produce significant quantities of hydrogen from its flagship LCEP and also plans to use carbon capture and storage (geological sequestration)

The Statement also contained ‘stretch’ targets for priority areas. One was that Australian industry produce clean hydrogen for less than \$2 per kilogram. Following commercial development of the LCEP, it is anticipated that LCK will have the ability to produce up to 200 million kilograms of hydrogen per year. Independent studies estimate that LCEP costs would be around \$1 per kilogram.

The Statement outlined four ‘big technology challenges’, all of which will be addressed by the LCEP:

1. [Delivery of more affordable, clean and reliable energy to households and industry for transportation, heating, production and power.](#)

How the LCEP supports this challenge:

- ✓ The LCEP plans to produce low cost in-situ gas to enable secure, low cost production of fertiliser for the Australia’s agricultural industry;
- ✓ The LCEP will be the lowest-cost domestic producer of urea, providing additional security to a critical product for the Australian agricultural sector;
- ✓ Once fully developed the LCEP will provide up to 2 million tonnes of urea to Australian farmers annually; and
- ✓ The LCEP produces hydrogen as part of the process of converting syngas into ammonia, before the final urea production process, as mentioned above.

2. Expanding production and increasing productivity, creating jobs and substantially reducing emissions from Australia's primary industries.

How the LCEP supports this challenge:

- ✓ Once constructed, the LCEP will increase domestic production of urea, where currently 95% is imported;
- ✓ The LCEP will create significant jobs in regional SA. During construction in 2021 and 2022 the LCEP will be one of the biggest infrastructure projects in South Australia creating more than 2,000 construction jobs. Once operations start in late 2024 LCEP will create 1,500 direct and up to 2,800 indirect jobs for the Northern Flinders Ranges region; and
- ✓ LCEP aims to be carbon neutral by 2030 by employing Carbon Capture, Utilisation and Storage (CCUS) technology and carbon offset.

3. Preserving and expanding onshore manufacturing of energy-intensive products and capturing new export markets for low emissions commodities.

How the LCEP supports this challenge:

- ✓ Commercial production from LCEP's in-situ gas fed urea plant will reduce Australia's reliance on imported urea;
- ✓ All inputs for urea production are available on-site, reducing reliance on variable gas prices;
- ✓ Using the latest fertiliser plant technology will reduce the energy required to produce fertiliser; and
- ✓ The LCEP will also be capable of producing hydrogen for export to emerging international markets

4. Scaling geological and biological sequestration to provide globally significant permanent sequestration of CO₂.

How the LCEP supports this challenge:

- ✓ The LCEP aims to become Australia's largest producer of carbon neutral nitrogen-based fertiliser through CCUS and renewables at the LCEP by using both geological and biological sequestration.

The Federal Government is proposing a \$1.62B funding package to accelerate the development of low emission technologies and is seeking to "back new technologies that will cut emissions in agriculture, manufacturing, industry and transport" (Prime Minister and Minister for Energy and Emissions Reduction joint media release, 17 September 2020).

LCK will be aggressively targeting this funding based on the capabilities outlined above.

LCK will continue to progress with its flagship LCEP as the priority project while it engages with Federal agencies about these funding opportunities and looks forward to being recognised as not just a domestic leader but a global leader in the Hydrogen Conversation.

Tenements

As of 30 September 2020, LCK holds interest in the licences listed below:

	Ownership
Leigh Creek Energy Project permits:	
PRL 247	100%
PEL 650	100%
GSEL 662	100%
PELA 582	100%
PELA 643	100%
PELA 644	100%
PELA 647	100%
PELA 649	100%
Cooper Basin gazettal permits:	
PELA 675	100%
PELA 676	100%
Bridgeport farm-in permits 1:	
ATP 2023	0% ¹
ATP 2024	0% ¹

¹ LCK has the option for a 20% participating interest at the end of the farm in obligations under its agreement with Bridgeport Energy (QLD) Pty Limited

The Leigh Creek Energy Project

Further work on development costs, including completion of outbound logistics studies, will be undertaken during FY21, and we will keep the market updated on the project development.

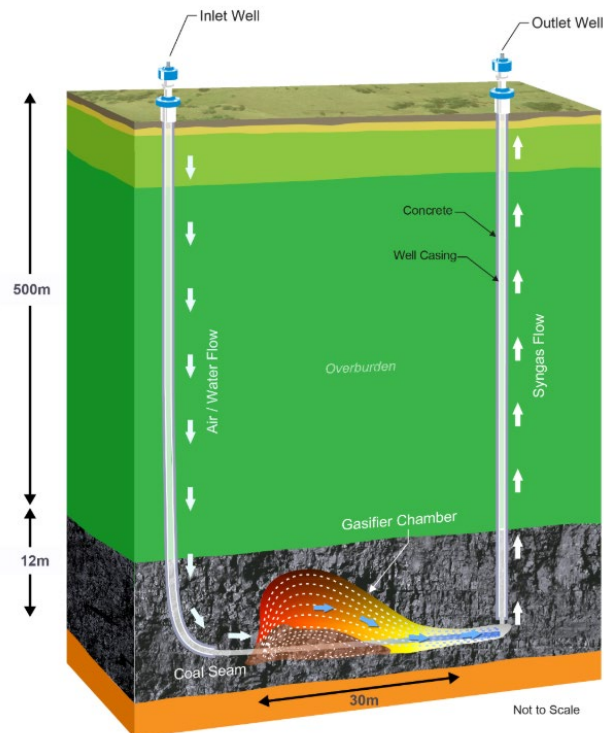
The LCEP is located at Leigh Creek, 550 kilometres north of Adelaide, South Australia. When operational, the LCEP will become the largest ISG project in Australia and a significant supplier of low cost, domestically-produced urea to Australia's agricultural sector.

The LCEP is being developed to generate unconventional gas, or syngas, from deep coal seams using gasification technology. LCK has proved and probable 2P reserves of 1,153 PJ of gas from 31% of the coal at Leigh Creek

LCK will use its syngas as feedstock for production of urea, a key fertiliser in agriculture.

Initial modelling based on studies from thyssenkrupp indicates that the LCEP can market urea into the domestic and import markets at or below import price parity from the dominant lowest quartile producers from the Gulf States.

The In-situ Gasification Process



Cooper Basin Oil & Gas Exploration

Following the successful application for two permits in the 2019 SA Acreage Release, we are progressing land access agreements the traditional owners.

We are also preparing for reprocessing of existing seismic data to resolve multiple leads.

Bridgeport Energy (QLD) Pty Limited, as operator of our Queensland interests are progressing well on their Permit Year 1 obligations.

Finance

As of 30 September 2020, the Company's total cash balance was AUD\$5.02 million.

The accompanying Appendix 5B (Quarterly Cashflow Report) includes a summary of cashflow inflows and outflows for the quarter, including amounts in item 6.1 which were executive and non-executive director fees paid as salaries and wages.

Further information:

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Resource Compliance Statement

The information in this announcement that relates to the 2P Syngas Reserve was detailed in an announcement lodged with ASX on 27 March 2019 and is available to view at 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.

The Board of Leigh Creek Energy Limited authorised this announcement to be provided to the ASX.

About Leigh Creek Energy

Located in South Australia, Leigh Creek Energy Limited (ASX:LCK) is an emerging energy company focused on developing its Leigh Creek Energy Project (LCEP). The LCEP will produce nitrogen-based fertiliser and/or hydrogen products at Leigh Creek by utilising ISG technologies.

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

For information on the ISG process [CLICK](#)

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

LEIGH CREEK ENERGY LIMITED

ABN

31 107 531 822

Quarter ended ("current quarter")

September 2020

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation (if expensed)		
(b) development		
(c) production		
(d) staff costs	(726)	(726)
(e) administration and corporate costs	(521)	(521)
1.3 Dividends received (see note 3)		
1.4 Interest received	2	2
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives	25	25
1.8 Other (provide details if material)		
1.9 Net cash from / (used in) operating activities	(1,220)	(1,220)
2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) entities		
(b) tenements		
(c) property, plant and equipment	12	12
(d) exploration & evaluation (if capitalised)	(650)	(650)
(e) investments		
(f) other non-current assets		

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment		
	(d) investments		
	(e) 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	Net cash from / (used in) investing activities	(638)	(638)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options		
3.4	Transaction costs related to issues of equity securities or convertible debt securities		
3.5	Proceeds from borrowings	147	147
3.6	Repayment of borrowings	(69)	(69)
3.7	Transaction costs related to loans and borrowings	(14)	(14)
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	64	64
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	6,814	6,814
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,220)	(1,220)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(638)	(638)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	64	64

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
4.5	Effect of movement in exchange rates on cash held		
4.6	Cash and cash equivalents at end of period	5,020	5,020

5. Reconciliation of cash and cash equivalents 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	3,498	5,293
5.2	Call deposits	1,522	1,521
5.3	Bank overdrafts		
5.4	Other (Term deposits)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	5,020	6,814

6. Payments to related parties of the entity and their associates

- 6.1 Aggregate amount of payments to related parties and their associates included in item 1
- 6.2 Aggregate amount of payments to related parties and their associates included in item 2

**Current quarter
\$A'000**

308

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

Explanation:

Executive and Non-Executive Directors fees.

Piper Alderman lawyers were paid for legal services rendered to the Group. Non-Executive Director Mr Greg English is a partner at Piper Alderman lawyers.

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1 Loan facilities	750	360
7.2 Credit standby arrangements		
7.3 Other (please specify)		
7.4 Total financing facilities	750	360

7.5 **Unused financing facilities available at quarter end** 390

7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.

R&D working capital facility with Commonwealth Bank of Australia. The facility remains available until December 2020.

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (Item 1.9)	(1,220)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	(650)
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(1,897)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	5,020
8.5 Unused finance facilities available at quarter end (Item 7.5)	390
8.6 Total available funding (Item 8.4 + Item 8.5)	5,410
8.7 Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	2.85

8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:

1. Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: N/A

2. Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

3. Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: N/A

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.

Date: 13 October 2020

Authorised by: ..By the Board
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow 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 cash flow 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.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.