LCK awards EPCCF contract for the 1Mtpa urea plant to South Korean engineering and construction company, DL E&C.

Leigh Creek Energy Limited (LCK) is an ASX listed energy company focussed on developing its Leigh Creek Energy Project (LCEP) that is targeting the production of syngas by in situ gasification of coal which it will then convert to urea to be sold as fertiliser.

LCK awards EPCCF contract to DL E&C

LCK has awarded the Engineering, Procurement, Construction, Commissioning and Financing (EPCCF) contract to listed engineering, procurement and construction contractor, DL E&C. The contract is for development of the full commercial stage of the Leigh Creek Energy Project (LCEP), consisting of a 1mtpa zero carbon urea production facility in South Australia with a target of reaching final investment decision (FID) by late 2022.

A letter of support from a major South Korean bank has been issued to provide debt finance for up to 70% (or approximately A$1.5b) of the Stage 2 project cost.

Concurrently, LCK will be looking to secure an offtake agreement for the urea production. We would assume a minimum contracted level would be a tonnage that covered the operating and financing costs, which will be dependent on urea pricing at the time.

Spot FOB Middle East urea prices are currently ~US$479/t or ~A$640/t (12 month forward US$446/t). The pre-feasibility study had urea pricing at ~A$380/t in Year 1 lifting to ~A$716/t in Year 10.

Capital raising

In mid–June LCK raised $18m by issuing 100m shares at $0.18, (~$16.9m post raising costs). The 100m shares each had an unlisted option attached, exercisable at $0.28 within the next three years. 10m additional options (same terms) were issued to the placement broker.

Valuation

LCK is in the early stages of project execution and thus has a number of milestones to meet before first urea is sold into the market in 2025. Given we have assumed a 70% debt funding of the Stage 2 project capex, LCK will require additional equity funding between now and a fully commissioned plant.

Our base case valuation assumes LCK sells down ~40% of the LCEP equity at a 25% discount to our FY26 project equity value to minimise equity issuance between now and FY26.

We have adjusted our valuation reflecting the 100m new shares issued at $0.18 and the 110m options forecast to exercise at $0.28. On this basis we value LCK at A$1.28 (previously $1.44) in FY26.

We discount back the FY26 valuation at our forecast cost of equity to give a A$0.51 (previously $0.57) valuation today.

Leigh Creek Energy Limited (LCK) is an ASX listed energy company focussed on developing its Leigh Creek Energy Project (LCEP), located 550km north of the capital city of Adelaide in the state of South Australia. LCEP is targeting the production of syngas by in situ gasification of coal which it will then convert to urea to be sold as fertiliser.

https://www.lcke.com.au/

Stock	LCK.ASX
Price	A$0.15
Market cap	A$124m
Valuation	A$0.51

Company data	
Net cash (March 21)	A$7.6m
Shares on issue	827.5m

Next news	
Late July 2021	4Q FY21 Appendix 5B
Late August 2021	FY20 Annual Result

LCK Share Price (A$)

Source: FactSet

David Fraser
david.fraser@mstaccess.com.au

Financial data table

Leigh Creek Energy — LCK-AU

Year end 30 June

MARKET DATA		
Price	**$**	**0.15**
52 week high / low	$	0.27 - 0.06
Base case valuation	**$**	**0.51**
Shares on issue (basic)	**m**	**827.5**
Options	m	177.3
Potential shares on issue (diluted)	**m**	**1,004.8**
Market capitalisation	**$m**	**124.1**

12 month relative performance versus S&P/ASX Small Ordinaries

INVESTMENT FUNDAMENTALS		FY20	FY21E	FY22E	FY23E	FY24E
Reported NPAT	$m	(7.2)	(8.4)	(9.7)	(10.6)	(11.9)
Underlying NPAT	**$m**	**(7.2)**	**(8.4)**	**(9.7)**	**(10.6)**	**(11.9)**
EPS Reported (undiluted)	¢	(1.3)	(1.2)	(1.2)	(1.3)	(1.4)
EPS Underlying (undiluted)	**¢**	**(1.3)**	**(1.2)**	**(1.2)**	**(1.3)**	**(1.4)**
Underlying EPS growth	%	n/m	n/m	n/m	n/m	n/m
P/E Reported (undiluted)	x	n/m	n/m	n/m	n/m	n/m
P/E Underlying (undiluted)	**x**	**n/m**	**n/m**	**n/m**	**n/m**	**n/m**
Dividend	**¢**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Payout ratio	%	0%	0%	0%	0%	0%
Yield (Y/E/ spot)	**%**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Franking	%	n/a	n/a	n/a	n/a	n/a
Gross Yield (Y/E/ spot)	**%**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

KEY RATIOS		FY20	FY21E	FY22E	FY23E	FY24E
Year end shares	m	655	813	828	828	828
Market cap (Y/E / Spot)	**$m**	**43.9**	**122.0**	**124.1**	**124.1**	**124.1**
Net debt /(cash)	$m	(6.3)	(22.1)	(10.2)	(10.4)	785.7
Enterprise value	**$m**	**37.6**	**100.0**	**113.9**	**113.7**	**909.8**
EV/Sales	x	n/m	n/m	268.8	67.1	536.7
EV/EBITDA	**x**	**n/m**	**n/m**	**n/m**	**n/m**	**n/m**
EV/EBIT	x	n/m	n/m	n/m	n/m	n/m
Net debt / Enterprise Value	x	(0.2)	(0.2)	(0.1)	(0.1)	0.9
Gearing (net debt / EBITDA)	**x**	**n/m**	**n/m**	**n/m**	**n/m**	**n/m**
Operating cash flow per share	¢	0.2	(0.8)	(1.0)	(1.0)	(1.1)
Price to operating cash flow	**x**	**42.0**	**n/m**	**n/m**	**n/m**	**n/m**
Free cash flow	**$m**	**(1.9)**	**(7.6)**	**(30.0)**	**(19.3)**	**(1,178.7)**
Free cash flow per share	¢	(0.3)	(1.1)	(3.6)	(2.3)	(142.4)
Price to free cash flow	**x**	**n/m**	**n/m**	**n/m**	**n/m**	**n/m**

Project assumptions	
2P Gas reserves (PJ)	**1,153**
2C Gas resource (PJ)	1,469
2P Reserve percentage of project coal reserves	31%
Indicated and inferred coal resource (Mt)	**301**
Syngas production (PJ p.a.) FY26	35
Forecast capital expenditure (A$b)	**2.63**
Stages 1 & 2	2.28
Year 17 & 18	0.35
Assumed gearing (Debt to Assets)	70.0%

CASH FLOW ($'000) (Appendix 4C)		3Q20	4Q20	1Q21	2Q21	3Q21
Receipts	$m	0.0	0.0	0.0	0.0	0.0
Grants, interest & other	$m	0.0	0.1	0.0	0.5	0.0
Total cash receipts	**$m**	**0.0**	**0.1**	**0.0**	**0.5**	**0.0**
Staff costs	$m	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)
Admin costs	$m	(0.6)	(0.4)	(0.5)	(0.8)	0.0
Cash operating costs	**$m**	**(1.4)**	**(1.1)**	**(1.2)**	**(1.5)**	**(0.7)**
PPE	$m	(0.1)	(0.0)	0.0	0.0	(0.1)
Exploration & Evaluation	$m	(0.5)	(0.6)	(0.7)	(0.3)	(1.2)
Net investing and financing	**$m**	**(0.6)**	**(0.6)**	**(0.6)**	**(0.3)**	**(1.3)**
Share issuance	$m	1.7	5.6	0.0	0.1	6.6
Other	$m	0.0	0.0	0.0	0.0	0.0
Net financing	**$m**	**1.9**	**5.2**	**0.1**	**(0.5)**	**6.3**
Net cash movement	**$m**	**(0.0)**	**3.5**	**(1.8)**	**(1.8)**	**4.3**
Cash Q End	**$m**	**3.8**	**6.8**	**5.0**	**3.3**	**7.6**

PROFIT AND LOSS		FY20	FY21E	FY22E	FY23E	FY24E
Sales	**$m**	**0.0**	**0.0**	**0.4**	**1.7**	**1.7**
Operating costs	$m	0.0	0.0	(0.3)	(1.0)	(1.0)
Gross profit	**$m**	**0.0**	**0.0**	**0.2**	**0.7**	**0.7**
Other income	$m	0.1	0.1	0.1	0.1	0.1
Share based payments	$m	(0.9)	(1.1)	(1.2)	(1.2)	(1.5)
Total operating costs	$m	(6.1)	(7.2)	(8.4)	(9.2)	(10.2)
EBITDA	**$m**	**(7.0)**	**(8.2)**	**(9.3)**	**(9.6)**	**(10.9)**
Depreciation & amortisation	$m	(0.1)	(0.2)	(0.5)	(1.1)	(1.1)
EBIT	$m	(7.0)	(8.4)	(9.8)	(10.7)	(12.0)
Net interest	$m	(0.1)	0.0	0.1	0.1	0.1
Associate earnings	$m	0.0	0.0	0.0	0.0	0.0
Impairments	$m	0.0	0.0	0.0	0.0	0.0
Pretax Profit	$m	(7.2)	(8.4)	(9.7)	(10.6)	(11.9)
Tax expense	$m	0.0	0.0	0.0	0.0	0.0
Minorities	$m	0.0	0.0	0.0	0.0	0.0
NPAT	**$m**	**(7.2)**	**(8.4)**	**(9.7)**	**(10.6)**	**(11.9)**

BALANCE SHEET		FY20	FY21E	FY22E	FY23E	FY24E
Cash	$m	6.8	22.1	10.2	10.4	13.4
Receivables	$m	0.6	0.2	0.2	0.2	0.2
Inventory	$m	0.0	0.0	0.0	0.0	0.0
Other	$m	0.1	0.1	0.1	0.1	0.1
Current assets	**$m**	**7.5**	**22.4**	**10.6**	**10.8**	**13.7**
PPE	$m	0.4	0.4	14.9	13.8	1,182.2
Exploration and evaluation	$m	27.2	29.2	36.2	47.2	47.2
Right of use asset	$m	0.2	0.2	0.2	0.2	0.2
Intangibles	$m	0.0	0.0	0.0	0.0	0.0
Other	$m	0.6	0.6	0.6	0.6	0.6
Non current assets	**$m**	**28.4**	**30.4**	**51.9**	**61.9**	**1,230.2**
Total Assets	**$m**	**35.9**	**52.8**	**62.5**	**72.6**	**1,243.9**
Accounts Payable	$m	0.5	0.5	0.5	0.6	0.6
Borrowings	$m	0.5	0.0	0.0	0.0	0.0
Other	$m	0.6	0.8	0.9	1.0	1.1
Current liabilities	**$m**	**1.6**	**1.3**	**1.4**	**1.6**	**1.7**
Borrowings	$m	0.1	0.0	0.0	0.0	799.1
Lease liabilities	$m	0.1	0.1	0.1	0.1	0.1
Other	$m	0.0	0.0	0.0	0.0	0.0
Non current liabilities	**$m**	**0.2**	**0.1**	**0.1**	**0.1**	**799.2**
Total Liabilities	**$m**	**1.8**	**1.4**	**1.6**	**1.7**	**800.9**
Equity	$m	81.1	105.7	124.8	145.3	541.8
Retained earnings	$m	(51.0)	(59.3)	(69.0)	(79.7)	(91.6)
Reserves / Other	$m	4.1	5.0	5.2	5.3	(7.2)
Shareholder's equity	**$m**	**34.2**	**51.4**	**61.0**	**70.9**	**443.1**

CASH FLOW		FY20	FY21E	FY22E	FY23E	FY24E
EBITDA	$m	(7.0)	(8.2)	(9.3)	(9.6)	(10.9)
Add back share compensation	$m	0.9	1.1	1.2	1.2	1.5
Change in working capital	$m	0.0	0.9	0.1	0.0	0.1
Cash flow pre interest and tax	**$m**	**(6.0)**	**(6.2)**	**(8.1)**	**(8.4)**	**(9.3)**
Net interest	$m	0.0	0.0	0.1	0.1	0.1
Tax paid / Refund / Other	$m	6.9	0.6	0.0	0.0	0.0
Operating cash flow	**$m**	**0.9**	**(5.5)**	**(8.0)**	**(8.3)**	**(9.2)**
Stage 1 development	$m	(0.0)	(0.1)	(15.0)	0.0	0.0
Stage 2 development	$m	(2.7)	(2.0)	(7.0)	(11.0)	(1,170)
Other	$m	0.0	0.0	0.0	0.0	0.0
Investing cash flow	**$m**	**(2.8)**	**(2.1)**	**(22.0)**	**(11.0)**	**(1,169.5)**
Change in Equity	$m	10.4	24.6	19.1	20.5	396.5
Increase / (decrease) in borrowings	$m	(3.4)	(0.4)	0.0	0.0	799.1
Dividend / Other	$m	(0.6)	(1.4)	(1.0)	(1.0)	(13.9)
Financing cash flow	**$m**	**6.4**	**22.8**	**18.1**	**19.5**	**1,181.7**
Change in Cash	$m	4.5	15.2	(11.8)	0.2	2.9

Source: Company data, MST Access

Investment Thesis:

LCK is an ASX listed energy company focussed on developing the Leigh Creek Energy Project (LCEP), located 550km north of Adelaide in South Australia. LCEP is targeting the production of syngas by in situ gasification (ISG) of underground coal which it will then convert to urea to be sold as fertiliser.

Please find our initiation on LCK on the MST Access website:

https://www.mstaccess.com.au/research-notes/

Global demand for urea

The world's population is expected to increase by 2 billion people in the next 30 years, from 7.7 billion to 9.7 billion. With a growing population comes an increase in demand for agricultural produce with farmers needing to produce more, using less land and less water. Every time a crop is harvested, vital nutrients are removed from the soil. Applying urea is one of the most common way to replace these nutrients. Commercial fertilisers increase yields by 30 to 50% in crops such as wheat, barley and rice.

Urea is one of the most popular fertilisers as it has a high nitrogen content (one tonne of urea contains 460 kg of nitrogen), is easy to transport and apply and is quickly absorbed by plants.

In Australia 20,000 farmers apply urea to more than 11 million hectares of land annually consuming approximately 2 Mtpa. Of the 2 million tonnes of urea used in Australia each year, 95% is imported from the Middle East and Asia.

How will LCK meet the global demand for urea?

Leigh Creek Energy's (LCK) flagship project is the Leigh Creek Energy Project (LCEP). It is proposed the LCEP will initially produce 1 Mtpa of urea (with the potential to increase to 2 Mtpa) from a dedicated facility at a low cash cost using syngas sourced from its wholly owned resources.

LCEP plans to send granular urea by rail and sea to domestic markets. Excess urea outside of the main demand seasons in Australia will be exported overseas.

LCK competitive advantages

We believe LCEP urea will be globally competitive because:

- **LCEP will be a low-cost producer** - LCEP operating costs will be very competitive as it forecasts it can produce syngas (mixture of methane (CH_4), hydrogen (H_2), cabin monoxide (CO) and carbon dioxide (CO_2)) on site for as little as A$1 per gigajoule, putting the project in the lowest cost quartile of global urea producers.
- **The inputs for urea production are on site** - Urea operations are proposed to be vertically integrated as gas and electricity will be produced on site. This eliminates commodity and supply risks associated with buying gas and power for urea production
- **LCEP will have a reliable supply of syngas** - Syngas has been successfully produced at LCEP using in-situ gasification (ISG) during the project's pre-commercial demonstration phase. Leigh Creek geology is ideally suited for ISG due to the nature of the coal resource and the local geology.
- **It has 30+ years of gas reserves** - Exploration and production permits have 1,153 PJ of 2P gas reserves based on 31% of the project's coal resources of 301.2 Mt coal. The reserves are sufficient to operate a 1Mtpa urea plant for 30 years plus.
- **LCEP has access to infrastructure** - The Leigh Creek site has access to existing road and rail infrastructure for transport to domestic and export markets. LCK believe that LCEP urea will be competitive in the wholesale Australian market as it will be cheaper, faster to market and less risky for urea traders than importing it from the Middle East and Asia. LCEP plans to export a proportion of its urea to take advantage of both the autumn-winter Australian season and the spring-summer Asian market. Ports accessible from Leigh Creek are central to the main Australian urea markets.

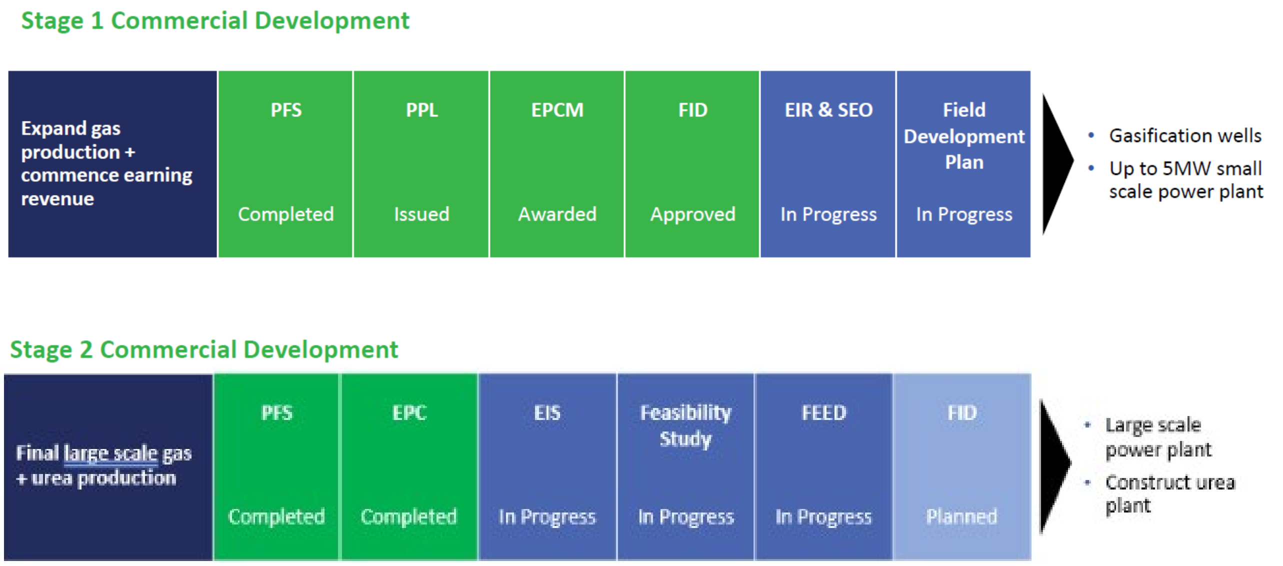
Forecast near term activities

The timelines show LCK's commercial development milestones for its upstream and downstream developments.

During the March quarter 2021, the Final Investment Decision (FID) was approved for Stage 1 of the LCEP.

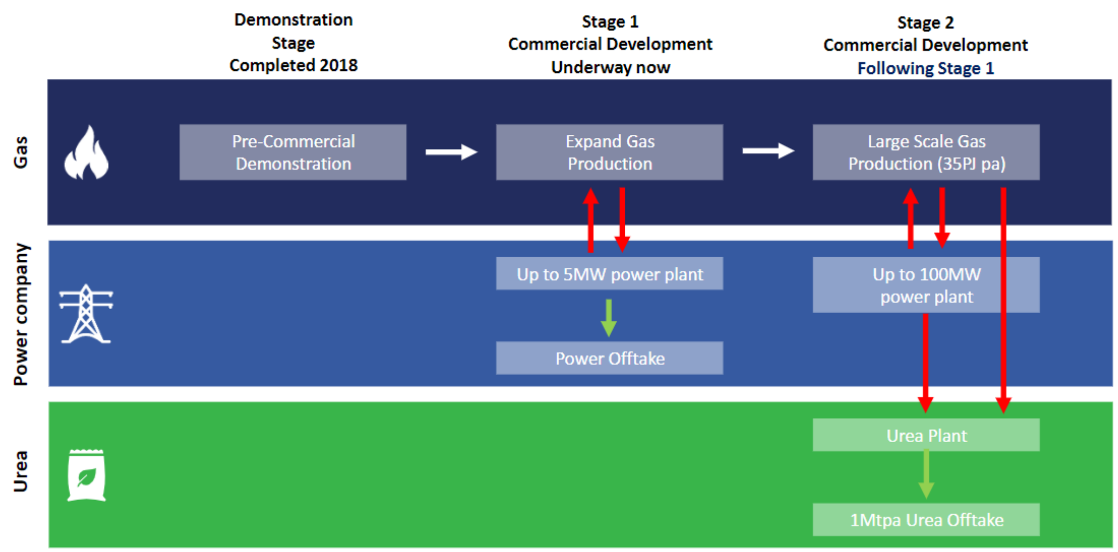
The announcement that LCK has awarded the Engineering, Procurement, Construction, Commissioning and Financing (EPCCF) contract to engineering, procurement and construction contractor, DL E&C Co has progressed Stage 2 with a target of reaching final investment decision (FID) by late 2022.

Figure 1 – LCEP proposed timeline comprises two key development workstream stages



Source: Company

Figure 2 – LCEP development pathway



Source: Company

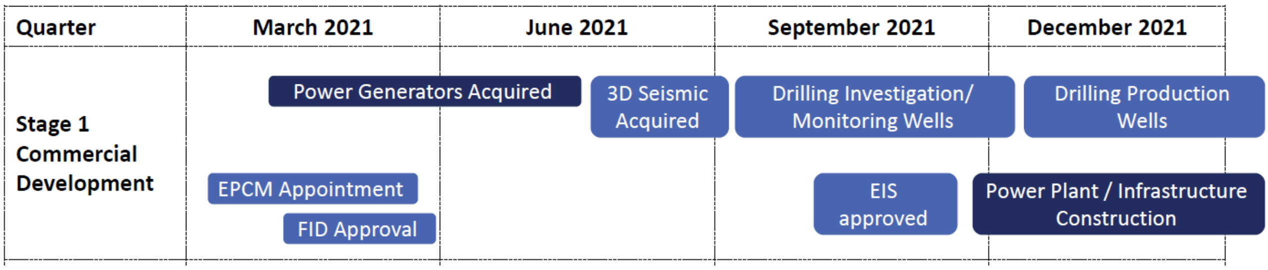
Stage 1 - Initial syngas production and small-scale power generation

During the March quarter 2021, the Final Investment Decision (FID) was approved for Stage 1 of the LCEP.

Stage 1 comprises drilling further wells, generating syngas and installing a small power plant to use the gas. Once the Stage 1 wells have been drilled, the gasifiers will be initiated and developed to produce syngas. The syngas will be fed into the small power plant and the electricity generated will be used to power electric driven compressors and the balance will be monetised by selling into the grid or directly to an end user. This process will avoid using diesel generators and flaring ramp up gas which will minimise CO_2 generation and reduce operating costs.

Following FID approval, the Company commenced its EPCM work program and procurement of long lead time items, such as electricity generators casing and compressors. As part of Stage 1 work programs, drilling services have been awarded to inGauge Energy, an Australian onshore drilling and completions project company.

Figure 3 – LCEP proposed timeline for Stage 1.



Source: Company

The scope of inGauge's engagement includes:

- Investigating options for well design and integrity measures based on the LCK gasifiers design
- Managing approval requirements in conjunction with LCK
- Procurement (tender scope, specifications, recommendation and assistance) of drilling contractors
- On site drill operations management

Prudentia has been awarded the engineering and design contract and will manage selection, engineering, construction and commissioning of above ground facilities.

The scope of Prudentia's engagement includes:

- Technology selection, engineering and design development
- Development of documents, specifications, and drawings for use with procurement and construction activities
- Development and tracking of project controls including schedule and budget
- Development of scope of work packages and management of procurement activities
- Construction and commissioning support

LCK has an established relationship with inGauge and Prudentia, as both companies worked on the 2018 pre-commercial demonstration project.

As part of Stage 1, LCK has prepared the Environmental Impact Report (EIR) and Statement of Environmental Objectives (SEO) for the Leigh Creek Energy Project Stage 1 Commercial Development on Petroleum Production Licence 269.

EIR submission: https://www.lcke.com.au/Portals/87/Content/Documents/2020/LCKE-EIR-Stg-1-Comcl-Develpmnt-20201222.pdf

SEO submission: https://www.lcke.com.au/Portals/87/Content/Documents/2020/LCKE-SEO-Stg-1-Comcl-Develpmnt-20201222.pdf

LCK has formally submitted the reports for assessment to the South Australian Department of Energy and Mining (DEM).

Stage 2 – Large scale syngas and urea production

LCK has awarded the Engineering, Procurement, Construction, Commissioning and Financing (EPCCF) contract to engineering, procurement and construction contractor, DL E&C. The contract is for development of the full commercial stage of the Leigh Creek Energy Project (LCEP), consisting of a 1mtpa zero carbon urea production facility in South Australia with a target of reaching final investment decision (FID) by late 2022.

A letter of support from a major South Korean bank has been issued to provide debt finance for up to 70% (or approximately A$1.5b) of the Stage 2 project cost.

Concurrently, LCK will be looking to secure an offtake agreement for the urea production.

DL E&C is a leading global engineering, procurement and construction contractor with deep technical expertise and corporate capability.

DL E&C has successfully completed more than 600 projects of construction, civil engineering, and chemical plant projects in 35 countries worldwide

Key terms of the contract

DL E&C will manage the LCEP Bankable Feasibility Study (BFS) and Front End Engineering & Design (FEED) stages, ahead of the Final Investment Decision (FID).

Once FID is achieved and all relevant key engineering data and project execution documents are finalised with LCK, DL E&C will then perform the engineering, procurement construction and commissioning of the urea production facilities.

Under the contract the turnkey price of the EPCCF will be approximately 70% (or approximately A$1.5b) debt funded, the major portion of which will be funded by South Korean banks but with the potential for involvement of other multi-national banks.

Investors will keen to understand when the final financing is agreed

- what the level of gearing (could it be greater than 70%), and
- the timing of the equity component.

The finance will be provided subject to usual commercial terms and is dependent on a positive FID. The remaining 30% will be funded by a mixture of debt and equity.

Next Steps

DL E&C will make an immediate start on the BFS. The FEED will then follow with a target FID in late 2022.

We estimate that for a scope of work like this, the engineering company will typically be paid ~1.5% - 2.0% of the forecast project cost. Based on a forecast LCEP construction capital expenditure number of A$2.25b, this equates to A$34m – A$45m.

This would likely be split:

- 15% on signing (A$5m – A$7m), FY22
- 25% on signing of final investment decision (A$9m – A$11m), FY23, and
- the balance (A$21m – A$27m) on project construction completion, FY25.

Funding requirements over the next 24 months, FY22 & FY23

Corporate overheads

Cash corporate overheads, exploration and evaluation costs have been running at ~A$1.5m - A$2.0m per quarter over the last couple of years, so circa A$8.0m per annum. Given new hires and a step up in work associated with Stage 1 and Stage 2 progression we have assumed corporate costs will move up to ~A$10m in the medium term, so A$20m over FY22 and FY23.

Stage 1 development

We forecast ~A$15m will be required to fund the drilling and construction of the initial gasifier chambers ($6.5m), additional seismic ($1.0m), and associated production plant and the purchase of a small power plant ($6m) to demonstrate project proof of concept.

Stage 2 development

We forecast up to ~A$15 - A$20m will be required to fund the first two milestone payments for the Stage 2 feasibility study to be carried out by DL E&C in FY22 and FY23.

FY22 & FY23 cash spend

Thus, we forecast LCK's cash spend over the next two years will be ~A$50m - A$55m (not including any Stage 2 construction work).

Equity funding

Energy Exploration Capital Partners placement

LCK completed a $6.5m capital raise ($6m post fees) by way of a placement to Energy Exploration Capital Partners (EECP) in January 2021. EECP has granted LCK an unilateral option to place an additional $13m of shares to EECP to raise and additional $12m net of fees.

Mid-June equity placement

In mid–June LCK raised $18m by issuing 100m shares at $0.18, (~$16.9m post raising costs). The 100m shares each had an unlisted option attached, exercisable at $0.28 within the next three years. 10m additional options (same terms) were issued to the placement broker.

Following both recent capital raises we forecast LCK will have ~$20m of cash at FY21 year end.

Forecast requirements

Thus, based on our forecasts and LCK's existing cash position we forecast the company will need additional equity of ~A$20m ~ A$25m, assuming the EECP option is exercised, or ~A$30m ~ A$35m if the EECP option is not exercised.

Our forecasts assume ~$40m of equity issuance over the next two years (previously $60m).

Leigh Creek Energy Valuation

The LCK valuation is dependent on the LCEP valuation (see initiation) and more importantly how the project is funded.

Our LCEP valuation is unchanged from our initiation where we forecast an equity value for 100% of the project at A$2,524m.

Capital structure

LCK currently has 827.5m shares on issue (712.6 m at initiation) and ~177m options outstanding (76.9m at initiation) (See Appendix 1).

LCK completed a ~$6.5m capital raise ($6m post fees) by way of a placement to Energy Exploration Capital Partners (EECP) in January 2021. Under the terms of the placement EECP can choose the timing of the issuance. (See Appendix 2 for more detail on terms of the raise).

To date EECP has been issued 35m shares at $0.14 ($4.9m) so has $1.1m of shares from the first placement to be issued.

EECP has granted LCK an unilateral option to place an additional two tranches of shares to EECP for A$12m. See Appendix 2.

Equity funding required and LCK valuation

LCK is in the very early stages of project execution and thus has a number of milestones to meet before first urea is sold into the market in 2025.

Given we have assumed a 70% debt funding of project capex LCK will require additional equity funding between now and a fully commissioned plant.

Options include equity capital raises and /or partnering and a sell down of the project to fund LCK's share of the required equity contribution.

On the basis that LCK funded 100% of the project by itself, we estimate funding required between now and FY26 is ~$800m.

We forecast funding requirements through to first production in 2025 of:

- Fees payable to DL & EC (up to ~A$45m) for the Feasibility study, FEED and EPCC work and financing arrangement (we estimate these at 1.5% - 2.0% of construction cost of ~ A$2.25b),
- Stage 1 funding of ~A$15m,
- Stage 2 LCEP equity requirements of ~A$675m,
- and corporate working capital costs of ~ A$35m – A$40m. NB: From FY26 onwards we assume the corporate overhead is part of the LCEP project operating costs.

We believe raising ~A$775m of new equity between now and the LCEP commissioning in 2025 may be difficult for LCK to do on its own.

What if LCK sold down a stake in the LCEP

Our view is that it would be more attractive for existing LCK equity holders for LCK to sell down a stake in the LCEP to fund LCK's equity contribution.

Our base case valuation assumes LCK sells down ~40% of the LCEP equity at a 25% discount to our FY26 project equity value to minimise the equity funding required by existing LCK equity holders.

On this basis we value LCK at A$1.28 in FY26 or A$0.51 today (discounted back at our assumed cost of equity (Ke) of 20%.

Figure 4 – MST Forecast LCK Valuation with a 40% sell down of LCEP

A$m			
Cash flows (Project Value)	**4,205**	**Equity required by FY26**	**805**
Less project net debt	(1,681)	Assumed LCK Price prior to raisi	$0.15
Equity value LCEP FY26	**2,524**	Discount to market including raisi	20%
Implied value of stake sold	1,020	Issue price (A$)	$0.12
LCK share of LCEP equity post project sell dc	**1,504**	Assumed equity raised in FY22 8	40
Cash raised from option exercise	2	Assumed shares issued in FY22	330
LCK Valuation FY26	**1,506**	**Project sell down**	
Current forecast diluted shares (m)	847	Equity required in FY24 & FY25	765
Share issued in FY22 & FY23 (m)	330	Received for percentage of proje	765
Forecast shares on issue FY26 (m)	1,177	Discount to forecast project equit	25%
Equity value per share FY26	**$1.28**	Implied value of stake sold	1,020
Cost of equity (Ke)	20.1%	Implied % of project sold	40%
Discounted back to today	**$0.51**	**LCK Equity funding required in**	**0**

Source: Company, MST Access

We have run an analysis to demonstrate LCK valuation sensitivity to the percentage of LCEP sold down and the price the required equity is raised at.

Clearly, if the LCK price lifts, the number of shares issued to raise the forecast equity requirements over FY22 and FY23 will be lower. Additionally, the higher the price the stock trades at, a greater number of options will exercise raising additional cash and thus limiting the funding required over the next two years; i.e. If all the current outstanding options exercised, LCK would issue an additional 177m shares and raise ~A$45m.

Figure 5 – MST Forecast Spot LCK Valuation at different LCEP % sell down and FY22&23 equity raise prices (A$)

Assumed FY22 & FY23 raising price	Project sell down discount to project equity value: 15%	20%	25%	30%	35%
0.15	0.55	0.53	0.51	0.49	0.46
0.20	0.59	0.57	0.55	0.52	0.49
0.25	0.62	0.60	0.58	0.55	0.52
0.30	0.64	0.62	0.60	0.57	0.53
0.35	0.66	0.64	0.61	0.58	0.55
0.40	0.67	0.65	0.62	0.59	0.56

Source: Company, MST Access

Risks to our forecasts and valuation

Key risks to our financial forecasts and valuation include:

- Capital cost of the project and project delays.
- Regulatory approvals.
- Technical success and urea production rate being achieved.
- Company and project funding.
- Competition from new and existing players.
- Global urea pricing.
- Foreign exchange rates impacting urea pricing and A$ sales.
- Raw feed costs – successful operation of gasifiers and syngas composition.
- Risk of adverse events, product quality or other safety issues.
- Key management personnel and employees.
- General economic conditions impacting on urea demand.

Appendix 1 – Capital structure and outstanding options

We have assumed for valuation purposes LCK trades at our valuation before FY26 so all the options exercise and A$45m of cash is raised.

Figure 6 – Leigh Creek Energy Capital Structure

	Options in the money	Total (m)	Exercise Price	Cash raised (A$m)	Exercise Date
Current Shares on issue (m)	**827.5**	**827.5**			
Plan 11	0.0	0.8	$0.30	0.0	8-May-21
Plan 5	0.0	2.0	$0.35	0.0	10-Oct-21
Plan 5	0.0	2.0	$0.45	0.0	10-Oct-21
Plan 9	0.0	5.0	$0.25	0.0	16-Jul-22
Plan 16	0.0	0.8	$0.25	0.0	16-Jul-22
Plan 8	0.0	5.0	$0.25	0.0	3-Jul-22
Plan 7	0.0	5.0	$0.35	0.0	17-Apr-23
Plan 12	0.0	1.5	$0.20	0.0	31-Oct-21
Plan 12	0.0	1.5	$0.22	0.0	31-Oct-21
Plan 12	0.0	1.5	$0.24	0.0	31-Oct-21
Plan 12	0.0	1.5	$0.26	0.0	31-Oct-21
Plan 10	0.0	6.3	$0.23	0.0	12-Dec-23
LCKAE	0.0	5.5	$0.18	0.0	16-Mar-23
LCKAE	5.5	5.5	$0.14	0.7	16-Mar-23
LCKAI	8.0	8.0	$0.12	1.0	18-Aug-24
LCKAJ	0.2	0.2	$0.12	0.0	27-Aug-24
LCKAF	1.4	1.4	$0.00	0.0	15-Apr-25
LCKAK	0.0	9.8	$0.24	0.0	13-Jan-24
TBA	0.0	110.0	$0.28	0.0	20-Jun-24
TBA	4.0	4.0	$0.00	0.0	TBA
Options (m)	**19**	**177**		**1.7**	
Potential diluted shares on issue (m)	**847**	**1,005**			

Source: Company

Appendix 2 – Energy Exploration Capital Partners (EECP) Equity terms

LCK will issue placement shares in relation to all or part of each of the second and third investments on the EECP's request, within 24 months of the date of the corresponding investment. The number of shares issued by LCK will be determined by applying the Purchase Price (as set out below) to the subscription amount prepaid by the Investor.

The Purchase Price will be the average of the five-day volume-weighted average prices selected by EECP during the 20 consecutive trading days immediately prior to the date of EECP's notice to issue shares, less a 10% discount (or a 13% discount if the Placement Shares are issued after 4 January 2022) (rounded down to the next one tenth of a cent, or if the share price exceeds $0.20, the next half a cent).

The purchase price will not be the subject of a cap. LCK has put strict protections in place regarding EECP's activities, such as trading restrictions and anti-shorting provisions. In addition, EECP is incentivised to see LCK's share price grow through being an option holder (with the options being issued at a substantial premium (see below)).

LCK will have the right to refuse an issuance of shares in relation to EECP's request for issuance and instead to repay the subscription amount by making a payment to EECP equal to the number of shares that would have otherwise been issued by the greater of the purchase price and the market value of the placement shares at that time. Notwithstanding LCK's exercise of its option to receive the Second Investment and/or the Third Investment, EECP will not be obligated to provide the additional funding if the market price of LCK's shares is below $0.085 (in relation to the Second Investment) or $0.14 (in relation to the Third Investment) and does not recover to above that level within two months after the Investor providing LCK with notice thereof.

LCK made an initial issuance of 6.75m placement shares to EECP at the time of the funding of the first placement, towards the ultimate number of placement shares to be issued. Alternatively, in lieu of applying these shares towards the aggregate number of the placement shares to be issued by LCK, EECP may make a further payment to LCK equal to the value of these shares determined using the purchase price at the time of the payment.

If LCK proceeds with the Second Investment and the Third Investment, net proceeds from the Second Investment and the Third Investment will not exceed 8% of LCK's market capitalisation (each), without EECP's consent.

Neither EECP nor LCK has any obligation in relation to the Second Investment or the Third Investment unless LCK exercises its option to put these investments to EECP.

In order to exercise its option in relation to each of the Second Investment and the Third Investment, LCK must have sufficient placement capacity to receive the investment at the time it exercises its option to receive the investment, obligating EECP to provide the funding relating to that investment. LCK will determine whether to exercise the option in relation to the Second Investment or the Third Investment, or both, prior to the deadline for its exercise, in its sole discretion.

LCK has agreed to issue 4,029,851 shares in satisfaction of a fee payable to the Investor and to grant 9.8 million options exercisable at $0.236 (representing a 140% premium over the prevailing market price) to the Investor.

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Level 13, 14 Martin Place, Sydney, NSW 2000
Main +61 2 8999 9988
www.mstfinancial.com.au

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