22 February 2022, ASX ANNOUNCEMENT (ASX:LCK)

Leigh Creek Urea Project Updates - Stage 1

Factory Acceptance Testing commenced today on Leigh Creek Energy Limited's ("LCK" or "the Company") Siemens power generators for Stage 1 commercialisation of the Leigh Creek Urea Project.

Highlights

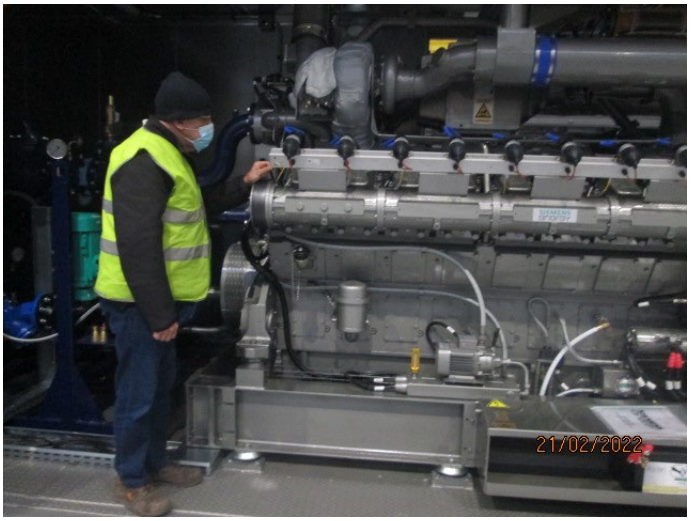
- LCK has acquired four new Siemens gas engines from Drivetrain Australia
- The four syngas fired power generators have a combined 4.76MW capacity
- The generators were selected based on LCK criteria to operate efficiently on LCUP syngas
- Siemens has progressed with engineering, procurement and fabrication and today the Factory Acceptance Tests (FAT) was commenced for the four new Siemens power generators, which is the last step before being released for the voyage to the final destination – Leigh Creek Urea Project Site

LCK Managing Director Phil Staveley commented on the progress of commercialisation activities:

"The power generators have been fabricated as per the schedule and we are excited to be preparing the site in preparation for their arrival and installation. This is a key milestone for LCUP's project development to build the only fully integrated urea production facility in Australia, positioning us to be the lowest cost sovereign supplier of this critical product for our agricultural sector."

Stage 1 Commercialisation Milestones

LCK's Stage 1 commercialisation plan includes acquisition and installation of the power generators, acquisition of 3D seismic over Leigh Creek permits, and drilling up to five new syngas-producing wells, ahead of installation of infrastructure construction. Drivetrain Australia will supply and install the Seimens engines for the commencement of syngas production and developing the field for the first urea integrated production facility in Australia.



Electricity Generator Selection

The generators were selected because Siemens has a track record with syngas applications and experience with similar Australian projects. Drivetrain also have the capacity to provide aftersales support and maintenance in South Australia.

The four syngas fired power generators have a combined 4.76MW capacity which supports the Company's goal of starting the Stage 1 Commercial Development.

Power Use

Once installed, the electricity generators will power site infrastructure, targeting to eliminate the diesel generation and further reduce emissions. It will enable the commissioning of gasifiers as we continue subsurface development.

Next Steps

The next steps in the LCUP's Stage 1 Commercial development, are to acquire 3D seismic, drill further monitoring wells and obtain approval for the operation Environmental Impact Statement (EIS).

Underground drilling design is being undertaken by inGauge Energy and engineering of the gas processing plant and the rest of production systems is being undertaken by Prudentia Process Consulting.

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

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About the Leigh Creek Urea Project

The Leigh Creek Urea Project (LCUP) is Leigh Creek Energy's (ASX:LCK) flagship project, developing low-cost nitrogen-based fertiliser for local and export agriculture markets. Located in South Australia, 550 kilometres north of Adelaide, the LCUP will initially produce 1Mtpa (with potential to increase to 2Mtpa) of urea.

LCK has a comprehensive environment, social and governance strategy. It has produced syngas within all approved environmental parameters set by the regulator and will be **carbon neutral from 2022**.

The LCUP will be one of the biggest infrastructure projects of its type in Australia, providing long term economic development and employment opportunities for the communities of the Upper Spencer Gulf region, northern Flinders Ranges and South Australia. The LCUP will be the only fully integrated urea production facility in Australia, with all inputs for low carbon urea production on-site.

The LCUP will be developed in 2 commercial stages:

Stage 1 consists of:

1. Construction of gasification wells to provide energy (syngas) for the project; and
2. 5 MW gas fired power generation.

Stage 2 consists of:

1. Expansion of gasification fields;
2. 100MW gas fired power generation;
3. Ammonia facility;
4. Urea facility; and
5. Logistics, loading and transport.