DoD awards Australia's Lynas $120 million to build a heavy rare earths facility in the USA: I have questions

written by Jack Lifton | June 28, 2022

Updated June 28, 2022: Lynas' Managing Director Amanda Lacaze provides answers below

I was intrigued last week when the U.S. Department of Defense (DoD) made the announcement that it had awarded US$120 million to Lynas Rare Earths Ltd. (ASX: LYC) to build a 3-5 kta heavy rare earth separation system in the USA. This is in addition to the $30 million the DoD awarded to Lynas (to be matched by Lynas) in February 2021, for the same thing. My guess is that since Lynas built and operates the world's largest light rare earth separation system in Malaysia where it processes ore from its Mt. Weld Australia monazite mine (the world's largest worked deposit of monazite), it seemed like an easy decision for the DoD, provided it was prepared to overlook the skills of the domestic American market and the mandate to buy American and reshore.

But, since the DoD had already agreed to provide US$30 million of an estimated (by Lynas) US$60 million to build such a facility in Texas, why, I asked myself was an additional US$120 million necessary?

So, I drafted a set of questions for Lynas, the answers to which would be particularly important in a due diligence study for the project, in case the DoD either did not do a due diligence (my guess) or would not publicly answer the same questions citing national security concerns, or some such nonsense.

Here are the questions I sent to Lynas at the beginning of this week:

1. What is the project's location?
2. What is the detailed CAPEX and the estimated OPEX for the system?
3. When will the permitting be finished?
4. Is the plant design finished (It would have to be for the permitting to be finalized)?
5. What is the timeline for construction and first output?
6. What exactly will be the composition of the plant's output in individual rare earths and tonnages of each, and when will the (nameplate) target capacities be reached?
7. Will the costs per KG of each individual rare earth and blend be competitive with the Chinese costs?
8. Will the US DoD be the only customer?
9. Will any of the heavy rare earths be consigned to specific metal/alloy/magnet makers? and,
10. From where, exactly, will the feedstocks be sourced?

Question number 10 is extremely important since there is today no commercial production of heavy rare earths outside of China. Also of note is the fact that Lynas has never commercially produced any separated individual heavy rare earths, nor is its Malaysian plant equipped to do so.

I am awaiting a reply to these questions from Lynas, but I will let you know when I get them.

Publisher's Update:

In response to the above questions InvestorIntel editor Jack Lifton received the following answers by email from Amanda Lacaze, Managing Director of Lynas on June 27, 2022:

1. What is the project's location?

Following a detailed site selection process, the facility is expected to be located within an existing industrial area on the Gulf Coast of the State of Texas.

Texas is an excellent location from which to serve our U.S. customers and support the U.S. government's moves to strengthen its industrial base and make supply chains more resilient through a diversified supply.

2. When will the permitting be finished? / Is the plant design finished? / What is the timeline for construction and first output?

The design of the Heavy Rare Earths plant was completed as part of the Phase 1 contract. The construction timeline will be confirmed following the completion of detailed engineering and planning. The plant is targeted to be operational in financial year 2025.

3. What exactly will be the composition of the plant's output in individual rare earths and tonnages of each?

A typical Heavy Rare Earths separation facility of this type would produce between 2500-3000 tonnes of heavy rare earths per year. We would expect our Heavy Rare Earths production to be in this range.

We have publicly stated our expectation that the Light Rare Earths plant will produce approximately 5,000 tonnes per year of

Rare Earths products, including approximately 1,250 tonnes per year of NdPr.

4. Will the US Department of Defense be the only customer?

This will be a commercial facility and will be designed to serve both the U.S Defense Industrial Base and commercial manufacturers.

5. Will any of the heavy rare earths be consigned to specific metal/alloy/magnet makers?

This facility is a positive step towards reinvigorating the domestic Rare Earths market, and we will work to encourage investment in value-added downstream processes including metal and magnet making.

6. From where, exactly, will the feedstocks be sourced?

Feedstock for the facility will be a mixed Rare Earths carbonate produced from material sourced at the Lynas mine in Mt Weld, Western Australia. Lynas is building a new Rare Earths Processing Facility in Kalgoorlie to process the Rare Earth concentrate from Mt Weld. The material produced in Kalgoorlie will be further processed at the new Rare Earths separation facility in the United States. Lynas will also work with potential 3rd party providers to source other suitable feedstocks as they become available.