



Highly successful quarter positions Boss Energy to be Australia's next uranium producer

Boss Energy now perfectly placed to capitalise on forecast increase in uranium price, with large JORC Resource and existing plant at its 100%-owned and permitted Honeymoon Uranium Project in South Australia.

Highlights

- Strong progress made on several fronts as part of Boss Energy's strategy to resume uranium production at Honeymoon
- Significant advances made on Honeymoon Enhanced Feasibility Study (EFS), which is on track for completion in the coming quarter
- EFS designed to see the existing solvent extraction columns at Honeymoon replaced with new NIMCIX columns to reduce costs and increase nameplate capacity up to 2.45Mlb/annum U₃O₈
- Further savings will cement Honeymoon's global status as one of the lowest-cost uranium producers
- All-In Cost of US\$32/lb U₃O₈ (pre any EFS savings)¹ compared with current long term contract prices which are close to ~US\$40/lb U₃O₈
- Highly experienced uranium executive Wyatt Buck appointed as Non-executive Director
- Leading uranium industry consultants also appointed, securing core in-house capabilities for Honeymoon's re-start
- Successful \$15m share placement completed to fund optimisation studies and exploration
- Strong balance sheet, zero debt and significant carried forward tax losses
- Company name change to Boss Energy, recognising a positive contribution to clean energy

"The outstanding progress we made during the quarter secures Boss Energy as Australia's next uranium producer, in the process capitalising on the forecast increase in uranium prices and our low costs, tier-1 location and extensive JORC Resource." Boss Energy MD & CEO Duncan Craib.

¹ Refer ASX announcement dated 21 January 2020. All material assumptions underpinning the forecast financial information (and the production targets on which such forecast financial information is based) continue to apply and have not materially changed.

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Boss Energy Limited (ASX: BOE) (Boss or the Company) is pleased to provide its Quarterly Activities Report for the three months ending 31 December 2020.

Strong progress on the Enhanced Feasibility Study

Through the EFS, Boss Energy aims to reduce operating expenditure and improve the ramp up production schedule and nameplate capacity of the Honeymoon Uranium Project (**Honeymoon**) to 2.45Mlb/annum U_3O_8 .

As previously advised, the EFS covers all aspects of Honeymoon, including the adoption of a wholly IX (NIMCIX) system with the first stage of production ramp up delivered within 12-months from an investment decision.

The Company expects associated savings to cement Honeymoon's global status as one of the lowest-cost uranium producers. All-In Costs of US\$32/lb U_3O_8 (pre any EFS savings) already compare favourably with current contract prices which are close to ~US\$40/lb U_3O_8 . Such independently verified results will greatly assist Boss Energy in its pursuit of financing and off-take discussions in order to make a decision to proceed to mine, assuming a specified global uranium price has been achieved to satisfy the targeted IRR and NPV return so as to maximise shareholder value.

The Board of Boss Energy remains highly encouraged by the preliminary outcomes of the EFS and looks forward to providing interim progress announcements in the lead up to the final EFS in Q2 2021, which will allow the economic potential of Honeymoon to be more widely appreciated.

Leadership starts at the top

On 1 October 2020, Boss Energy announced the appointment of Mr Wyatt Buck to its Board of Directors. Mr Buck's extensive uranium senior operational and project execution experience complements the Board's existing strong technical and commercial capabilities. His expertise will prove immensely valuable as Boss Energy progresses its fully permitted Honeymoon Project in South Australia towards a production restart.

Mr Buck's uranium experience began with Cameco Corporation, where he was employed for 15 years between 1991-2006 in various roles, culminating as GM of the McArthur River Uranium Mine and Key Lake Mill, the largest Uranium mining operation in the world. He then held senior operational roles with Paladin Energy Ltd (ASX: PDN) as General Manager and Managing Director of the Langer Heinrich Uranium Project in Namibia from the commencement of construction in February 2006 through to design level production. From September 2009 to May 2011, Mr Buck was Executive GM Operations at Paladin with direct operational responsibility for its Langer Heinrich and Kayelekera Uranium projects.

On 8 December 2020, Boss Energy further announced it had secured an Owner's Team to strengthen the Company's in-house capabilities in progressing the EFS and re-starting Honeymoon. Building an effective Owner's Team at this point in time prepares our industry experts and provides them with an opportunity to contribute to the EFS, so that the Company proactively manages the challenges involved with meeting construction milestones when Honeymoon's operations restart.

Trevor Robinson is engaged as a Project Manager, and has more than 35 years of professional experience in the evaluation, design, construction, commissioning and management of metallurgical projects

including uranium, nickel, gold, and copper. Mr Robinson's significant uranium experience includes NIMCIX ion exchange commissioning and operation in Namibia which is very relevant to Honeymoon. Additional uranium experience has been gained at Olympic Dam, Ranger and Rossing.

Dr Merrill Ford is engaged as a Process Consultant, who has spent several years in the field of uranium extraction metallurgy, the design of NIMCIX columns for IX systems, the development of resin-in-pulp technology for gold and uranium and the modelling of uranium leaching. As an independent consultant to the uranium industry, Dr Ford has provided input to feasibility and operational studies for a number of uranium clients, including Cameco, Paladin, Energy Metals, and Swakop Uranium.

Jeremy Green has been engaged as a Civil Engineer. Mr Green has 40 years of experience in all aspects of civil and structural design with an emphasis on resource developments, with extensive engineering experience at a senior level on many projects. His experience has provided a good understanding of design, design logistics and practical construction factors.

Boss Energy has also re-appointed its Key Advisers² from its Feasibility Study, who are leading industry specialists and possess an inherent understanding of Honeymoon having worked alongside the Boss Energy management over the past 5 years. Their high-quality technical abilities, coupled with input from the Owner's Team, will ensure a robust technical approach to completing the EFS and successfully restarting Honeymoon.

\$15 million placement

On 1 October 2020, the Company announced it had received firm commitments for a \$15 million share placement through the issue of approximately 224 million new shares to institutional and sophisticated investors at a price of 6.7c per share.

Share placement funds will be used to:

- Pursue IX process optimization for incorporation into the EFS
- Fund ongoing exploration activities meeting tenement commitments
- Recruit additional technical and mining experts as and when required
- Fund the acquisition of long lead items for a restart of mining at Honeymoon
- Assess and execute where appropriate, value accretive M&A opportunities
- General corporate and administration purposes.

The Placement was strongly supported by existing and new domestic and international investors. In addition, Boss Energy Directors participated in the Placement as follows:

Duncan Craib	(Managing Director)	1,500,000 shares
Peter O'Connor	(Chairman)	1,200,000 shares
Bryn Jones	(Technical Director)	375,000 shares
Dudley Kingsnorth	(Non-Executive Director)	150,000 shares
Wyatt Buck	(Non-Executive Director)	140,000 shares

Boss Energy possesses a very strong balance sheet and is completely debt free, distinguishing the company from many of its peers in the uranium sector. As at 30 June 2020, the Boss Energy consolidated tax group is also estimated to have Australian tax losses of approximately \$106 million of which 80% is comprised of income tax losses and the remainder being capital losses.

² Refer ASX announcement dated 8 December 2020.

Boss Energy name change and new website

On 18 November 2020, Boss Energy advised that a resolution had been passed by Shareholders at the Annual General Meeting to change the name of the Company from Boss Resources Limited to Boss Energy Limited.

The change of name reflects the Company's significant technical advancements and large JORC resource expansion made on Honeymoon, with global first mover advantage to rapidly seize upon an expected change in market conditions. As a restart project, with very low upfront capital outlay to recommence production, Honeymoon is evolving into one of the lower cost uranium producers globally. The Company name change to Boss Energy reinforces one of our core values which is to positively contribute to clean energy.

Accordingly, the Company's website address was changed to www.bossenergy.com and twitter handle to [@Boss_Energy](https://twitter.com/Boss_Energy). Our new website has been refreshed to make it easier to navigate and find the information you need to keep in touch with Boss Energy.

Uranium market analysis

The effect of the measures taken by mines to combat COVID -19 is expected to reduce production from planned levels in 2021. With the resolution of most of the trade-related uncertainties, utilities are expected to re-enter the market during 2021 for long term supplies. The closure of the Ranger mine in Australia and the planned closure of Orano's Cominak mine in Niger in March this year, highlight the limited number of mines that will be in operation in the latter half of this decade. Inventories and supplies from existing mines are declining, Boss Energy is perfectly positioned to move forwards as the supply gap increases.

Supply

2020 was a year which highlighted the global nature of the uranium industry, the shift which has taken place over time from multiple smaller mines to 'super' mines, the lack of geographic and corporate diversity of supply and the need for new mines. Most nuclear generation is in countries which do not have significant uranium supply or low-cost reserves and utilities are becoming increasingly dependent on a limited number of mines for long term supply.

The supply from currently operating uranium mines, is estimated to have been reduced by approximately 24m lbs U₃O₈ during 2020 by COVID-19 related production curtailments in Canada, Kazakhstan, and Namibia. As 2020 progressed the affected mines showed limited signs of returning to normal operations as workers returned to the Kazakh mines and Cameco brought the Cigar Lake mine back into production in September 2020. However, by mid-December the number of COVID-19 cases at Cameco's mining operations had risen and operations at Cigar Lake were again suspended.

Uranium supply has been declining since the middle of the last decade; production has been progressively curtailed as spot and long-term prices have stagnated at levels that will not support economic production from these mines. In a presentation to the Saskatchewan Mining Association TradeTech estimated that annual supply in 2020 (including COVID-19 reductions) was around 60m lbs U₃O₈ less than in 2016. The effect of production cutbacks for economic and Covid-related reasons and supplier buying to meet contractual commitments has been to accelerate the reduction of mobile inventory and bring forward the need for new supply sources.

Demand

The outlook for nuclear power is strong. In January 2021 442 reactors were in operation generating 393GWe, and there are another 53 reactors (59.76GWe) under construction. The IAEA report 'Energy, Electricity and Nuclear Power Estimates for the Period up to 2050' which was released in September states that nuclear power will continue to play a key role in the world's low carbon energy mix, with global nuclear electrical capacity seen nearly doubling by 2050 in their high case scenario.

Most of the uncertainty surrounding the trade cases in the USA which has played an important role in 2019 and 2020 had been resolved (review of issues in previous quarterly report) and utilities, particularly in the USA are able to focus on developing their procurement strategies for mid- and long-term procurement.

A threat to nuclear generation in the US has been the premature closure of plants for economic reasons. In December, the US Senate Committee approved Bipartisan Legislation to Revitalize the US Nuclear Infrastructure. One of the provisions of the Bill includes a targeted federal credit program to preserve commercial reactors at risk of premature shutdown due to economic reasons. The Bill will go to the full Senate for a vote this year.

Appendix 5B disclosures

In line with its obligations under ASX Listing Rule 5.3.5, Boss Energy notes that the only payments to related parties of the Company, as disclosed in the Appendix 5B (quarterly Cashflow Report) for the quarter ended 31 December 2020, relate to payments for executive directors' salary and superannuation and non-executive director fees.

During the quarter ended 31 December 2020, the Company spent approximately \$672,000 on project and exploration activities relating to its Honeymoon Project. These activities included work undertaken on the EFS including further technical studies and continued exploration activities including the review and interpretation of historical data. In addition to these studies the Company continued to incur the ongoing care and maintenance activities required at Honeymoon. The expenditure represents direct costs associated with these activities as well as capitalised wages which can be directly attributable to Honeymoon.

This ASX announcement was approved and authorised by the Board of Boss Energy Limited.

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Schedule of mining tenements

The following information is provided pursuant to Listing Rule 5.3.3 for the quarter ended 31 December 2020.

Tenement Name	Location	Licence Number	Interest
Yarramba	South Australia	EL6510	100%
South Eagle	South Australia	EL6081	100%
Gould's Dam	South Australia	EL6512	100%
Katchiwilleroo	South Australia	EL6511	100%
Ethiudna	South Australia	EL6020	100%
Gould's Dam	South Australia	RL83-85	100%
Honeymoon Mine	South Australia	ML6109	100%

There were no mining tenement acquisitions or divestments during the quarter.

Reference to previous ASX announcements

In relation to the results of the Feasibility Study announced 21 January 2020, the Company confirms that all material assumptions underpinning the production target and forecast financial information included in that announcement continue to apply and have not materially changed. Nothing in this announcement pre-empts the findings of the Enhanced Feasibility Study currently being undertaken.

In relation to the Mineral Resource announced on 25 February 2019, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in that market announcement continue to apply and have not materially changed.

Forward-Looking Statements

This announcement includes forward-looking statements. These forward-looking statements are based on the Company's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Boss Energy, which could cause actual results to differ materially from such statements. Boss Energy makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of this announcement.