



**Resolute**

# **ASX Announcement**

**26 November 2018**

## **New 40MW Solar Hybrid Power Plant for Syama Gold Mine**

**Joint Development Agreement Signed with Ignite Energy**

**New Power Plant to be fully funded by Ignite Energy**

**Expected ~40% savings in Syama power cost**

**World's largest mine-based off-grid fully integrated independent  
solar hybrid power plant**

### **Highlights**

- Joint Development Agreement signed between Resolute and Ignite Energy
- New power plant to be independently financed, owned, and operated by Ignite Energy
- Long term tariff agreement expected to provide ~40% power cost savings for Resolute at Syama
- Solar Hybrid Power Plant expected to be a global leader for mine site based integrated energy management
- Solar, battery, and HFO technologies to provide increased efficiency and improved environmental outcomes
- Reduction in risk exposure to potential oil price escalation and fuel logistics
- Potential future expansion of battery storage and solar plant to accommodate future electric automated fleet
- Potential for the creation of a local micro grid to benefit local Mali communities

Resolute Mining Limited (Resolute or the Company) (ASX: RSG) is pleased to announce the signing of a Joint Development Agreement (JDA) with Ignite Energy Projects Pty Ltd (Ignite Energy), a leading financier, developer and operator of power projects in Africa, for the development of a new 40 megawatt (MW) independent solar hybrid power plant at the Company's Syama Gold Mine (Syama) in Mali.

The Syama Solar Hybrid Power Plant will combine solar, battery, and heavy fuel oil (HFO) technologies. The innovative project is expected, when constructed, to be the world's largest off-grid, fully integrated hybrid power plant for a stand-alone mining operation. The new power plant will replace the existing historic 28MW diesel fired power station at Syama and is expected to be fully operational by the end of 2020.

The new Syama power solution will be funded and constructed under an Independent Power Producer (IPP) model whereby Ignite Energy, under the terms of an exclusive Power Purchase Agreement, will be responsible for the design, construction, ownership, funding, and operation of the new Solar Hybrid Power Facility on an exclusive basis and will supply power to Resolute on a guaranteed basis subject to a maximum tariff over a term of between 12 and 20 years.

The new solar hybrid power solution is expected to generate savings of up to 40% on the current operating costs of power at Syama. In addition to higher efficiencies of the solar hybrid solution, the replacement of Resolute's



existing diesel generated power plant will reduce reliance on, and exposure to, diesel prices. The new power facility will also provide significant environmental benefits including lower carbon emissions as a result of solar power generation and the greater efficiencies of integrated battery storage hybrid technology and improved engine technologies.

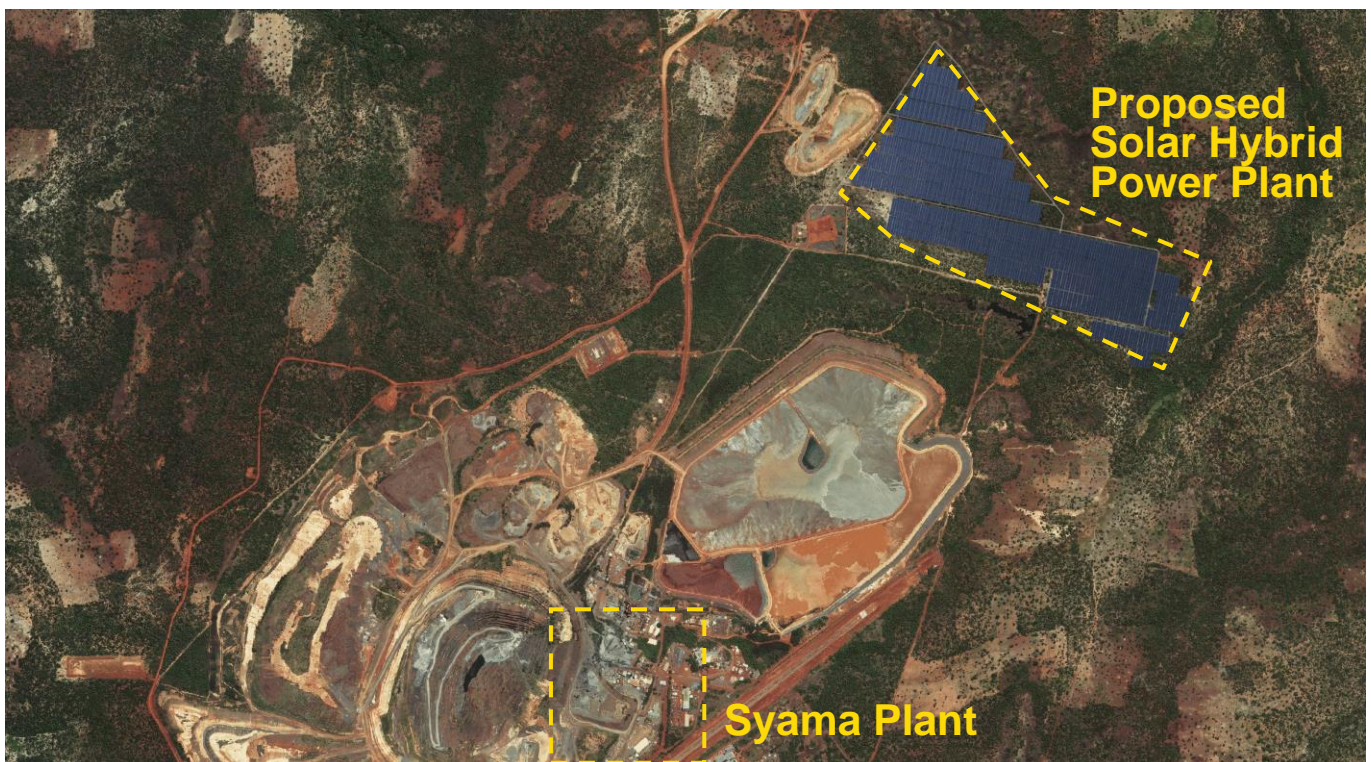
Managing Director and CEO, Mr John Welborn, was pleased to announce the signing of the JDA following a comprehensive global evaluation process seeking the most cost effective, environmentally friendly power solution for Syama:

“Resolute aims to be a leader in mining innovation and to promote responsible and sustainable positive economic growth in Africa. The partnership with Ignite Energy to develop a low cost solar hybrid power solution for Syama will establish the Company as a global leader in energy solutions for the mining sector. The project is entirely consistent with our ongoing efforts to use innovation and technology to optimise and enhance our Syama operations and deliver exceptional outcomes for our shareholders.

“The scale of this project will be a world first – a unique combination of solar, battery, and HFO storage and generation capacity which will provide Syama with long term low cost electricity with minimal capital requirements. The Syama Solar Hybrid Power Plant will deliver long term electricity cost savings of up to 40% at Syama while reducing carbon emissions and providing tangible benefits to local Mali communities.

“The project is a key component of delivering the expected sub-US\$750 per ounce All-in-Sustaining-Cost for the Syama Underground Gold Mine.”

## Syama Solar Hybrid Power Solution



**Figure 1: Proposed location of the new Syama Solar Hybrid Power Plant**

The new Syama Solar Hybrid Power Plant solution will comprise an advanced combination of modern Solar PhotoVoltaic generation (Solar PV), HFO based generation, and battery-based energy management system. HFO fuel costs can be up to 50% lower than diesel with larger modern generating units substantially more efficient than Resolute’s current engines. The addition of a component of sustainable environmentally friendly low cost power



from Solar PV, and the use of batteries to provide spinning reserve and manage loads more efficiently, is projected to result in a substantial reduction in Syama power costs.

The addition of a new lower cost power solution was incorporated into Resolute's Updated Definitive Feasibility Study (DFS Update) for Syama and was a key component in the reduction of Life of Mine All-In Sustaining Cost for the Syama Underground Gold Mine to US\$746/oz (see ASX Announcement dated 3 July 2018). The DFS Update contemplated a new Syama power solution to be operational by 2020 that would enable incremental reduction in power costs with a consequential material impact in operating costs. The tariffs contemplated in the JDA with Ignite Energy are consistent with the cost savings modelled in the DFS Update.

The development of advanced, efficient and more environmentally friendly power solutions is consistent with Resolute's broader intention to build and operate mines which utilise currently available advanced mature technologies, and which also anticipate and facilitate future developments and improvements. Lower cost self-generated power provides significant advantages for Syama, including the opportunity to provide social and economic benefits for the region.

## Syama Power History and Background

Historically, Resolute has operated a 28MW diesel fired power station at Syama. The Syama power station was originally established by BHP in the 1980's and contains a fleet of diesel generators which have progressively expanded to meet operational requirements. Current configuration consists of two 5MW Allen units and a series of smaller Caterpillar and Cummins units.

Resolute has been examining opportunities to reduce the mine's reliance on diesel, and reduce costs, for many years. The current cost to generate power at Syama ranges from USD\$0.20/kWh to USD\$0.24/kWh depending on prevailing diesel fuel prices.

Prior to 2016, Resolute had been working with the Mali Government on a possible high voltage grid connection between the City of Sikasso and Syama. The Syama Grid Connection Project (SGCP) contemplated the construction of a 225kV electrical transmission line to provide the mine with reliable and lower cost power. The SGCP was suspended in June 2016 following a comprehensive review of the project and an assessment of possible energy alternatives.

During 2018, Resolute conducted an international Expression of Interest tender process seeking proposals for an Independent Power Producer (IPP) model, whereby a third party would be responsible for construction and operation of new power generation facilities. Resolute also investigated, in parallel, an owner-operator model. This work, which accessed innovative energy progress being made across the mining industry in Africa, has identified a new hybrid energy solution for Syama.

## Joint Development Agreement and Power Purchase Agreement

The JDA sets out the terms and conditions of the development phase of the power project which will result in the signing of a Power Purchase Agreement (PPA).

The PPA sets out that the new Syama Solar Hybrid Power Plant will be designed, constructed, owned, and operated by the IPP on an exclusive basis and will supply power to Resolute on a guaranteed basis subject to a maximum tariff over a term of between 12 and 20 years.

The PPA is expected to be finalised in the first half of 2019 allowing for a staged development of the Solar Hybrid Power Plant to commence in 2019 and be commissioned during 2020 as per the expectations in the Syama DFS Update.

**For further information, contact:**

**John Welborn**  
Managing Director & CEO

**Jeremy Meynert**  
General Manager – Business Development & Investor Relations



Resolute

## ASX Announcement

### About Resolute

Resolute is a successful gold miner with more than 28 years of experience as an explorer, developer, and operator of gold mines in Australia and Africa. The Company has operated nine gold mines which have produced more than 8 million ounces of gold. Resolute currently owns three gold mines, the Syama Gold Mine in Mali (Syama), the Ravenswood Gold Mine in Australia (Ravenswood) and the Bibiani Gold Mine in Ghana (Bibiani). For the financial year ending 30 June 2019, Resolute expects to produce 300,000oz of gold at an All-In Sustaining Cost of US\$960/oz (A\$1,280/oz). The Company has a pathway to annual gold production in excess of 500,000oz from a Global Mineral Resource base of 16.5 million ounces.

Syama is a world class, robust, long-life asset capable of producing more than 300,000 ounces of gold per annum from existing processing infrastructure. Resolute is currently developing the world's first fully automated underground gold mine at Syama which will deliver a low cost, large scale operation with a mine life beyond 2032.

Ravenswood has been consistent performer and an integral part of Resolute's business for more than a decade. The highly successful Mt Wright Underground Mine continues to produce as the Company transitions back to a large scale, low cost open pit mining operation which will extend the mine life to at least 2032.

Bibiani is a potential long life, high margin operation and represents a growth opportunity for Resolute.

Resolute is actively exploring over 5,300km<sup>2</sup> of potential world class tenure in Africa and Australia searching for opportunities to expand and improve the Company's operations. A portfolio of strategic investments in highly prospective, well managed African-focused gold exploration companies has been established to provide a pipeline of future development opportunities.

#### ASX:RSG Capital Summary

Fully Paid Ordinary Shares: 757,512,088

Current Share Price:

A\$0.96 as at 23 November 2018

Market Capitalisation:

A\$727 million

FY19 Guidance:

300,000oz @ AISC US\$960/oz (A\$1,280/oz)

#### Board of Directors

Mr Martin Botha *Non-Executive Chairman*

Mr John Welborn *Managing Director & CEO*

Mr Peter Sullivan *Non-Executive Director*

Mr Mark Potts *Non-Executive Director*

Ms Yasmin Broughton *Non-Executive Director*

Ms Sabina Shugg *Non-Executive Director*

#### Contact

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