

**ASX Release**

Tuesday 14<sup>th</sup> May 2019

**ASX Code**

PAK

**About Us**

Pacific American Coal Limited (the Company) is focused on the production, development and exploration of metallurgical coal assets in North America. PAK's strategic focus is on the 100% owned Elko coking coal project in British Columbia. PAK has 100% ownership in 3 Coal Leases in the East Kootenay Coal Field in British Columbia - Canada and tenements in application in low volatile bituminous region of the Arkoma coal basin in Oklahoma. PAK is also actively reviewing other potential investments.

**Board**

Non-Executive Chairman – Geoff Hill  
Executive Director & CEO – Mark Sykes  
Non-Executive Director – Simon Bird

**Company Secretary**

Ian Morgan

**Management**

Chief Executive Coal – Matthew Wall  
Business Development – Dom Hill

Project	Stage	Location
Elko	Exploration	Canada
Howe	Exploration	Oklahoma
Bokoshe	Exploration	Oklahoma

Pacific American Coal Limited  
ABN 83 127 131 604  
GPO Box 1546  
SYDNEY, NSW, 2001

[www.pamcoal.com](http://www.pamcoal.com)

## Hydro Energy Joint Venture

### Highlights

Pacific American Coal Limited (**ASX: PAK**) is pleased to announce that it has identified a significant opportunity in alternate energy projects in the Pacific Region and entered into a joint venture agreement with a leading Austrian hydropower turbine manufacturer **Global Hydro Energy GmbH** ("Global Hydro").

Key elements of the comprehensive joint venture agreement, signed with world class technology partner Global Hydro, include:

- **PAK and Global Hydro are to form a new Singaporean based joint venture company to be called Global Pacific Hydro ("GP Hydro").**
- **PAK and Global Hydro are to each own 50% of GP Hydro.**
- **PAK's minimum investment in the new venture is US\$50,000 with additional investment tied to achieving specific milestones.**
- **GP Hydro will be focused on micro hydro and hybrid projects in the Pacific Region including Australia.**

Commenting on the signing of the joint venture agreement with Global Hydro, PAK Chairman Geoff Hill said:

*"This is a very exciting initiative for PAK and our shareholders. The board has been reviewing additional investment opportunities for some time and identified renewable energy as a priority due to its high growth potential. We now have a leading technology partner and clear business strategy to grow an alternative energy business focussed on hydro and hybrid projects with a low risk, high impact, entry strategy."*

### Hydro Investment Opportunity

Pacific American Coal (**ASX: PAK**) has been actively reviewing additional investment opportunities over the last 12 months. As part of the rigorous assessment process, the board identified renewable energy as being an area of interest due to the significant levels of global investment in the sector, including in the Asia Pacific region. Hydro-electricity and hybrid energy developments on the back of micro hydro power plants offer a significant opportunity for PAK, due to a number of factors including:

- Hydro is a mature alternate energy power source
- Hydro is a stable technology with a long-life cycle
- Micro plants can be used with solar and battery technology for hybrid projects
- There are numerous opportunities for off grid projects in the Australian and Pacific regions

### Joint Venture with Global Hydro Energy GmbH

PAK has been working with Global Hydro to develop a joint business plan which can take advantage of Global Hydro's world class micro hydro technology (SmarT) and PAK's project development and regional knowledge. The parties have signed a joint venture agreement. Key elements of the joint venture arrangement and business plan are:

- A 50/50 joint venture company is to be established in Singapore and called Global Pacific Hydro ("GP Hydro")
- GP Hydro is to be focused on micro hydro and hybrid projects in the Pacific Region, including Australia, through the introduction of Global Hydro products to these markets.
- Develop and adapt Global Hydro's technology for local environmental situations
- Explore the addition of accessory products such as battery storage, wind or solar power with Global Hydro products

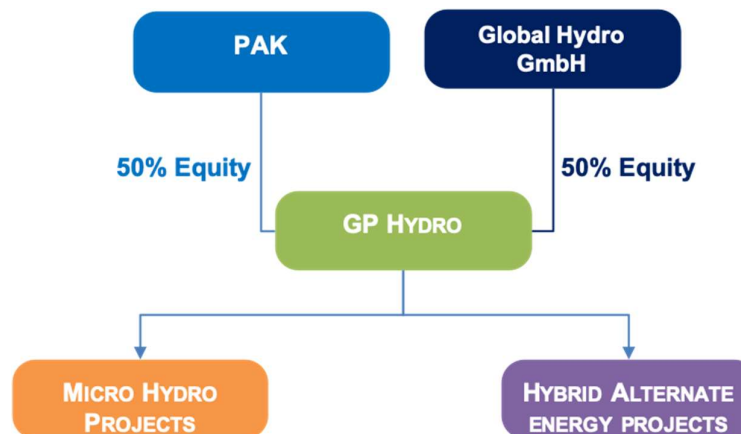


Figure 1 – Joint Venture Structure

The initial investment committed by PAK to establish the joint venture vehicle is US\$50,000. Subject to shareholders' approval, if required, further commitments of up to US\$500,000 in total would be provided in separate tranches and invested should the joint venture achieve certain clearly defined milestones.

GP Hydro has a well-defined regional marketing strategy which will focus on hybrid and micro grid projects as well as pumped hydro opportunities in Australia, PNG and the Pacific Islands. Opportunities to deploy Global Hydro's proven technology in our region exist in various sectors including:

- Landowners:
  - Wet farming
  - Electric irrigation systems
  - Retro fitting dams
  - Power intensive farming
- Industrial Users:
  - Mining off-grid
  - Residential and commercial developments
  - Small infrastructure projects
  - Energy parks
  - Electric power hybrid systems
- Communities:
  - Off-grid projects
  - Electric power hybrid systems
  - Micro grids
- Governments:
  - Refurbishments
  - Private and public project developments
  - New population micro grids
  - Carbon neutral projects

GP Hydro will bring together the complementary skills of Global Hydro and PAK. And will be able to call upon to:

- Establish international business and professional networks
- Establish investor and financial resource contacts in Australia and Asia

- Combine technical expertise from Global Hydro, matched with regional project implementation from PAK
- Implement and finance new technologies
- Have a footprint on both sides of the Pacific, giving access to technology and development opportunities
- Have expertise in permitting, regulatory and working with governments to deliver projects
- Provide stakeholder engagement and management
- Maintain a board and management with substantial skills in project identification development, execution and delivery
- Bring knowledge of the Australian markets and project requirements

### Why Global Hydro Energy

PAK has selected Global Hydro as its joint venture partner due to its cutting-edge technology and products in the hydro space. Global Hydro is privately owned family business based in Austria with 100 years of experience in manufacturing and implementing hydro projects globally. With group global sales of +USD100m across the hydro space, Global Hydro provides PAK with a world class technology partner which will enable the joint venture to commencing business with a proven product that has been de-risked in various projects across the globe.

Global Hydro provides the best of European quality. They are a specialist in design, manufacture and installation of turbines and hydro plants with capacities ranging from 100 kW to 25 MW. The company provides the full range of services through development, production, automation and service capabilities.

As a specialist in micro hydro technology, Global Hydro has developed its own SmartT technology which is an ideal product for outputs of 100kW to 1 MW per unit. SmartT power stations are fully assembled at the factory and delivered as ready-to-use power plant in 20ft containers. SmartT technology can be combined with other technologies such as solar and wind energy plus combined with battery storage for optimized operation. This low operating cost sustainable technology has no environmental impact and is therefore ideal for the Pacific regional markets, including Australia.



Figure 2 – Global Hydro Products and Manufacturing Facility

### Clean Energy in the Pacific Region

There is a significant opportunity with clean energy in the Pacific, including Australia. With a global focus on alternative energy, global investment in clean energy exceeded \$300B for the fifth year. The energy sector in Australia is also moving its focus to clean energy, with \$9.5 billion invested in clean energy during 2018.

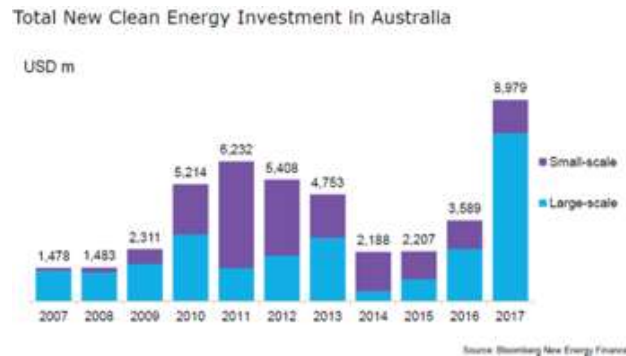


Figure 3 – Total Clean Energy Investment in Australia

Across the region, private and public funding of renewable energy has grown substantially over the last five years. Private companies have mainly targeted solar and battery projects. Large hydro projects are being targeted by multinationals and governments. This leaves the small and micro size projects as a primary opportunity for GP Hydro.

To combat global warming, several Pacific island nations are pushing towards 100% renewable energy. Australia is at the forefront of developing renewable projects and offering aid for Pacific island nations to switch from high cost and environmentally unfriendly diesel to renewable energy. Additionally, institutional investors and sovereign wealth funds are investing heavily into renewables. PAK, through its 50% owned joint venture GP Hydro, has an opportunity to develop projects with a world leader in hydro and micro hydro products.

### Focus on Elko Remains

Our hydro joint venture is an important first step in the PAK board's stated strategy of developing a business line complementary to our coal business. However, our focus remains firmly on the further development of our flagship Elko coking coal project, as we develop the hydro business.

Elko remains an exciting opportunity for PAK, as evidenced by the recent upgrade in its JORC Resource to over 303MT. PAK is continuing to expedite the development of Elko, including:

- The recent appointment of leading mining executive Matt Wall as Chief Executive Coal
- An application has been lodged with the BC Government for a new notice of works approval
- Plans are being advanced for the next phase of exploration activity during the northern summer
- Discussions with several potential partners about the Elko project have commenced



#### **For Further Information Contact**

Dom Hill

Business Development Manager

Pacific American Coal - North America

[info@pamcoal.com](mailto:info@pamcoal.com)

More details are available on PAK's website [www.pamcoal.com](http://www.pamcoal.com)

#### **Competent Person's Statement**

The information in this document that relates to JORC 2012 Resources based on information compiled by Mr. Dwight Kinnes, B.Sc. Colorado State University, Geology, who is a Member of a Recognised Overseas Professional Organisation (ROPO) included in a list promulgated by the ASX from time to time, being the Society for Mining, Metallurgy, and Exploration (Registered Member No. 4063295), and American Institute of Professional Geologists (Cert. No. 10244).

Mr Kinnes is Principal Consultant/President of Highland GeoComputing, LLC and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration by them and to the activity which they are undertaking to qualify as a 'Competent Person' as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012). Mr Kinnes consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Previously Released Information**

This ASX announcements refer to information extracted from reports available for viewing on the Company's website [www.pamcoal.com](http://www.pamcoal.com) and announced on 16.01.2019 "Elko Coking Coal Project JORC Resource Increased to 303Mt"

The Company confirms it is not aware of any new information or data that materially affects the information included in the original market announcement, and, in the case of exploration targets, that all material assumptions and technical parameters underpinning the exploration targets in the relevant market announcement continues to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings presented have not been materially modified from the original market announcement.

#### **Pacific American Coal Limited**

ABN 83 127 131 604

Suite 706, Level 7, 89 York Street, Sydney NSW 2000

GPO Box 1546, Sydney NSW 2001

P: +61 (0) 2 8964 4373

E: [info@pamcoal.com](mailto:info@pamcoal.com)

W: [www.pamcoal.com](http://www.pamcoal.com)