



# **KPO Reports Commercial and Corporate Progress**

- Pursuing ownership of gas reserves to supply portfolio of power projects
- KALINA Cycle® modules for key industrial applications being prioritized for international markets
- KALiNA Cycle® being considered by major energy company for energy efficiency in oil sands extraction
- Reactivated the Klamath Hills Geothermal Project due to corporate demand for carbon off-sets
- Preparing to bid on various geothermal projects and 3<sup>rd</sup> party industrial waste heat to power business
- Updating Intellectual Property folio to address applications for Hydrogen and LNG sectors
- Investigating carbon capture and storage opportunities for its Alberta projects
- Saddle Hills 64MW project targeted to achieve Full Notice to Proceed in Q4-2021

Waste Heat to Power ("WHP") technology leader, KALINA Power Limited ("KALINA" or the "Company") (ASX: KPO) is pleased to provide shareholders with an update on the breadth of the Company's commercial activity and its technology commercialization progress on prioritized applications of the KALINA Cycle®.

As today's update demonstrates, opportunities for the KALiNA Cycle® continues to strengthen as industries look to reduce carbon emissions in line with Government legislation. Canada's carbon tax is legislated to increase from its current level of \$50/tonne to \$170/tonne making energy efficient technologies such as the KALiNA Cycle® more rapidly adopted. Funding for technology commercialization is also available through various Canadian and Alberta government agencies to accelerate the Company's plans to design standardize modules of the KALiNA Cycle® for various industrial applications.

### **Gas Supply Strategies**

The Company's Canadian subsidiary, Kalina Distributed Power Limited ("KDP") has a portfolio of projects in development that will advance through a combination of tolling agreements with gas producers and merchant electricity revenues from the Alberta Power Pool. Tolling agreements provide projects with less risk while projects with merchant revenues can achieve significantly higher returns, albeit with more market risk exposure.

KDP intends to de-risk merchant economics by securing ownership of gas reserves. This strategy will significantly enhance KDP's portfolio of projects by providing lower fuel costs, as well as stable and secure long-term access to natural gas. To limit corporate dilution, KDP is considering funding this strategy through a subsidiary that can optimize tax incentives using flow-through shares available to Canadian investors.

#### **Technology Commercialization**

KALINA Cycle® technology includes several unique cycle designs across a range of industrial applications that are characterized by temperature, the flow rate, and physical nature of the heat source. Each application requires standard, modularized designs and an established supply chain of major vendors to enable KALINA to provide credible cost estimating and a value proposition for each "product".

KDP is applying for government funding to develop standard designs and modules of the KALiNA Cycle® with certain major vendors and stakeholders engaged in the Company's projects and is exploring international joint venture opportunities.

The following industrial applications for the KALINA Cycle® represent the current priorities in development:

## • Gas Turbines: Power Generation and Pipeline Compression

The current 10MW KALiNA Cycle® module being developed for Saddle Hills represents the initial modularized "product". KDP intends to market the module in North America and internationally to produce zero-emissions power from the waste heat generated from gas turbines. This module may be modified for both power plants and pipeline compressor stations where gas turbines are used.

KDP expects to participate in a competitive bidding process for a significant waste heat to power opportunity at multiple gas pipeline compressor stations in Western Canada in Q4, 2021. KDP intends to marshal resources and partners in order to properly bid on this opportunity.

# Oil Sands WHP: Steam-Assisted Gravity Drainage 'SAGD'

KDP is filing for government grant funding to design and construct a 4MW KALiNA Cycle® plant for a globally recognised energy company that is seeking to improve energy efficiency in oil sands extraction. A successful project may lead to up to 80MW of KALiNA Cycle® deployment. The grant process, commercial scope, and arrangements with the referenced energy company are expected to be determined in the coming months.

# Geothermal Opportunities

KDP engaged Power Engineers earlier this year to engineer a standard set of designs for a generic 10MW geothermal plant using the KALiNA Cycle®. This will be completed with a preliminary cost estimate in Q3, 2021. Once complete, the Company plans to initiate a modularized design with a class 4 cost estimate in Q4, 2021 such that KALiNA can develop its own projects and effectively bid on projects being developed by geothermal power developers.

KDP expects to participate in a competitive bidding process for a large, geothermal project in Western Canada in Q4, 2021. KALiNA intends to marshal resources and partners in order to properly bid on this opportunity.

KALiNA has reactivated project development plans for the Klamath Hills ("KHG") 10MW geothermal project. Corporations have been very active seeking to secure carbon credit offsets using long-term power purchase agreements. KALiNA has increased its stake in the KHG project holding company to 50.1% and recently amended one of its two adjacent land leases so that one of the landowners can proceed with an important agreement with the US Department of Fisheries and Wildlife. As part of this change, KALiNA has received a USD\$200,00 payment and certain other concessions to permit development of the project in the collective interests of all parties.

# Intellectual Property Updated to address Hydrogen and LNG Sectors

KPO owns the worldwide patents relating to the KALiNA Cycle®Technology and has one of the most substantial intellectual property portfolios in the sector. The portfolio includes patents developed internally over the years, acquisition of a portfolio from Siemens in 2016 and those acquired from the estate of the late Alex Kalina in 2019. The company has continued to develop additional IP including several efficiencies relating to the Hydrogen and LNG sectors.

KALINA also reaffirms that its Flagship 64MW Primary Site located in the County of Saddle Hills, Alberta, Canada remains on target to achieve Full Notice to Proceed ('FNTP') in Q4 2021.

# Carbon Capture & Storage ("CCS")

CCS technology is rapidly becoming more economical, especially in jurisdictions such as Canada where the carbon tax is increasing from \$50/tonne to \$170/tonne. KALINA is actively investigating CCS opportunities for combined cycle power projects in Alberta. KDP intends to deploy CCS through a competitive bidding process with major vendors capable of providing performance guarantees suitable for project financing.

#### Comment:

Managing Director Ross MacLachlan said: "While a lot of our focus has been advancing the flagship 64MW Saddle Hills project, our team in Canada has also been very active pursuing other commercial opportunities. As the push for renewables grows, and government legislates industry to lower their carbon emissions, we are witnessing more demand for our technology.

"Also, projects that have historically been challenging, such as geothermal, today make much more economic sense given the rapid and significant shift toward renewable energy projects. We look forward to proving continued updates as each initiative develops."

#### **About KALINA Power Limited**

KALiNA Power Limited is a clean-tech company in the Industrial Waste Heat to Power sector, producing zeroemissions power from heat produced by energy-intensive industrial processes that may otherwise be wasted, as well as from the heat available in geothermal resources. The technology has been commercially deployed across a range of industrial settings and applications at 16 plants around the world. KPO owns the worldwide patents relating to the KALiNA Cycle®Technology and has one of the most substantial intellectual property portfolios in the sector.

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This announcement was approved and authorised for issue by the Board of Kalina Power Limited