

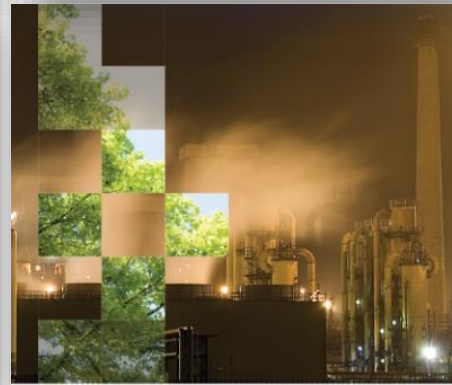
## Cement Industry



## Geothermal Energy



## Iron & Steel Industry



## Petrochemical Industry



## Solar Thermal Energy



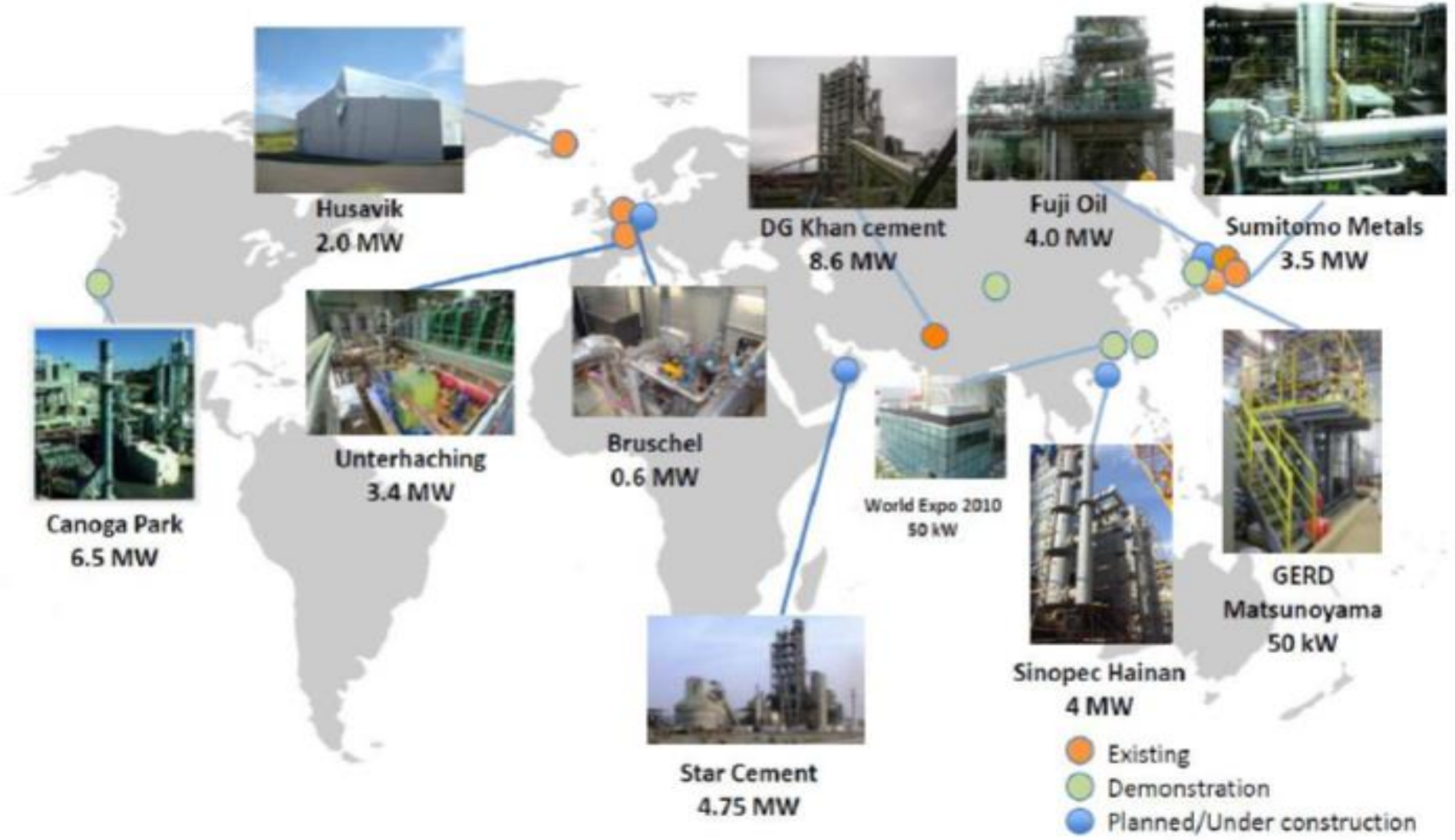
MAKING CLEAN POWER FROM WASTE HEAT IN A RANGE OF INDUSTRIES  
Efficient, Safe, Reliable, Proven

# Introduction To KALiNA Cycle®

- Electricity from waste heat represents a massive market and a global environmental priority
  - *A 4 Megawatt KALiNA Cycle® plant can offset upwards of 19,000 tonnes per year of CO2 in displacing coal fired electricity which releases around 500 kg/MWh (US Department of Energy)*
- Generating electricity from waste heat is a multi-billion dollar international market currently addressed with a handful of companies using various iterations of the Organic Rankine Cycle (“ORC”).
  - Market leader is ORMAT: (NYSE) / Market Cap ~ \$2.1 Billion
  - The KALiNA Cycle® is a proprietary industrial power process that can be 20-40% more efficient than ORC.
  - KALiNA Cycle® has been successfully commercialised across a range of industries
  - The Company has completed a restructuring to position the KALiNA Cycle® for global deployment:
    - Eliminated over \$12.5 million of external debt and simplified corporate structure
    - Restructuring existing license agreements to control compliance for design and project execution
    - New senior management, strengthened technical team and a revised board of directors
    - Capital efficient, corporate partnering business plan to meet international demand
    - Several transformative projects underway: each can create significant value to shareholders

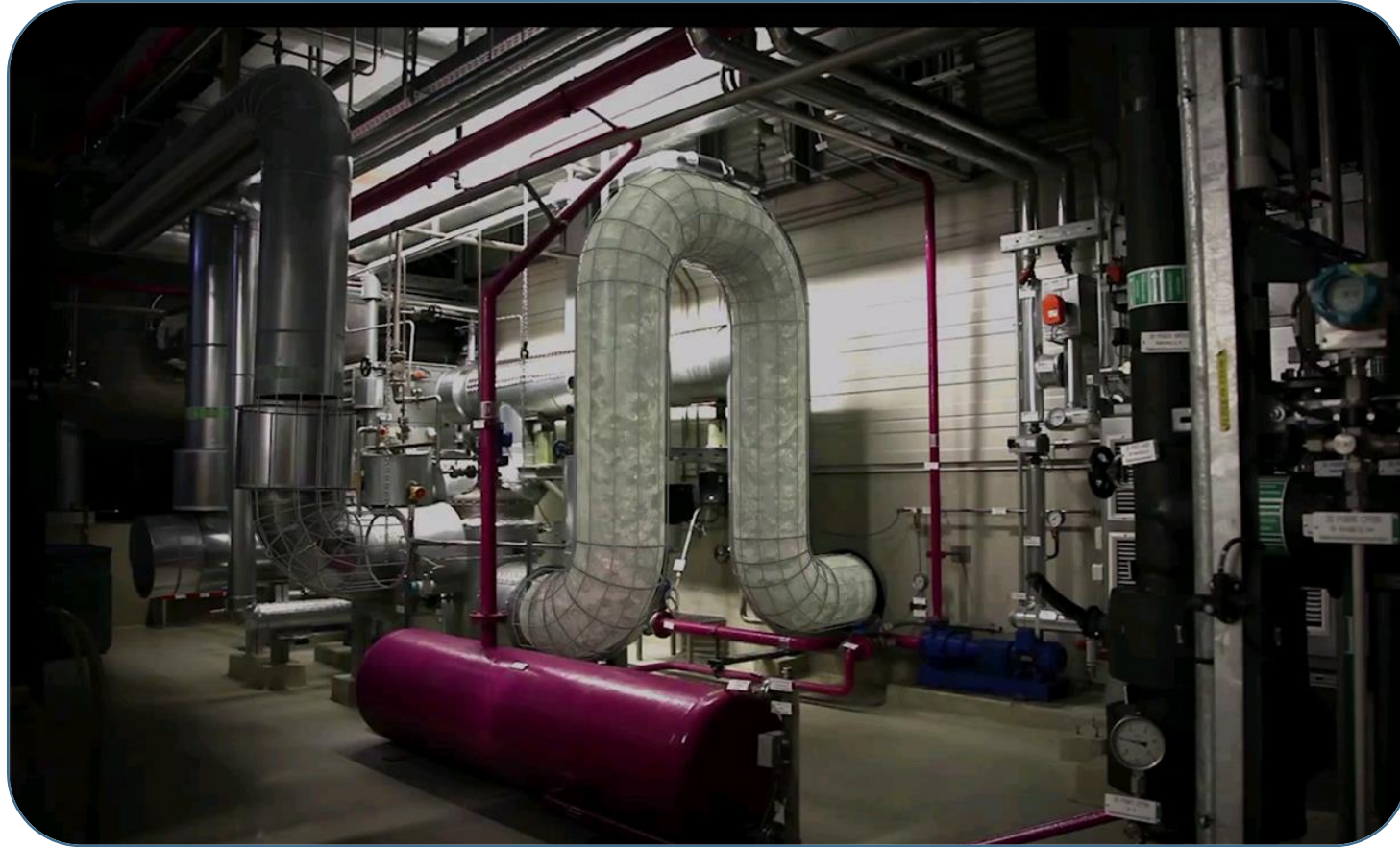
# KALiNA Cycle® Ready For Worldwide Deployment - \$126 Million Spent To Date

Commercially Deployed In A Range Of Industries -15 Plants





# KALiNA Cycle® Virtual Plant Tour Explains How The Technology Works



For a seven minute video tour of the KALiNA Cycle® Geothermal plant in Unterhaching, Germany, please visit: [www.KALiNApower.com](http://www.KALiNApower.com)

# KALiNA Cycle® vs Organic Rankine Cycle (ORC)

- ORC originally invented in 1960's vs KALiNA Cycle invented in late 1980's
- ORC and KALiNA Cycle® both use waste heat to boil a working fluid that have a lower boiling temperature than water. Boiled working fluid creates a vapour to drive a turbine to generate electricity; similar to the conventional steam cycle
- ORC installations have confirmed market demand for a rapidly growing multi-billion dollar sector
- ORC market leader ORMAT facing competition from various alternative ORC suppliers
- ORC working fluids are typically fixed concentrations of either Pentane, Butane or refrigerants like r134 or r245
- Some ORC working fluids are explosive, toxic, ozone depleting and limited for use in some jurisdictions
- KALiNA Cycle® working fluid is a variable mixture of ammonia and water which has many advantages:
  - Adjustable concentrations of ammonia with water can address variations in the waste heat source and this allows optimized boiling temperatures that can result in improved performance of 20-40% over ORC
  - Ammonia is not ozone depleting, not explosive and is accepted in wide use throughout the world.
  - Ammonia and water have a similar molecular weight:
    - vapour generated can be used with a wide range of turbine sizes (cost and performance efficient)
    - Competitive capital costs and operating costs
- KALiNA Cycle® has extensive proprietary know-how and maintains a strong and growing patent portfolio

## HIGHLIGHTS OF TECHNIP STONE & WEBSTER TECHNICAL REPORT:

*“The technology is robust, its advantages are substantial and given the extent of technology validation performed to date, Technip believes with appropriate technical and commercial support, there is a potential for the KALiNA Cycle® to be adopted on an industrial scale worldwide”*

*“The sound thermodynamic basis of the performance and efficiency advantages of the KALiNA Cycle® technology in real-world settings have been successfully validated...confirms that the technology is fundamentally efficient, reliable and safe and can be delivered across a range of heat-source parameters, including those often found but generally not utilized in common industrial settings”*

**Technip**

*take it further.*

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

- 38,000 employees in 48 Countries.
- Range of services including for Petrochemical and renewable energy sector.
- 40 years experience in EPC, commissioning, start-up and plant testing.
- 2014 revenue of €\$10.7bn

## HIGHLIGHTS OF FROST & SULLIVAN MARKETS REPORT:

*Frost & Sullivan report identifies over one million MWe global market with potential US\$800 billion annual revenues (assuming a power price of US10 cents)*

*“Frost & Sullivan anticipates that the market for binary power generation systems using heat from natural or industrial sources (such as those using the KALiNA Cycle® technology) will grow extremely strongly...this is as a result of several factors:*

- An increased focus on energy efficiency by industry, driven by increasing energy costs and an increasing desire by industry to use available energy sources;*
- Government policies and programs encouraging the adoption of energy efficiency technology;*
- Policies to encourage renewable energy sources, such as solar thermal and geothermal; and*
- Increased focus on lower temperature heat sources which will stimulate demand for binary systems”*

FROST & SULLIVAN

[ww2.frost.com](http://ww2.frost.com)

- 1,800 employees in 45 offices globally.
- 360° Research is a core of their service. Integrates seven perspectives to provide complete and overall view of factors that impact industry.
- 50 years experience of research in multiple industries to build expertise to deliver information and solutions to their clients.

# What Has Been Learned From 15 Plants Deployed And How To Achieve Success

- **PAST PROJECTS:**

- Projects that complied with KALiNA engineering design and equipment specification worked well
- Projects that utilized KALiNA engineering team and world class EPC firms were executed properly
- Sumitomo Metals, Fuji Oil and Unterhaching represent existing KALiNA Cycle power plants in a range of industries that showcase the reliability of the technology when delivered well

- **FUTURE PROJECTS:**

- Repeatable success for global commercial deployment requires effective project delivery and execution
- Fulfilment partners provide complementary skill sets to KALiNA's engineering and technical team that will allow repeatable delivery of reliable power plants to industry best standards
- Working with leading partners allows more rapid deployment of multiple projects with successful outcomes
- Preferred vendor partners provide high quality, standardised equipment for high performance, shorter lead times and better inventory management to deliver optimised cost benefit outcomes



# Highlights Of Business Plan

- Targeting criteria:
  - Markets and opportunities that are capital efficient: customer and third party funding available to minimise dilution to the Company. KALiNA Power ownership of future projects will be considered on selective economic criteria
  - Markets where multiple project opportunities exist (ie Sinopec 100+)
  - Markets with Supportive Regulatory regimes with either funding availability or legislated requirements:
    - China (legislated energy efficiency), Japan (multiple sources of funding and legislated power prices), USA (states such as California – legislated renewable energy targets), Canada (grant funding, oil sands)
  - New projects and active customers include: Sinopec, Japan Ministry of Environment and Taufkirchen in Germany
- Effective management of project execution and compliance of licensees:
  - Recruitment of additional team members with track record of building successful companies and demonstrated success in developing and constructing power projects
  - Delivering turnkey solutions to provide high quality, cost effective projects with management and oversight to ensure design and equipment specifications are met
  - Select fulfilment partners working with KALiNA will provide engineering, procurement and construction to execute and deliver projects
  - Using a turnkey licensing model provides attractive profit margins

# Example of KALiNA Cycle Plant Economics

- Capital costs for a 5MWe plant are ~ US\$16.6 million (~US\$3.325 million per MWe)\*
- Operating costs fully burdened in the range of 7.6cents per kWh

	Annualised Costs (Cents Per kWh)	Profitability of a 5MWe Plant at 15c per kWh**
Site Annual O&M Expenses per kWh	1.1 cents	
Selling, Administrative and General Expenses (SAGE) per kWh	0.7 cents	
Twenty year Nominal Capital Cost per kWh	2.1 cents	
Twenty year Nominal Cost of Turnkey Fee and License	1.0 cents	
Principal and Interest Cost per kWh	2.7 cents	
<b>TOTAL</b>	<b>7.6 cents</b>	
	<b>Annual Revenues @ 15 cents</b>	<b>\$6.2 Million</b>
	<b>Annual Costs @ 7.6 cents</b>	<b>\$3.0 Million</b>
	<b>NET PRE TAX INCOME</b>	<b>\$3.2 Million</b>

\*KALiNA Cycle Power Island only

\*\*Assumes operating capacity of 95%

# Sensitivity To Plant Size And Power Price

Plant Size Mwe	Cost Per MWe	IRR* Across A Range Of Power Sale Prices				
		10 cents Kwh	15 cents Kwh	20 cents Kwh	25 cents Kwh	35 cents Kwh
0.5	\$6,500,000	-3.6%	-3.5%	-2.9%	2.0%	13.0%
1	\$5,000,000	-3.1%	4.2%	12.7%	19.5%	32.2%
5	\$3,325,000	14.1%	26.9%	35.9%	44.6%	65.0%
10	\$2,660,000	20.6%	33.3%	45.9%	58.8%	85.1%

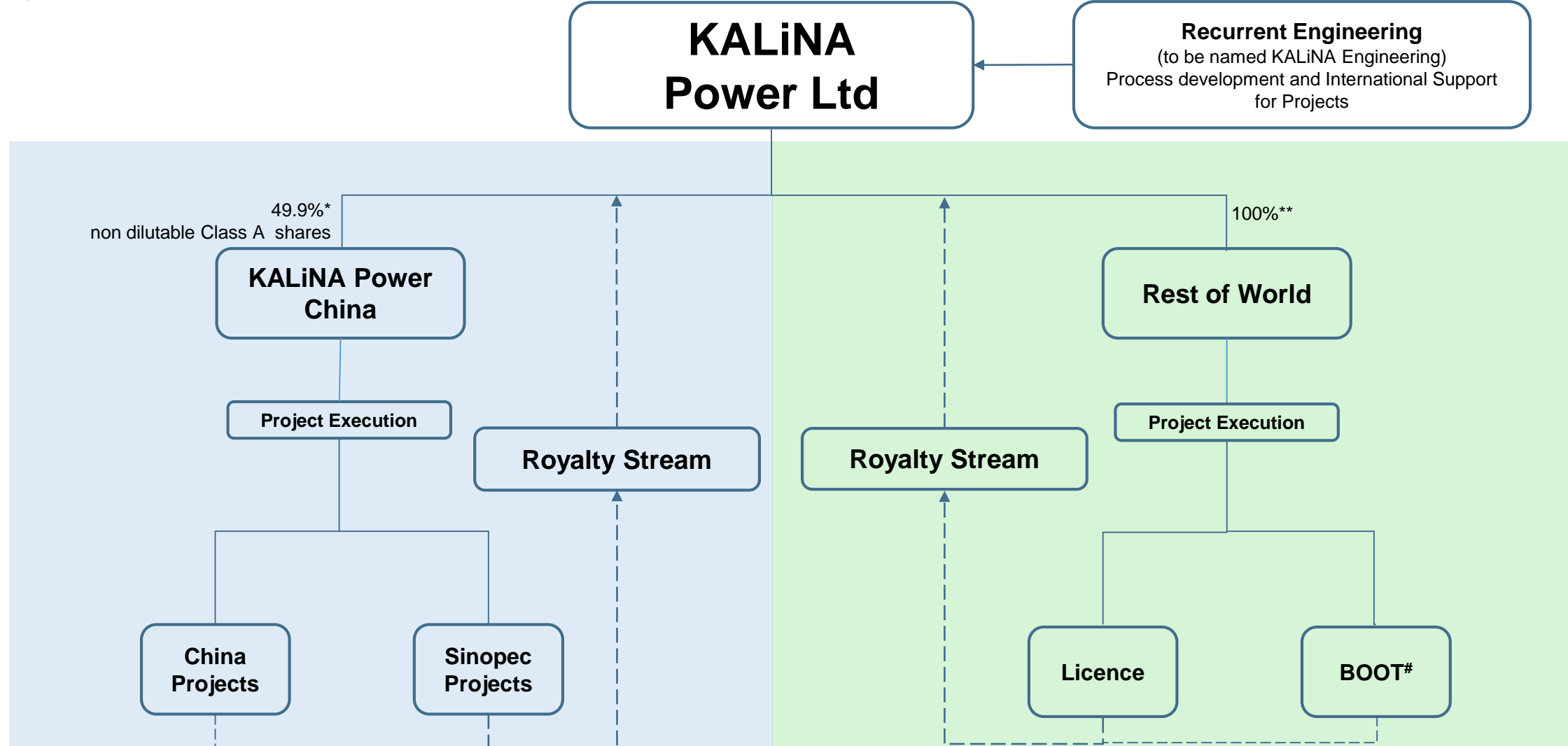
\* Assuming 100% Equity

# How Does KPO Make Money With Its Turnkey Licensing Model?

Turnkey Revenue Items	Gross \$ Per MWe	KALiNA Proceeds Per MWe	KALiNA Proceeds 5MWe
EPC Margin on overall project cost	\$250,000	\$35,000	\$175,000
Turnkey Fee / Engineering Services	\$500,000	\$500,000	\$2,500,000
<b>Total</b>	<b>\$750,000</b>	<b>\$535,000</b>	<b>\$2,675,000</b>
<b>Recurring Annual Royalty to KALiNA*</b>	<b>\$40,000</b>	<b>\$40,000</b>	<b>\$200,000/year</b>

\* For near term projects with Sinopec in China it is anticipated that the royalty will be a one-off based on MW installed

# Structure – Designed To Deliver KALiNA Cycle Power Solutions



- Held through New Energy Asia Limited, a 75% subsidiary of KALiNA Power
- Future funding of business in China expected to come from investment sources in China

\*\* Asia region currently 75% via New Energy Asia Limited  
 # Build Own Operate Transfer



# Why China – Sinopec

- Government mandate requiring large industrial enterprises to achieve significant energy efficiencies
- KALiNA Cycle identified by Government as a priority technology to address energy efficiency
- Sinopec is the second largest company in the Fortune Global Top 500 (US\$447billion revenue)
- First 4MWe KALiNA project at Sinopec petrochemical plant on Hainan Island is 80% complete
- KALiNA now overseeing project management to assist project completion in compliance with design specifications
- Scheduled for mechanical completion Q3, 2016
- Successful completion to act as blueprint for roll-out with Sinopec:
  - Sinopec provides funds for each project making it capital efficient for KALiNA
  - JV with Sinopec Engineering to deliver EPC construction for KALiNA plants to Sinopec projects
  - Showcase KALiNA Cycle® for widespread adoption in China to meet mandated energy efficiency targets
  - Hainan Island project expected to require a total of 8 KALiNA Cycle power plants
  - Sinopec has over 1,000 industrial sites looking to achieve energy efficiencies
  - Sinopec has identified an initial 22 petrochemical sites to utilize 100 KALiNA Cycle power plants

# KPO Pro-Forma Financials – EBITDA With Sinopec And ROW Global Market

NEW MEGAWATTS INSTALLED PER CALENDER YEAR	2016	2017	2018	2019	2020	2021	2022	2023
China Projects	1	4	6	12	20	30	40	50
<b>CHINA MW</b>	<b>4</b>	<b>16</b>	<b>24</b>	<b>48</b>	<b>80</b>	<b>120</b>	<b>160</b>	<b>200</b>
ROW Projects	0	1.8	2.5	3	6	10	14	18
<b>ROW MW</b>	<b>0</b>	<b>14</b>	<b>20</b>	<b>24</b>	<b>48</b>	<b>80</b>	<b>112</b>	<b>144</b>
<b>TOTAL NEW MW</b>	<b>4</b>	<b>30</b>	<b>44</b>	<b>72</b>	<b>128</b>	<b>200</b>	<b>272</b>	<b>344</b>
<b>CUMULATIVE MW</b>	<b>4</b>	<b>34</b>	<b>78</b>	<b>150</b>	<b>278</b>	<b>478</b>	<b>750</b>	<b>1094</b>

Note: New projects costs incurred and costs recovered in current year: turnkey license fee and royalty received in following year

## KPO INCOME STATEMENT

(Figures in USD)

	2016 Forecast	2017 Forecast	2018 Forecast	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast	2023 Forecast
<b>EBITDA*</b>	<b>(879,490)</b>	<b>(69,377)</b>	<b>8,840,114</b>	<b>18,347,624</b>	<b>31,403,889</b>	<b>58,272,838</b>	<b>92,600,149</b>	<b>128,226,558</b>

## Key Assumptions

- Completion of first plant in China at Sinopec Hainan and roll out of identified opportunities with Sinopec
- Agreements with key international engineering firms and preferred equipment vendors to enable global marketing and project execution
  - Additional ROW projects forecasted represent less than 0.001% of the global market identified by Frost & Sullivan
  - Rest of World projects pay a recurring annual royalty to KALiNA Power of \$40,000 per MW

\* Estimates only based on number of potential MW installed – actual results may vary as formal contracts have not yet been entered into for future projects

# Board and Management of KALiNA Power and China

## Ross MacLachlan, Executive Director

- Thirty-five years of technology development and project funding as CEO and Executive Director, previously at Lignol Energy
- Raised over US\$100 million in both the conventional energy and alternative energy sectors
- Former Director of Pristine Power which built over 600 MWe of projects eventually sold for US\$300m to Veresen Inc

## Mark Mirolli, Engineer, Chief Technology Officer

- Twenty-five years experience in thermal power generation, design and construction and the leading expert on the KALiNA Cycle®
- Former Director of Technology Development for ABB Combustion Engineering

## Tim Horgan, Solicitor, Executive Director

- Former Counsel at Gillette and sat on its AMEE Operating Committee overseeing annual sales in excess of US\$1.2 billion
- Oversaw acquisition and worldwide licensing of the 2002 and 2006 FIFA World Cups for over US\$1 billion in revenues

## Jeff Myers, (proposed) Non-Executive Director

- Senior Operating Partner of Stonepeak Infrastructure Partners, former founder and CEO of Pristine Power.
- Led in the development, execution and operation of three gigawatts of independent power projects

## Dr Malcolm Jacques, Non-Executive Director

- International career across research, development and implementation of numerous energy technologies.
- Worked previously at BP Ventures (UK), The Energy Laboratory, MIT (Cambridge, USA), Strategic Research Foundation (AUS)

## John Byrne, Non-Executive Chairman

- Thirty years experience in industrial project development and capital markets success
- Founded Western Coal Corporation which was dual listed on AIM and TSX which was sold for over US\$1 billion

## George Yan, Chief Operating Officer – China

- Senior project management professional with experience in China and North America. Founded 400+ employee EPC firm in China
- Managed several, multi-hundred million dollar Oil Sands projects with Jacobs and Worley Parsons in Canada

## Next 12 months:

- Secure additional capital raising
- Restructure contract for completion of Sinopec Hainan plant
- Appointment to board of industry leading directors
- Recruitment of additional key personnel
- Complete negotiations with multiple key EPC Fulfilment and Preferred Vendors partners
- Complete joint venture and agreements for roll-out of additional China plants
- Secure financing for Chinese operating subsidiary with funding from China
- Initiate construction of additional plants in China
- Secure international project funding for turnkey project execution
- Initiate joint marketing efforts with multiple EPC Fulfilment and Preferred Vendor partners in rest of the world

## Important Information

- This presentation may contain certain forward-looking statements that have been based on current expectations about future acts, events and circumstances
- These forward looking statements are, however, subject to risks, uncertainties and assumptions that could cause those acts, events and circumstances to differ materially from the expectations described in such forward-looking statements
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Thank you

