

### Clean TeQ Limited Investor Presentation

June 2012

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or personal

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#### Vision



"Clean TeQ will be a globally recognised company providing innovative and value creating solutions to the world's critical problems in water and air quality and strategic metals recovery"

#### **Overview**



The Company is the Australian leader in providing solutions that reduce air pollution by odorous, toxic and greenhouse gases



The Company is introducing world leading, patented technologies that reduce water pollution by removing salts and toxic materials in groundwater, coal waters, mining waters and wastewaters



The Company has developed, patented and proven world leading technologies that extract, purify and recover valuable metals from ores and sludge in the mining and mineral processing industries

#### **Overview**





#### **Market Focus**

# **ScleanTeQ**



#### **Clients**

**F**MG









**ScleanTeQ** 

#### **Revenue Model**



#### **Revenue Model includes:**

- Project based fees
  - Delivery of engineered air, water & metal extraction plants
- Licence fees
  - Fee for the use of its IP for a Field and within a Territory
    - Fields
      - » Air-based IP for Biotechnology and Thermal Air Pollution Control
      - » Water-based IP for Continuous Ionic Filtration™ Water Treatment
      - » Mining-based IP for Clean-iX® Metal Extraction and Purification
    - Territories
      - » Australia
      - » Japan
      - » Future territories include North America, South America, China, India
- Service Fees
  - Fee for service from licencees and joint ventures
- Royalties
  - Percentage of sales based on its IP
- Build, Own and Operate
  - Associated Water revenue model

#### **Investment Details**





#### **Financials**





Revenue \$'000 p.a.

#### **Financials**



# Sicean TeQ

#### CleanTeQ Holdings Limited April 12 Balance Sheet

Current Assets	\$
Cash at bank	2,628,969
Trade Debtors	1,224,986
Other current assets	1,964,570
Total Current Assets	5,818,525
Non-current Accest	
Property Plant & Equipment	122 202
Deferred Tax Access	2 501 000
	2,391,900
Investment in IV	1 201 706
Total Non Current Accests	14 545 094
Total Non-Current Assets	14, 545, 564
Total Assets	20, 364, 509
Current Liabilities	
Trade & Other payables	2,661,288
Other current liabilities	22,925
Total Current Liabilities	2,684,213
Non-current Liabilities	0 507 007
Deferred lax Liabilities	2,587,807
Other Non-current liabilities	129,013
Total Non-Current Liabilites	2,716,820
Total Liabilities	5,401,033
Net Assets	14,963,476
Fauity	
Issued Canital	13 269 772
Reserves	56 082
Retained Farnings	1.637.622
Total Equity	14,963,476

#### **Developments in FY12**



- FY12 revenue is forecast at ca. \$14m, EBIT ca. \$1.0m and NPAT ca. \$0.7m
  - Healthy air and water revenue base in FY 12
- Joint Venture Company, Associated Water Pty Ltd (AWPL), commenced with Nippon Gas, Japan
  - Nippon Gas invested \$4m into AWPL for a 50% shareholding in AWPL
  - Clean TeQ licenced the CIF<sup>™</sup> technology for water treatment in the coal seam gas industry (the Field) in Australia (the Territory) to the AWPL for its 50% shareholding
  - As a further show of confidence, Nippon Gas invested \$2m for 10% shareholding in Clean TeQ Holding
- Sold two 2MLD CIF<sup>™</sup> plants (value \$2m) to Queensland Gas Company
  - First commercial examples of the CIF technology to treat water associated with coal seam gas production.
- In advanced discussions with a major global mining services company
  - JV or IP deal to use CIF<sup>™</sup> technology to treat water in the mining industry for reuse and discharge.
- In advanced discussions with Nippon Gas in Japanese market
  - IP deal for the Japanese market on the use of our technology suite.
  - Trials are already underway for metal recovery and water reuse with potential contracts in discussion.

#### **FY13 Targets**



#### Air Division

- Revenue target of \$11m+ for FY13. Already has a strong pipeline of projects under contract.
- Negotiate a Licence / JV with Asian partner for delivery of air technologies into Asia and Middle East.

#### Water Division

- Conclude negotiation with major mining services company on water in mining market partnership.
- Revenue target for "water in mining applications" of \$7m+ in FY13
- Commenced discussions and negotiations for technology licence in water technologies for the China and USA regions

#### Mining Division

Investigate opportunities for technology to add value to stranded resources

#### Associated Water

- 3+ mobile and modular water treatment plants servicing the coal seam gas market and treating up to 5MLD
- Commercialisation and introduction of brine evaporation / crystallisation technology

#### Japan Joint Venture

- Complete the successful demonstration of precious / light metal extraction technology from waste sludge
- Licence negotiated on air and water suite of CLQ technologies for Japan region
- Licence negotiated on precious / light metal extraction technology for Japan region

#### **Developments**





#### **Revenue Mix**

FY13 (est)

0.8%

13.7%

0.0%

0.0%

41.1%

44.4%

FY14 (est)

2.1%

11.9%

0.0%

0.0%

44.5%

41.5%

- Target revenue growth of 50%+ in FY13
- Increasing air revenue but decreasing as a percentage of the overall revenue
- Increasing water revenue in line with water service model
- No mining revenue is predicted at this time however success in this sector represents a significant upside potential
- Licence revenue is variable depending on countries targeted and type of licence
- Royalty revenue increasing in line with cumulating licences being granted globally

#### **Air Markets**



#### Organic growth in odour air pollution markets in Australia

- Currently we are the market leader in this segment in Australia and will continue to innovate and optimise our offering to our large Australian customer base.
- Potential growth in Australian market for greenhouse gas emission control.
  - Our Clean-RTO technology converts methane to carbon dioxide saving over 80% of the carbon tax payable.
- Growing market for odour and volatile organic emission control in Asian and Middle East markets.
  - Biological odour control for WWTP's is becoming the preferred option and our technology is world-class. Currently tendering into China and Saudi Arabia. Excellent Australian reference base (over 100 installations) for overseas expansion.
  - Thermal RTO will become more popular as increasing regulatory pressure in Asia and Middle East to reduce the levels of organic emissions.

#### Partnership Strategy

- Provide a technology package or project based licence for biology technology
- Provide a complete package for thermal technology

#### **The Produced Water Marketplace**



- Produced water is a term used in the oil and gas industry to describe water that is produced along with the oil and gas.
- The quantity and quality of the produced water is dependant on the oil or gas type.
- Oil and gas types are divided into conventional and unconventional.
- Unconventional developments (coal seam gas, shale oil and gas, tar sand oils) are expanding rapidly and the treatment of produced water from is the largest emerging water marketplace globally.



#### **Associated Water Pty Ltd**



The Australian CSG water market has the potential to be one of the largest emerging water treatment market opportunities globally

- Over 30,000 gas wells require water treatment over the next 6 years.
- Capital expenditure on water treatment in CSG market is estimated to be ca. \$500m p.a.
- Operating cost are similarly estimated to be around \$500m p.a. and continue for the life of the gas fields, estimated at 2030.

#### Early movers have installed reverse osmosis (RO) technology.

- QGC using conventional RO / evaporation technology for Kenya and Windibri plants (\$300m+)
- Santos, Origin, AGL, Arrow engaging with other water treatment solution providers with many CSG companies stating that RO is not the best solution for produced water because of power, operability in scaling environments and brine volumes and alternatives are being sought.

# Continuous Ionic Filtration (CIF<sup>™</sup>), DesaliX<sup>™</sup> and HiROx<sup>™</sup> give the clients a better outcome

- Lower Costs
- Lower Energy
- Higher Water Recovery
- Lower Brine Volumes
- And can be used as a pretreatment to existing underperforming RO plants



- Or personal use only
  - The CIF<sup>™</sup> process can be up to 50% cheaper in capital and operating cost than existing reverse osmosis desalination processes operating on produced water.
  - Associated Water Pty Ltd (AWPL) will use CIF<sup>™</sup> technology to treat produced water to a grade suitable for agricultural use while minimising the amount of by-product brines.
    - AWPL will build, own and operate mobile and modular plants to service the Australian produced water market.
    - AWPL aims to gain 5 10% penetration in the Australian market by end of FY14.
    - AWPL will establish commercial relationships with other major water treatment suppliers to offer CIF<sup>™</sup> pre-treatment for currently underperforming reverse osmosis plants.

#### **Produced Water in North America**

#### Market for CIF<sup>™</sup> based Technology in North America includes

#### **Conventional Oil Fields**

In many parts of North America, for geological and regulatory reasons it is necessary to dispose of produced water off-site and advances in desalination technologies have meant that the beneficial reuse of this wastewater, either on-site or off-site, is becoming an increasingly economic possibility.

S Clean TeQ

#### Shale Gas Industry

The expected dramatic expansion of the shale gas industry, such as the Marcellus Shale, means rock which holds gas must be fractured – typically using around 13,000 m<sup>3</sup> of water. This water is contaminated by chemicals and requires treatment before disposal. Environmental concerns related to frac water entering the water table look set to ensure that energy companies operating in the shale will need to invest in water treatment services.

#### **Oil Sands Industry**

The growth of the oil sands industry in Canada and the process of extracting synthetic crude oil from oil sands is highly water-intensive. Even though Canada is one of the most water-rich countries on earth, the water availability in the Athabasca oil sands region is insufficient to meet demand unless a greater proportion of the wastewater is recovered and recycled.

#### Enhanced Oil Recovery Techniques

Primary recovery typically recovers only 5-15% of the oil from a well. Secondary recovery, often involving pumping water down the well to maintain the pressure on the oil, may increase recovery to 30%. Enhanced oil recovery techniques can increase the proportion of the oil brought to the surface to 60%. Although a variety of fluids can be used in EOR, many require flood water of a precise salinity. For example, low-salinity water from which divalent ions have been removed, but monovalent ions remain in a certain concentration, can be used to peel off the oil from the clays which surround it, increasing recovery rates without the clay becoming mixed in with the oil. Creating these custom waters requires advanced water treatment technologies.

#### Water in Mining



## The Australian market for water treatment plants in mining is >\$150m p.a.

- Increased investment in the resources industry means more water is needed for processing and subsequent discharge or reprocessing. Many mines compete with the local community for water resources
- Specific opportunities exist in the processing of saline water in coal mines where over 20 mines in NSW and Queensland currently have water balance problems. These mines are subject to strict discharge regulations and water desalination is generally needed to meet discharge licence conditions.
- Pipeline of potential projects, with our proposed JV partner, in this area is substantial.

#### Globally, mining is heavily dependent on water

Water is used everywhere from the extraction of crude ores to the processing and refining of the finished products and, as such, it is a major operational risk. It is also a major environmental risk: wastewater from mines can be highly toxic and governments around the world are becoming increasingly vigilant in their efforts to protect natural resources from contamination.

## The global market for water treatment plants in mining is currently >\$800m p.a.

- The demand is growing due to similar market demands. The immediate demand outside of Australia is from South and North America, Africa and China.
- Saline mine waters are generally highly scaling (contains calcium, magnesium, sulphate, carbonate) which means that RO is unsuitable. We are working with major global companies to provide our unique CIF<sup>™</sup> solution for this type of water.





Global Market for Water Equipment in Mining \$m p.a.



#### **Growth Strategy**



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#### Air treatment

- Organic growth in local markets
- Leverage large reference base into Asia and Middle East markets

#### Produced water treatment and reuse

- Consolidate Australian commercial base
  - the treatment of produced water in the \$500m + p.a. Australian market through the established Associated Water Pty Ltd JV.

#### - Licence & Royalty model globally

- \$2.5b p.a. North American market
- \$500m p.a. South America market
- China market
- Indonesian market

#### Mining water treatment and reuse

- Establish and consolidate Australian commercial base
  - in the treatment of mining water in the \$150m p.a. Australian market through the creation of a JV with global mining services company in FY13.
- Licence & Royalty model globally
  - \$200m p.a. North American market
  - \$200m p.a. South America market
  - South African
  - China market
  - Indonesian market

#### **Produced Water Treatment Markets**



#### **Mining Water Treatment Markets**



#### **Growth Strategy**



#### Japan Joint Venture

- Large markets for
  - resource recovery
  - water treatment and reuse
  - air pollution control
- Establish JV in Japan in FY13
- Establish commercial operations demonstrating the value of CIF™ for metal recovery in FY13

#### Generate revenue streams from Mining & Metals recovery

- Based on previous and current successes in metals extraction, expand the business into
  - metal recovery from waste materials for industrial companies
  - ventures in recovering and purifying valuable metals from ores and sludge for small to medium sized mining companies

#### **Board & Management Team**





Greg Toll, Executive Charman
Greg Toll, Executive Officer
Greger Harley, Non-Executive Director
Matthew Lakey, General Manager (Air)
Bob Cleary, Non-Executive Director
G. John Carr, General Manager (Water & Mining)

- 7. Melanie Leydin. Chief Financial Officer and Company Secretary
- 8. Ross Dive, Managing Director (UV Guard)

#### 1. Greg Toll, Executive Chairman

Former Clean TeQ CEO with considerable experience in senior management roles at Effem Foods, Nestle and Lion Nathan.

#### 2. Peter Voigt, Chief Executive Officer

Company founder and former Clean TeQ CTO with over 30 years of experience in the development and commercialisation of technology.

#### 3. Roger Harley, Non-Executive Director

Founder & principal of Fawkner Capital and formerly with Deutsche Bank. Wide ranging experience in financing, innovation and capital markets.

#### 4. Matthew Lakey, General Manager, Air

Engineering background and with a broad range of experience in project design and management.

#### 5. Bob Cleary, Non-Executive Director

Background in senior management roles in mining, chemicals and oil & gas companies and as a director of a number of resource companies and former MD of Energy Resources Australia Ltd.

#### 6. John Carr, General Manager, Water & Mining

Mining background with experience in the piloting, design and operations of water and mining process operations.

#### 7. Melanie Leydin, CFO & Company Secretary

Extensive experience in the accounting profession and Director and Company Secretary of a number of mining and oil and gas companies on the ASX.

#### 8. Ross Dive, General Manager, UV Guard