

Aeris Environmental Ltd (ASX:AEI)

Annual General Meeting

27 November 2014

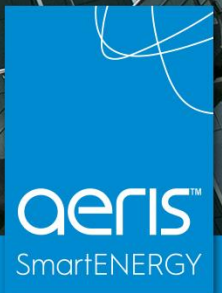




**Aeris Environmental Ltd
(ASX:AEI)**

**Annual
General
Meeting**

27 November 2014





Aeris Environmental Ltd is
focussed on the global
megatrends of **energy**
efficiency, healthier air, food
safety, water quality, and
long term materials
protection with core guiding
principles of:

‘clean, green, protect’



Mr Maurie Stang

Non-Executive Chairman

Aeris key technology platforms

✓ SmartENERGY

Dramatic energy savings & improved efficiency across all air-conditioning & refrigeration systems

✓ Smart Coatings

Permanent OEM coatings for the prevention of mould, bacterial growth and enhanced corrosion protection.

✓ Smart Surfaces

Point of use hard surface applications with unique long term residual efficacy.

✓ Smart Polymers

Plastic additives that are permanently microbially resistant whilst being environmentally friendly.

✓ Smart Water

Enzymatic remediation of biofilm in circuits including air conditioning, large industrial plant, beverage and brewery

Aeris today - growth drivers

- ✓ **Successful investment** in technology platforms and application validation, now crystallised to drive shareholder value.
- ✓ **Acquisition of Smartcool Australia business** now fully integrated.
- ✓ **Strong R&D program** with three significant product launches in the last quarter.
- ✓ **Unprecedented revenue pipeline** across all five technology platforms with significant SmartENERGY sales activity.
- ✓ **Commercial orders** currently scaling.



Aeris today - growth drivers

- ✓ **Strategic alliances with major energy retailers** and industry leaders.
- ✓ **Innovative customer funding** for 'green' projects rapidly evolving.
- ✓ **C-Suite sales process** driven by compelling ROI with immediate P&L benefit to Aeris' customers.
- ✓ **Outstanding industry and technical experience** with successful reference sites both in Australia and across the Asia-Pacific region.
- ✓ **Solution focussed product portfolio** with high annuity revenue and sustainable margins.

Energy Retail Association Australia Members

OUR MEMBERS

The ERAA has full and associate members who participate on the ERAA board, policy committee, market briefings as well as ad-hoc working groups.

FULL MEMBERS



ASSOCIATE MEMBERS



Aeris corporate overview

Aeris Environmental Ltd

Stock Exchange:	AEI:AU
Share price (10 November):	22 cents
Shares on issue:	117,746,704
Market capitalisation (10 November):	\$25.90 Million
% held by top 20 shareholders:	70.46%

Financial:

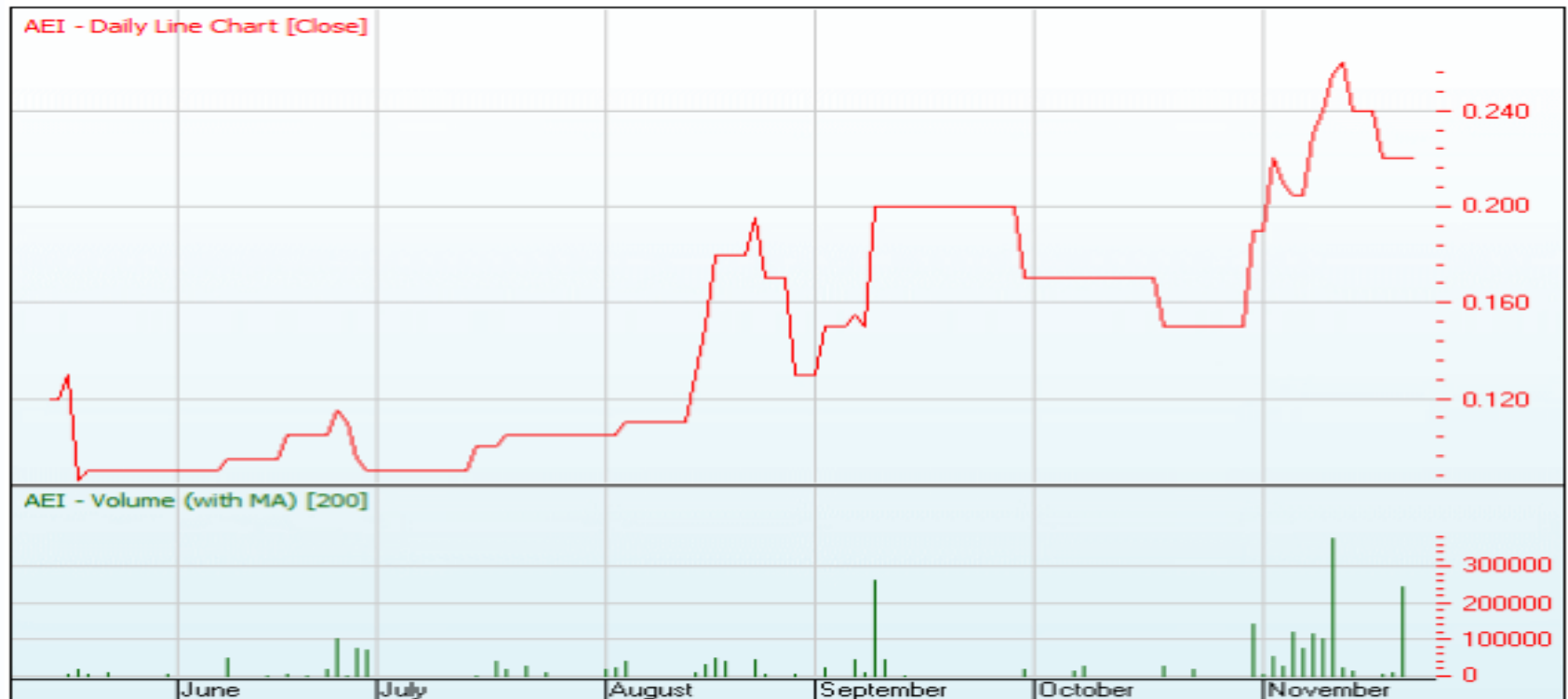
	2014	2013
	\$	\$
Income	487,121	549,065
Expenses	(1,555,014)	(1,733,675)
Loss after income tax	(1,067,893)	(1,184,610)
Profit / (loss) from Discontinued operations	-	52,451
Net Loss for the period	(1,067,893)	(1,132,159)



Aeris corporate overview

AEI, AERIS ENVIRONMENTAL ORD

The chart of daily prices over 6 months for security AEI



Microbial control matters

- High public profile and deadly pandemics like Ebola, MERS & H1N1 with quicker mass infection due to increased cross border travel.
- Understanding about infection prevention in non-healthcare environments.
- Total acceptance by the medical and scientific community of the need to treat and protect secondary touch surface.
- Growing world population with increased density in cities.

Why residual protection is important...

- ICU hospital rooms (bed rails, over-bed tables, intravenous poles, and arms of the visitor's chair) were treated with copper, known to have residual antimicrobial activity.
- Healthcare-acquired infections (HAIs) were reduced by 58%.
- Nearly 1 in every 20 hospitalized patients in the United States develops a HAI, resulting in 100,000 deaths per year and "adding \$35.7–\$45 billion to healthcare costs" in the United States.
- Microbes can remain for weeks on hospital surfaces, thereby significantly increasing the risk of HAIs

(Cassandra D. Salgado, MD, May 2013, Infection Control and Hospital Epidemiology)



The 'green' business

- Growing trend to adopt, cost efficient, green technologies that deliver proven environmental outcomes.
- Legislation & mandated emission reduction targets.
- Financial incentives from federal and state governments, development organisations and supply constrained energy retailers.
- Greater corporate understanding of the financial cost of being inefficient and the ROI advantages for 'going green'.
- Widespread adoption of environmental and efficiency benchmarks such as NABERS.
- Triple bottom line reporting and corporate social responsibility by multinational corporations.

The Abbott government is committing to reduce carbon emissions to 5% below 2000 levels by 2020, via the \$2.55 billion Emissions Reduction Fund.

Air conditioning in Australia consumed approximately 22% or 59,000GWh of the total 223,000GWh of electricity produced in Australia in 2012.

Total indirect greenhouse gas emissions as a result of energy consumption to power AC systems are approximately 57.1MtCO₂-e per annum, **equivalent to more than 10% of the Australian greenhouse emissions as calculated by the 2011-12 NGGI.**

For every new 2kW (electrical input) of air conditioning capacity added to the electrical distribution networks, some \$7,000 in costs for network augmentation are imposed on the system (DRET 2011).

Reference

"Cold Hard Facts 2: Report," prepared for the Department of Sustainability, Environment, Water, Population and Communities and National Greenhouse account factors: published by Dept of Climate Change and Energy Efficiency July 2012, for NGERs reporting structure.

A high profile opportunity

theguardian

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News > Australia news > Australian politics

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Taking the next step on energy efficiency

GREG PICKER | 12 NOV, 11:12 AM | 1

CLIMATE | ENERGY MARKETS | POLICY & POLITICS | SMART ENERGY

Energy efficiency is often described as perhaps the one sensible climate change policy that we can all agree on. And why not? Delivered well, energy efficiency saves consumers money, reduces energy demand and the need for increasing electricity infrastructure, all the while reducing greenhouse gases and acting as a benefit to the economy as a whole.

There have been a number of recent stories demonstrating the central role energy efficiency has had in helping transition Australia's inexorably increasing annual electricity demand to an acceptable level in the last few years. To some real extent the reason Australia has a chance of meeting its climate change target is because of energy efficiency measures. The Energy Efficiency Commission has reported that if considered as a fuel the amount of energy efficiency is greater than renewable, gas and even coal globally.

Australia one of only four nations forecast to miss 2020 emissions target

A UN report says Australia and just three other nations will not meet their pledge to reduce emissions by 2020

ecogeneration

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NSW Energy Savings Scheme expanded

Fri, 14 November 2014

The NSW Government will strengthen its Energy Savings Scheme to help homes and businesses in NSW save money on their gas bills.

The Hon Rob Stokes MP, NSW Minister for the Environment said the scheme will be extended to 2025 and expanded to help homes and businesses save gas.

The NSW Government will not only expand the scheme, but also significantly improve its design and overhaul the administration to lower costs and increase the benefits of the scheme, according to the Energy Efficiency Council (EEC).

EEC Acting CEO Luke Menzel said "World leaders discussing energy efficiency at G20 in Brisbane will see this as a major vote of confidence from the NSW Government."



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Paul Keating: US-China emissions deal exposes 'nonsense' of Abbott's policies

Latika Bourke

Published: November 13, 2014 - 10:18AM

Former prime minister Paul Keating says the landmark climate change deal struck between China and the US exposes the "nonsense" of the Abbott government's policies and its refusal to place the issue on the agenda of G20.

But Treasurer Joe Hockey says he's "not sure" if Beijing and Washington's move will ensure climate change will be front and centre of this weekend's G20 discussions in Queensland but urged leaders not to be distracted from what he said were the twin priorities of jobs and growth.

China and the United States stunned observers [by announcing a secretly negotiated agreement](#) that commits the US to cutting its carbon emissions by 28 per cent by 2025. Beijing has for the first time said its carbon emissions will peak by 2030.

The SmartENERGY solution

Inefficient Cooling is Burning a \$1.75bn Hole in Aussies' Pockets

With temperatures set to hit highs of 37 degrees this week, Air-conditioning units throughout the state will be turned to max in a bid to keep cool. However, research from Aeris has found that inefficient energy use is needlessly costing Aussies \$1.75bn* per year.

Aeris' assessment of the Cold Hard Facts Report shows that each year, \$8.85bn is spent powering refrigeration and air-conditioning units. However, through a combination of bacteria build up and dated technology, most units are running inefficiently.

(*based on 15c kw/h average consumption)

Australian SmartENERGY Breakthrough Positioned to Spearhead up to Half the Nation's 2020 Carbon Reduction Target if Broadly Adopted

Aeris Environmental CEO, Peter Bush, stated that its breakthrough integrated coatings and optimisation technology could help drive up to half the entire Direct Action emissions target, providing major ongoing competitive advantage and savings for Australian businesses and government.

"If all Australian buildings implemented a simple retrofit action to their current air conditioning and refrigeration plants, half of Australia's entire emissions reduction target could be met whilst dramatically increasing efficiency." Peter Bush, CEO Aeris announced today.

HVACR Energy Efficiency Seminar Series

November
2014

Brisbane :: Sydney
Melbourne

Presented by
B2B Forums
in association with



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SmartENERGY

SmartENERGY milestones

- Smartcool Australia business acquired by Aeris on 1 July 2014.
- Multiple field trials demonstrate the synergy of AerisGuard long lasting remediation and treatment with Smartcool compressor optimisation system.
- Aeris development and launch of SmartENERGY Measurement and Verification, reporting and assurance platform.

How does SmartENERGY work

- HVAC coils dramatically deteriorate in performance & energy efficiency from day of installation.
- AerisGuard remediates and protects the coil to return to 'new' efficiency.
- SmartENERGY compressor optimisation utilises propriety algorithms which recognise the near perfect state of the AerisGuarded coils.
- SmartENERGY measurement & verification, reporting and maintenance program ensures ongoing peak performance and energy savings.

"SmartENERGY delivers dramatic energy savings and improved efficiency across all air-conditioning and refrigeration systems with immediate cash flow savings."



Mr Peter Bush

Chief Executive Officer

Aeris today

- ✓ **Multi-million dollar SmartENERGY and OEM Coatings qualified sales pipeline going into 2015.**
- ✓ **Current investment and sales activity in priority markets** – Australia, Philippines, Thailand, Middle East, Singapore, Hong Kong and China.
- ✓ **Direct technical sales force currently deployed.**
- ✓ **Active recruitment of technical sales specialists** to service priority markets.
- ✓ **Ramp up in investor relations** focussed on multiple brokerage houses.
- ✓ **Strong education/public relations program** with focus on SmartENERGY.
- ✓ **Successful engagement with all levels of Government** for SmartENERGY.
- ✓ **Strategic partnerships with energy retailers** and trade partners.
- ✓ **Multiple new product launches** driven by key channel partners demands.

Aeris revenue drivers

SmartENERGY

- Focus on Australian multisite clients with early revenue opportunity.
- Co-announcements with expanding number of high profile customers.
- Targeted business development with international customers across Asia Pacific.
- Innovative finance models including substantial opportunities for subsidised peak demand projects.
- SmartENERGY successfully undertaken first major project with large retailer.



Smart Coatings

- New range of AerisGuard smart coatings successfully developed and now launching into Australian and key international markets.
- First contract for new OEM coating signed with SolAirWorld.
- Expansion of OEM HVAC coating in Asia, Middle East and USA.
- Commercial launch of duct and exhaust coatings in Australia.



Aeris revenue drivers

Smart Surfaces

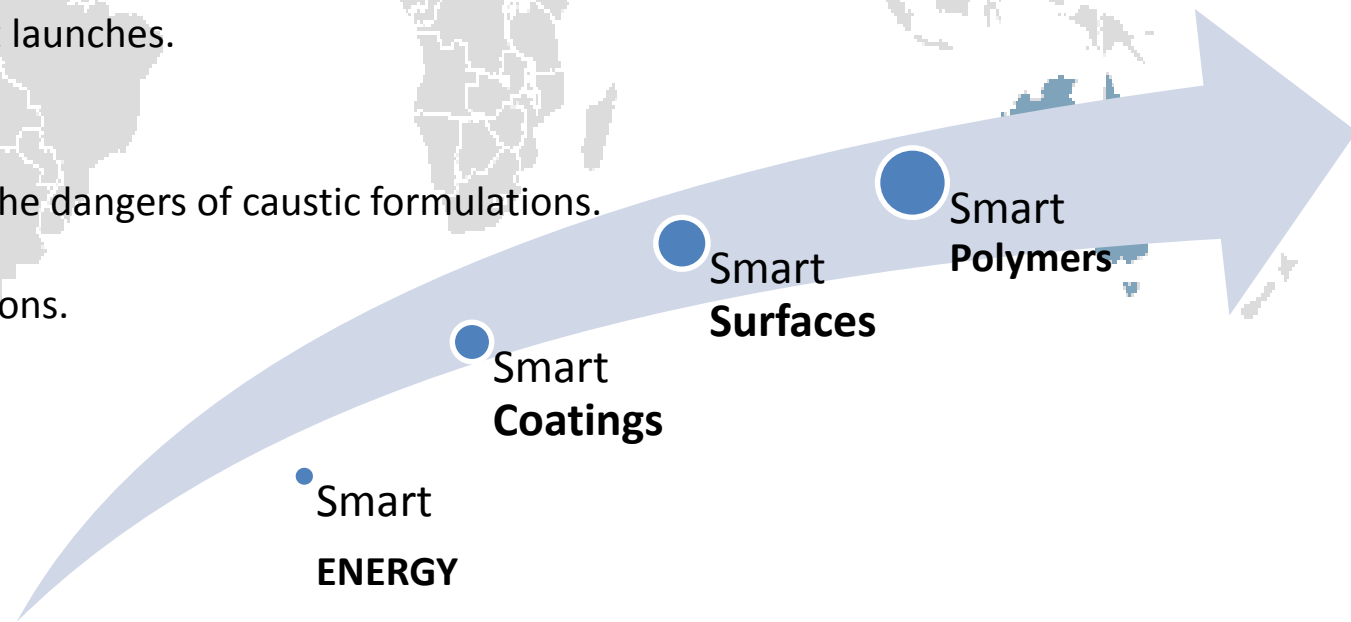
- Launch of consumer AerisGuard residual anti-mould product.
- Launch market established in Thailand for AerisGuard hard surface treatment.
- Expansion of Aeris Hygiene Services into broader food safety value chain.

Smart Polymers

- Manufacturing scale up of Smart Polymer additives.
- First high volume specifications achieved in industrial & commercial products.
- First healthcare product launches.

Smart Water

- Growing awareness of the dangers of caustic formulations.
- Strong sales pipeline.
- New customer applications.



The energy opportunity

**ELECTRICITY
PRICES HAVE
RISEN BY 35%
OVER THE PAST
4 YEARS**

HVAC CONTRIBUTES:

70%

OF TOTAL
ENERGY USAGE

50-70%

OF TOTAL
ENERGY BILL

63%

OF GREENHOUSE
GASES

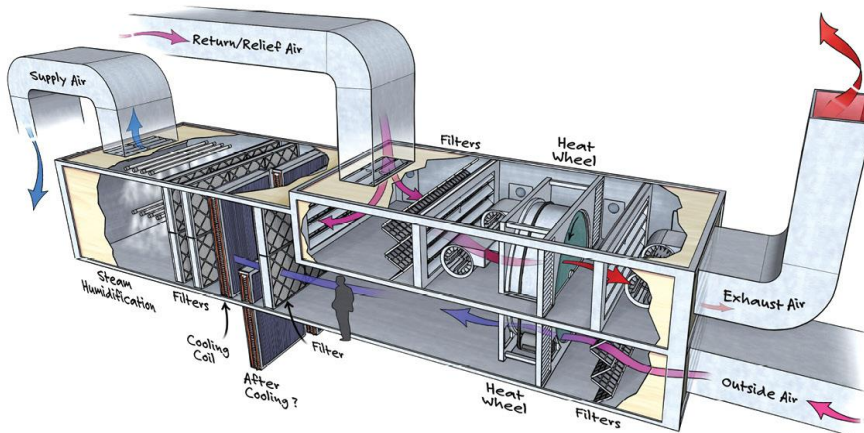


Aeris SmartENERGY solution

THE APPLICATION OF
OUR TECHNOLOGIES
& SOLUTIONS HAS
DELIVERED OUR
CLIENTS ENERGY
SAVINGS IN THE
RANGE OF 19-25%

SmartENERGY is Aeris' proprietary energy management & control systems featuring realtime analytics combined with AerisGuard smart anti-microbial & anti-corrosion protective coatings.

- 1 Complete, green biological remediation of coil (deepcleaning).
- 2 SMART anti-microbial polymer protective coil coating.
- 3 Real time energy optimisation utilising proprietary, dedicated control system.
- 4 Ongoing reporting, analytics, measurement and verification.



Improve Indoor
Air Quality

Reduce Energy
Consumption

Improve Airflow,
Temperature, Set Point
& Humidity Control

Aeris SmartENERGY benefits

Compelling value drivers:

- Proven, significant HVAC energy reduction – 19-25% savings in HVAC cost
- Improved HVAC system efficiency – over 100% airflow increase
- Improved indoor air quality – certified protection of coils
- Reduced operational & maintenance costs – return to 'as new' efficiency
- Prolonged equipment life – major capex savings
- Independent validated and certified – CSIRO, USA EPA, HACCP, EcoSpecifier



Remediation and long term anti-microbial protection



Energy management and control system



Real-time analytics and reporting

A transformative year

- ✓ Orders and commitments from retail, property, healthcare and Government clients.
- ✓ Demonstrations and proposals with national, multisite customers.
- ✓ Signed agreement with a leading national energy retailer. - provides immediate, joint access to several thousand large scale customers.
- ✓ Strategic alliances with other large energy retailers.
- ✓ NSW Government validation project designed and awaiting installation.

\$75,000 saving per annum in one building

Large Apartment/Hotel – Sydney – Phase I common area – 29 split units –

- Estimated 14,463 kWh/unit/annum energy reduction from SmartENERGY installation.
- Improvement of air flow as a result of increased coil face velocity by an average of 198%.

Energy Consumed kWh				Coil Pressure Differential Pa				Air Flow m/s			
Unit	Pre Aeris	Post Aeris	Reduction	Unit	Pre Aeris	Post Aeris	Reduction	Unit	Pre Aeris	Post Aeris	Increase
10.1	1,467	810	31%	10.1	80	40	50%	10.1	0.9	2.6	289%
10.2	1,967	1,439	27%	10.2	90	60	33%	10.2	2.3	3.5	152%
10.3	NA	NA	NA	10.3	110	60	45%	10.3	2.9	4.5	155%

Formula for success

- ✓ World standard measurement, verification, monitoring and reporting.
- ✓ Innovative funding including on bill finance, capex to opex, and energy sharing.
- ✓ Annuity income stream with high margin, recurring revenue.
- ✓ Optimisation, not replacement. Solutions, not products.
- ✓ Immediately cash flow positive with strong focus on business case.

Over \$250,000 saving per annum in one building

Shopping mall – Townsville QLD

- 104 systems on site, with 2 different configurations (Package units and Split ducted units).
- The system is of normal operational standard, it is 8 years of age with no mechanical or operation issues to note and is adequately maintained.

Parameters	Before Treatment	After Treatment	Criteria Met
Power	431kWh	333kWh	22.6% saved
Air Flow Rate (Supply Air)	2.09m/s	4.46m/s	114% improved

Indoor Air Quality – Sydney shopping mall

Sample 1

- Post AerisGuard

Sample 2

- Coil cleaned using conventional alkaline solution 2 weeks prior to AerisGuard

Sample	Unknown Location	Bacteria cfu/plate	Acromonium spp.	Alternaria spp.	Aspergillus spp.	Aspergillus niger	Aureobasidium spp.	Bipolaris/Dreschlera	Chaetomium spp.	Cladosporium spp.	Curvularia spp.	Fusarium spp.	Epicoccum spp.	Paecilomyces spp.	Penicillium spp.	Pithomyces spp.	Stemphylium spp.	Trichoderma spp.	Stachybotrys spp.	Zygomycetes	Yeasts	Mould cfu/plate
1	HVAC Coil	2	BELOW DETECTION LIMITS																			BDL
2	HVAC Coil	>500								24					1					1	26	26
Rating		<50	50 - 100	100 - 250	>250	Elevated																
						Further investigation is warranted when viable mould were detected on surfaces at concentrations between 50-100 cfu/plate or more than 25 cfu/plate if potentially pathogenic genera (in red) were detected.																
						High																
						Above 100 cfu/plate active mould contamination may have been present on the surface. The cause and source of the mould should be determined and redressed.																
						Very High																
If surface mould concentrations exceed 250 cfu/plate, very high mould contamination was present on these surfaces and remediation to remove the mould growth or cross contamination is required.																						

The CSIRO estimates that the cost of poor indoor air quality in Australia may be as high as \$12 billion per year (Brown, 1998). In recent years, comparative risk studies performed by the US EPA and its Science Advisory Board have consistently ranked indoor air pollution among the top five environmental risks to public health (US EPA, 1993).

SmartENERGY revenue

Big Box Retail QLD

home maker centre, multi tenants
104 Split ducted & package systems

Supply and installation price	\$ 417,679
Energy saving to client	23%
ROI	62%
Pay Back Period (years)	1.6
Predicted yearly savings	\$ 257,890

Office Building NSW

24 level office block
3 x 1200 kW screw chiller, 2 x 700kW chillers
11 AHUs.

Supply and installation price	\$ 142,507
Energy saving to client	22%
ROI	54%
Pay Back Period (years)	1.9
Predicted yearly savings	\$ 76,643

Refrigerated truck

Roof mounted cooling system

Supply and installation price	\$5,000
Energy saving to client	7 Gal/day
ROI	146%
Pay Back Period (years)	0.68
Predicted yearly savings	\$7,300

Retailer – National

8 year energy contract

	Per Site	45 sites
Supply and installation price	\$40,608	\$1,827,360
Annual revenue	\$12,027	\$541,218
8 year agreement	\$81,784	\$3,680,288

SmartENERGY Strategic Customer Funnel

SmartENERGY sales process

- C-suite engagement & meeting
- Case study presentation – technical
- High level feasibility (+/- 10%)
- Funding commitment and source
- Agreement of key commercial terms
- Proof of concept installation
- **Broad portfolio rollout – large scale annuity revenue**



SmartENERGY Strategic Customer Funnel

Australian SmartENERGY opportunity size

Supermarkets

Over 10,000 supermarkets and convenience stores

Shopping centre

Over 1,338 shopping centres

Retail

Over 210,000 locations

Hospitals

Over 1,300 hospitals

Nursing homes

Over 2,080 residential aged care homes.

Retail Food

Over 60,000 retail food outlets

Refrigerated transport

Estimated fleet of 28,900 refrigerated trucks and export containers

Residential

Over 11.5 million devices in residential dwellings.

Estimated total market value per segment for full SmartENERGY implementation*

	Australian	Priority Intl.
Supermarkets	\$ 500,000,000	\$ 5,000,000,000
Shopping centre	\$ 334,500,000	\$ 3,345,000,000
Retail	\$ 525,000,000	\$ 5,250,000,000
Hospitals	\$ 45,500,000	\$ 455,000,000
Nursing homes	\$ 52,000,000	\$ 520,000,000
Retail Food	\$ 480,000,000	\$ 4,800,000,000
Refrigerated transport	\$ 144,500,000	\$ 1,445,000,000
Residential	\$ 1,150,000,000	\$ 11,500,000,000

(*) please note that no claim is made for rate of market adoption

Smart Coatings

- ✓ New, disruptive, innovative, environmentally friendly and OH&S safe AerisGuard technology.
- ✓ New paths to revenue with motivated, market leading partners across priority regions.
- ✓ The global antimicrobial coatings market is on track to reach to \$3.3 billion by 2018—doubling its value in six years.



OEM HVAC coating

- AerisGuard OEM HVAC coating that provides life of product microbial resistance for a variety of uses and materials.
- Signed SolAir exclusive contract.
- Rapidly growing network of customers across the Asia Pacific HVAC manufacturing sector.

Duct Coating

- Breakthrough environmentally and applicator friendly AerisGuard coating that is safe and quick to apply whilst being non-toxic and having no malodour.
- Replaces market leading product with existing substantial revenue.
- Orders received, manufactured and shipped along with forward commitments from leading customer.

Exhaust hood novel coating

- Innovative new product in regulated space with significant cost, work flow and OH&S advantages.
- Successful commercial application concluded. Early orders shipped.
- Negotiation underway with multiple national fast food chains.



Smart Surfaces

- ✓ AerisGuard hard surface disinfectants with extended residual properties.
- ✓ Environmentally friendly, food safe and compatible with all cleanable surfaces.
- ✓ **Global market opportunity in excess of USD \$500Mil per annum.**
- ✓ Universal applicability across multiple vertical markets.

Smart Mould

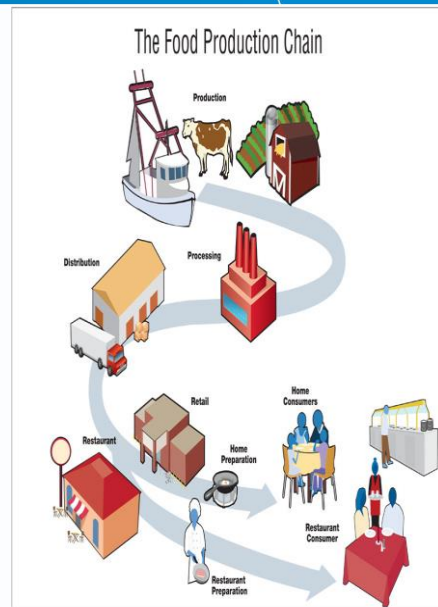
- Agreement signed and International launch pending.
- Current channel development for water damage recovery and commercial applications.

Consumer/commercial hard surface disinfection

- Successful development of high efficacy, residual product line.
- Further investment required on international regulatory and marketing studies.
- Current commercial interest from leading multinational.
- Significant 2015 revenue opportunities in Japan & Thailand with established channel partners.

Aeris Hygiene Surfaces

- Successful expansion of AHS distributor/channel sales.



Smart Polymers

- Focus on providing **proprietary, branded AerisGuard additives, working with leading Melbourne based polymer group, Romar** for scale up production of AerisGuard additives.
- **Priority program established for implementation of Smart Polymers into high volume healthcare, industrial and commercial products.**
- **Latest developments has resulted in a substantial reduction in the cost of implementing AerisGuard smart polymers.**
- The U.S. antimicrobial plastics market was valued at USD 662.3 million in 2013 and is anticipated to reach USD 1,227.4 million by 2020, expanding at a CAGR of 9.3% during the forecast period from 2014 to 2020.
- Healthcare was the largest application segment, accounting for approximately 44% of the market share in 2013. Higher number of patients with hospital-acquired infections is projected to augment demand for antimicrobial plastics.

Anti-microbial wrapping



Wrap



Membrane



Protective
barrier



Gowns



Packaging



Moulded
articles



Hospital
Chairs



High touch

Drivers for success

- **Broad customer and market acceptance** of the SmartENERGY value proposition.
- **SmartENERGY driven by megatrends** of energy savings, sustainability, triple bottom line reporting, indoor air quality, and immediate return on investment.
- **SmartENERGY underpinned by independent assessment** and global standard Measurement & Verification.
- **Current level of sales activity and customer driven enquiry requires immediate scale up of existing resources.**
- Current engagement with leading shopping centre, hotel, commercial and health care groups across Australia. **All trials and evaluations to date have exceeded or confirmed the proposed AerisGuard benefit.**
- **Industry profile of Aeris Environmental and SmartENERGY is now well established.** Aeris has been key speaker at various industry and trade events including the recent Australian Refrigeration Association Energy Efficiency in HVAC national seminar series.
- **Attractive cost base and margins with annuity revenue streams lead to outstanding potential for shareholder value creation.**

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