



HPEV, Inc.

**Thermal Dispersion
Technology Solutions**

Ted Banzhaf
President

The Problem



- **Motor and Generator manufacturers have a problem** – removing heat from equipment efficiently.
- Worldwide environmental and environmental & efficiency mandates being implemented now: Three steps: 2013, 2015, 2017
- ***Active Material*** is the expensive part of the motor (or generator) that solves both the problems.

Less Active Material needed, lower costs, better margins – smaller motors that put out more power can be sold for more!

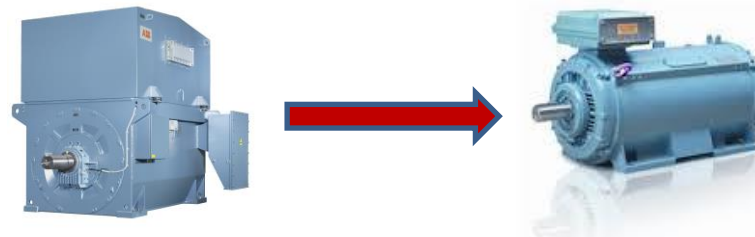


The Solution

HPEV's patented technology removes heat better than **air cooling** or **liquid cooling**: faster than anything on the market.

- Less **Active Material** required for the same output – Lower Cost
- Helps achieve **Environmental Mandates**

HPEV's patented technology replaces either solution and provides MUCH better performance, and the **Environmental mandates are achieved!**



	Air Cooled Motor	HPEV Improved	Improvement
Cost to Manufacture	\$50,000	\$40,000	20%
Output (Horsepower)	1,000	1,250	25%
Sales Price	\$100,000	\$135,000	35%

Therefore, because costs have been reduced and a motor that puts out more horsepower sells for a higher price, gross margins will rise by 90% for the manufacturer.

	<u>Before</u>	<u>After</u>	<u>Change</u>
Gross Margin	\$50,000	\$95,000	90%

Status – Where is HPEV now

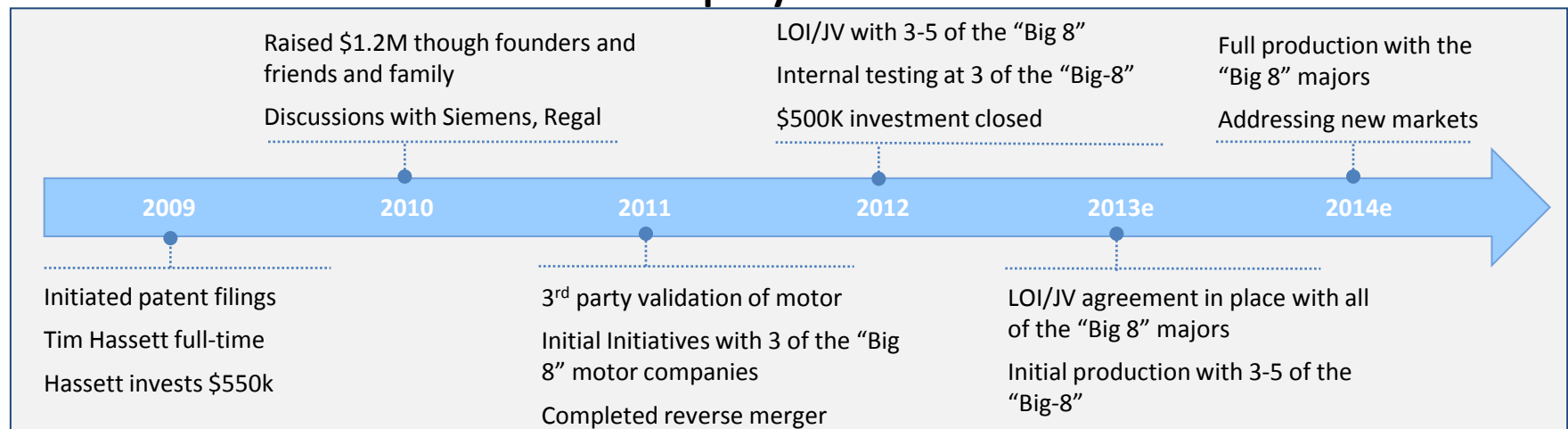


Customers are The Big-8: Emerson, Nidec, GE, Siemens, Regal Beloit, WEG, ABB & Teco-Westinghouse. More than 80% of this \$50+ B mkt.

Milestones:

- 5 issued patents, 12 pending and more patents and trademarks on the way
- Channel/manufacturing partnership agreement with Thermacore
- Joint Development Agreements with several Big-8 customers
- MOU/Commercialization Agreements with two Big-8 customers
- Work has begun with one Big-8 customer

Company Timeline



Experienced Management Team



History of bringing technology to market

Tim Hassett <i>CEO, Chairman & Founder</i>	30+ years experience managing and growing mid-sized manufacturing firms: GE, WaveCrest, Hawk Motors, Rockwell Automation <ul style="list-style-type: none">• Turned around 2 divisions for Jack Welch at GE• WaveCrest from \$0 to \$30M in revenues in 18 months (with Mark)• Lemo from \$32 to \$75M in revs and grew Net Income 22x in 4 years (Mark)• Tim & Mark designed the Mars Rover drive train
Ted Banzhaf <i>President</i>	15+ years experience in growing public companies in all facets of finance, growth strategies and management. Expertise in maximization of shareholder value and maturing small companies into larger organizations. - SpatialLight Technologies (NASDAQ:HDTV), CEUT, Raymond James
Mark Hodowanec <i>CTO & Founder</i>	20+ years of engineering & operations expertise: more than 30 publications & numerous patents. <ul style="list-style-type: none">• Led new product innovation at Reliance Electric• Engineering Manager at Siemens Energy and Automation• Led Emerson to API approval – after Emerson’s efforts had failed for 11 years• Mars Rover drive train designer
Quentin Ponder <i>Vice Chairman</i>	50+ years experience in management. Baldor Electric Motors, Franklin Electric Motors, GE Noted in the book <i>“World Class Manufacturing: The Next Decade”</i> as one of the 5 best executives for manufacturing improvement pathways in the modern industrial era . Coined the term “Flex Flow Manufacturing” based on his revolutionary manufacturing management techniques.

The Market



\$95+ billion market that is growing 3-5% per year.

Addressable segment of that market is about \$50 billion.

**Target Audience >80% of this \$50B segment
is controlled by the Big-8**

Market Challenge

The industry hasn't seen an improvement in costs of more than 5% since the 1950s when (Tim's father invented the frameless DC motor.)

Customers & Partners



HPEV's optimal customer: a motor/generator – 50 up to 100,000hp

HPEV's value proposition: reduce the manufacturers' cost of production, improve performance, & meet environmental standards



Potential Customers:

- Emerson Corporation (NYSE: EMR)
- Nidec Corporation (NYSE: NJ)
- Flygt (Sub of Xylem Inc. - NYSE: XYL)
- WEG Motors (Brazil)
- GE Power Conversion (NYSE: GE)
- Siemens (NYSE: SI)
- Regal Beloit (NYSE: RBC)
- ABB (NYSE: ABB)
- TECO-Westinghouse Motor Company



Power and productivity
for a better world™



Channel/Manufacturing Partner: Thermacore

- Leader in Heat Exchangers
- Fabricate HPEV technology and sell directly to the OEM
- HPEV's "salesman" to the 200+ motor/generator OEMs



Revenue Model



HPEV is an *Intellectual Property* company

1. **Upfront license fee to use the technology (1-3 years term)**
 - Expected License Fee to be \$1M - \$10M depending on factors such as exclusivity (i.e. Emerson), minimum sales requirements and length of license
2. **Royalties on revenues from sales = 3% of gross sales**
3. **Royalty from Thermacore on each sale for the use of HPEV IP**

Market Strategy: Existing relationships, trade journals and competitive demand. HPEV is already into the design phase of discussions with 6 of the Big-8. When one is in the marketplace, they will all need the technology.

Third Party Validation: HPEV has third party validation reports from an industry leading certification firm. Also, at least 3 of the Big-8 have done internal validation. This accounts for the acceleration of their implementation schedules.

Competitive Landscape



Motor and Generator Cooling Options

	Fan Cooled	Water Cooled	Heat Exchanger	HPEV
Heat Transfer (W/m ² K)	1X	1X	4X	8-9X
Required Accessories	Blower/Fan & Piping	Pump & Piping	Pump, Radiator, Fan, Blower, Piping	NOTHING
Construction	Complex	Medium	Complex	SIMPLE
Cost	Low	Medium-High	High	VERY INEXPENSIVE
Reliability	Low (dust particles, filters required)	Medium	Low (fouling)	HIGH

HPEV wins in EVERY category and reduces manufacturing costs by more than 25%

Summary



HPEV helps manufacturers remove heat from rotating equipment – heat is the enemy. For motors and generators, the patented technology:

- Reduces manufacturing costs by over 20-25%
- Improves power output by approximately 25%
- Helps manufacturers meet worldwide environmental & efficiency mandates that are being implemented over the next 4 years.
- The technology is being commercialized NOW by several of the Big-8
- The addressable market is \$50B and we want 3% of every one of those sales.
- HPEV has a management team with an excellent track record of driving profitability and bringing products to market.

*Final thought: **more than 60% of all electricity generated in the world is consumed by motors or generators***

This is just the beginning for the company and 2013 will be a game changing year for the motor/generator marketplace.

Contact Information



OTCBB: **WARM**

Thank you for your interest

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President

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