



# THOR POWER™

ANNUAL REPORT 2006

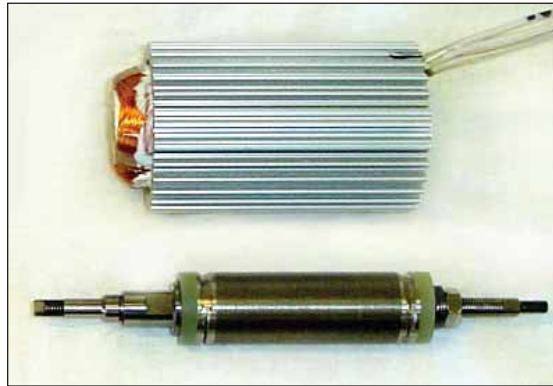
## ELECTRIC MOTOR SYSTEMS

Twice the power,  
half the weight,  
double the efficiency  
of traditional designs

Thor Power Corporation specializes in the design, development and marketing of exceptionally efficient, energy-saving electric motor systems using microelectronics and permanent magnet motors. Our electric motors are perfectly matched to their specific application—principally up to 5 kW, as well as under 55 kW for certain electric vehicle applications.

Thor Power electric motors are marketed under the registered trademark TREZIUM®. We license our technology to original equipment makers (OEMs), develop strategic partnerships with OEMs and suppliers, and sell complete TREZIUM® systems to designers, developers and distributors.

## The TREZIUM® Electric System



*PermMag Motor, 2kW*



*Microelectronics,  
100 to 267 VAC; 50/60 Hz*



## FROM THE CEO

What a year! We started calendar year 2006 with \$238 in cash—and ended with \$215,527. A copy of our Financial Report, compiled on an income tax basis by our accountants Beard Miller Company, LLP, is attached as an appendix. Our starting cash amount is about as close as it gets and I'm resolved not to go there again.

Having said that, we had a good year for a host of reasons, thanks in large part to loyal supporters who have aided us in all dimensions of the business—finance, supply, market, employees, community and shareholders. It is an understatement to say that their faith, trust, and support are invaluable. I am deeply grateful.

Thor Power is a company in the early commercialization stage of growth. Nonetheless, circumstances are significantly improved over last year. We now have our first independent outside equity holders, and within a year we expect to finalize our overall policies related to corporate governance.

Because this is our inaugural annual report, I thought it apropos to start the ball rolling with some highlights of our company's progress to date.

- Founded Thor Power in August 2002
- Significant support, financial & non-financial, from Ben Franklin Technology Partners
- Received our first patent in August 2006, with four more patents pending
- Granted our first license for electric vehicles in October 2006
- Raised more than \$695,000 in funding through July 2006
- Secured a \$300,000 round of equity funding by year-end 2006
- Brought in first product revenue in November 2006
- Developed non-disclosure agreements for power tools and heating, ventilation, air conditioning (HVAC)
- In partnership with Thor Power, the Energy Research Center at Lehigh University obtained a record \$75,000 grant from Pennsylvania Infrastructure Technology Alliance (PITA) for the sole purpose of testing/proving our initial production

We have also had the benefit of considerable support and wise counsel from our advisors Karl Weiler, John Devaney, Herb Meeker, Pierre Tonachel, Bob Thomson, Cecilia Friend, Rob Bauer, Ron Binn, and David Perry. For this we are extremely grateful. Finally, without the commercial and technical support of our strategic partners—companies, government, and academic institutions—we would have not accomplished anywhere near our current degree of success. Their generous support is extremely appreciated.

Respectfully submitted,

David Bonner,  
Chief Executive Officer  
April 2007

## THE THOR POWER STORY

Electric motors consume 67 percent of the energy produced in the United States—yet their fundamental technology hasn't changed much in the past 100 years. Thor Power is well on its way to commercializing an entirely new electric motor design that could have a dramatic impact on nearly every sector of society.

Alternating current (AC) motors are used extensively in many products, including refrigerators, air conditioners, power tools, washers, dryers and computers. The basic design, perfected in the late 1800s, involves supplying an external stator with an electrical current to produce a rotating magnetic field. This electromagnetic field spins the rotor that rests inside the stator. Such a design is only 47 percent efficient in its use of electricity.



*In summer 2007, Thor Power will move into the new BF TechVentures building in Bethlehem, PA.*

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Thor Power electric motors, on the other hand, use highly efficient rare-earth magnets, a relatively new technology. These magnets are powerful enough to eliminate the need for electricity to generate the magnetic field that spins the rotor. This design also permits electronic regulation of the motor, compared with the mechanical methods that are used today.

Eliminating the electromagnets lowers the weight and results in a quieter, more efficient motor—90 percent efficient, in fact. Testing has shown that the motor also lasts significantly longer than standard designs. The typical AC motor has a life span of about 400 hours, but Thor Power stopped testing their design when it reached the 2,000-hour mark with no signs of degradation.

Thor Power electric motors generate twice the power at half the weight and double the efficiency of existing electric motors. This cuts the consumers' operating costs by 50 percent—a major technological advance, particularly in the one- to two-kilowatt power range, considering this country's current energy and environmental needs.

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## FINANCIAL DEVELOPMENT

### ***Convertible Debt Financing***

Thor Power opened 2006 with a focus on completing a \$400,000 round of options for convertible debt financing (initiated in autumn 2005) with Tersus Energy Plc (Tersus), a company on the London Stock Exchange. The initial tranche of \$100,000 was made available in February and permitted The Technology Partnership (TTP), our engineers in Britain, to complete work on the electronic controller. The residual of the \$100,000 was used for working capital in our Bethlehem, PA, facility and also permitted us to receive an additional \$85,000 from Ben Franklin

Technology Partners. A second tranche option of \$150,000 was due in November 2006 from Tersus. Unfortunately, Tersus was not able to exercise the option due to cash flow problems at their end. (See: note 4 to the Financial Statements.)

### ***Ben Franklin Technology Partners Funding***

Since 2003, Ben Franklin Technology Partners of Northeastern Pennsylvania (BFTP), an international model for innovation in technology-based economic development, has provided \$401,000 of financing, and incalculable support since our startup in 2002. Without their advice, counsel and enthusiastic endorsement, Thor Power would not exist. We are deeply indebted to them. All of our financing with BFTP is in the form of convertible debt. (See: note 4 to the Financial Statements.)

BFTP's mission is to diversify and strengthen Pennsylvania's economy by focusing on entrepreneurial development and technological innovation. BFTP delivers crucial resources for technology-driven enterprises in sectors such as information technology, life sciences, communications, advanced manufacturing, advanced materials and environmental technology by:

- Investing risk capital in emerging technology-based enterprises and established businesses;
- Providing hands-on technical and business expertise to spur enterprise growth and accelerate commercialization activities; and,
- Delivering customized solutions that draw on an extensive network of public and private resources, including universities, federal laboratories and research institutions.

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### Thor Power Funding at a Glance

- \$401,000 in funding from Ben Franklin Technology Partners (since 2003)
  - \$400,000 in convertible debt options by Tersus Energy Plc (2006), with \$100,000 exercised to date
  - \$300,000 in "B" Round equity financing (as of December 31, 2006)
  - \$75,000 grant to ERC from the Pennsylvania Infrastructure Technology Alliance
  - \$15,000 Keystone Innovation Zone grant from the Lehigh Valley Economic Development Authority
  - \$5,000 Market Access Grant award
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### ***Pennsylvania Infrastructure Technology Alliance (PITA) Grant***

In 2006, the Energy Research Center (ERC) at Lehigh University and Thor Power were awarded a grant of \$75,000 by PITA, which is a collaboration among the Commonwealth of Pennsylvania, the Institute for Complex Engineered Systems at Carnegie Mellon University, and the Center for Advanced Technology for Large Structural Systems at Lehigh University. This grant—*the largest that PITA has ever awarded to any company*—is for beta testing of our TREZIUM® Electric System.

The grant permitted ERC to acquire an expensive, high-speed dynamometer for our test program that we could not otherwise have afforded. Thanks to our collaborative success, Thor Power and the ERC applied for and will receive in 2007 another grant of \$75,000 for our test program, which will determine the expected reliability and durability of our motor with a high degree of certainty.

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PITA awarded the Lehigh University Energy Research Center a \$75,000 grant to test the Trezium® Electric System.

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PITA Research and Educational programs assist the Commonwealth of Pennsylvania and its companies in increasing operating efficiency and enhancing economic development by:

- Combining physical and informational infrastructure technology development expertise in Pennsylvania
- Leveraging complementary technology development in design, manufacturing, and environmental issues
- Focusing research and educational capabilities of two world-class universities on technology solutions to economic issues in the Commonwealth
- Creating an environment linking Pennsylvania companies with students to create high paying jobs and retain highly educated students.



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### ***“B” Round Equity Financing***

In August, Thor Power initiated a “B” round of equity financing, which closed at \$300,000 as of December 31, 2006. Of this, \$50,000 was used to meet the obligation to TTP that was due in November 2006. We are grateful for the trust and commitment to Thor Power shown by our new shareholders. (See: note 6 to the Financial Statements.)

### ***Keystone Innovation Zone Grant***

In December we were awarded a Lehigh Valley Economic Development Authority Keystone Innovation Zone (KIZ) grant for more than \$12,000 for electronics design software and \$3,000 of hardware for our first design seat. We also received notice of a Market Access Grant (MAG) worth almost \$5,000 to cover the cost of export development for our first overseas revenue. MAG awards are provided by the Pennsylvania Office of International Business Development, Department of Community and Economic Development.

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Thor Power was awarded more than \$15,000 in Keystone Innovation Zone grants.

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### ***Net Operating Losses***

Finally, in the finance area, due to the nature of both Thor Power’s development activity and practice of expensing development cost as incurred, we have finished 2006 with approximately \$800,000 of NOLs (net operating losses). These will be helpful for a variety of potential strategic purposes going forward.

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## PRODUCT DEVELOPMENT

### ***Positive Exposure in Great Britain***

TTP, our engineering partner in Great Britain, was able to restart product development of the electronic controller in February, following delays due to our absence of financing. By mid-year we held a product review in Britain, at which point TTP said they had successfully met every product specification except spin catch, which relates to disengaging and re-engaging the motor without a complete stop.

### ***Bringing Development Back Home to Eastern Pennsylvania***

Several alternative solutions were identified for resolving the spin catch challenge. However, TTP required additional funding to address the issue. Following a review of alternatives with our advisors, we decided in August to conclude our relationship with TTP and bring electronics product development back to Bethlehem, PA. Transfer of deliverables was completed in November.

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In August 2006 Thor Power brought all electronics product development back to Pennsylvania from England.

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Meanwhile, the development of the motor, delayed due to stator development, was also brought back to the Lehigh Valley (northeastern PA) and placed in the capable hands of Everson Tesla. Located in Nazareth, PA, Everson Tesla manufactures coils, motors, magnets, superconducting magnets, and superconducting systems. Soon thereafter we received our first permanent magnet rotor from Electron Energy of Landisville, PA—and by year-end we were able to deliver a working stator to the ERC at Lehigh University for testing.

### ***A New Phase of Growth***

The PITA grant enabled ERC to start mid-year with the appointment of personnel for the project, allocation of space at Lehigh University, and acquisition and installation of equipment. Early testing of the assembled test bench began late in the year. The bench is an outstanding achievement that allows us to measure the input/output of any electronic controller and motor, both separately and as a complete system. In 2007 we plan to substantiate our early positive test results for TREZIUM®.

### ***Intellectual Property Advancements***

In 2006, Thor Power received a patent for controller variable speed using back-EMF (electromagnetic frequency) control. Three other patents are pending, and we applied for an additional patent in August based on the work done by TTP last year. Additionally, registration of Thor Power and Grismir trademarks are pending. Registration of TREZIUM® has been accomplished.

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## MARKET DEVELOPMENT

### ***New Licensee Brought On Board***

Thor Power signed a licensing agreement with Navitas Technologies in November. Navitas, based in Kitchener, Ontario, Canada, manufactures and markets high performance, microprocessor-based electronic control systems and accessories for a wide variety of electric vehicles. The license grants the company exclusive worldwide rights to use Thor Power technology for off-road electric vehicles, with certain stipulations and conditions. The license was given in consideration of a payment of \$50,000 against future royalties of 5% of net revenues realized by Navitas.

### ***Non-Disclosure Agreements Signed***

Non-disclosure agreements have been signed with two companies in the power tool business and two companies in heating, ventilation and air conditioning (HVAC). We have purposely limited our active marketing with prospective customers until the Weibull Test of our test program in order to avoid hyperbole and assure prospective partners of our commitment to quality.

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*The Weibull test—an important part of a quality product development program—determines, prior to the first customer sale, the expected reliability and durability of a product with a high degree of certainty.*

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## HUMAN RESOURCES

### ***Sustainable Approach to Employee Growth***

Since our founding in 2002, Thor Power has made efforts to network with people who possess the skills and commitment required to ensure both compatibility and success when we are in a position to expand with additional personnel. To this end, we have established successful strategic partners in bookkeeping, internal administration and systems. Additionally, we have hired people on a part-time basis in “over-the-horizon” areas such as product development, market development and systems. This sustainable approach has helped us avoid any mismatches of personnel that can be catastrophic to an early stage company.

### ***New Chief Engineer Joins the Thor Power Team***

We were fortunate to have Jim Butt join us in 2006 as Chief Engineer. Jim is an electrical engineer steeped in requirements for both mechanical as well as electronics engineering. Although he is working on a part-time basis at the moment, his other work is symbiotic to our needs, as he is running our test program at ERC and teaching electronics engineering at Lehigh University.

## COMMUNITY CONTRIBUTION

At Thor Power, we believe it is important for every individual and organization to contribute to the community not simply by providing jobs and proper stewardship of the environment, but by making an effort to improve the well-being of the less fortunate.

To that end, since 2003, we have organized and provided Christmas dinner to the less fortunate in Easton, PA. This year we formalized the event by calling it “Jacob’s Christmas” as an interdenominational event, serving meals to 120 guests who otherwise would not have had a place to go, and delivering 10 additional meals to individual who were unable to get there.

The *Express-Times* newspaper of Easton recognized the event with one of its trophies for community service. Equally rewarding, we had volunteers come from as far as San Francisco to participate, having almost as many volunteers as guests. All of this was accomplished despite the fact that a number of people said no one would volunteer and no one would show up. Almost sounds like a startup company, doesn’t it?



*Mother and child at “Jacob’s Christmas,” December 25, 2006*

Courtesy: Easton Express-Times