

SMARTHEAT INC.
Form 424B3
November 02, 2010

PROSPECTUS

\$100,000,000

SMARTHEAT, INC.

Common Stock
Warrants
Debt Securities
Units
Rights

We may from time to time, in one or more offerings at prices and on terms that we will determine at the time of each offering, sell common stock, warrants, debt securities, rights or a combination of these securities, or units, for an aggregate initial offering price of up to \$100,000,000. This prospectus describes the general manner in which our securities may be offered using this prospectus. Each time we offer and sell securities, we will provide you with a prospectus supplement that will contain specific information about the terms of that offering. Any prospectus supplement may also add, update, or change information contained in this prospectus. You should carefully read this prospectus and the applicable prospectus supplement as well as the documents incorporated or deemed to be incorporated by reference in this prospectus before you purchase any of the securities offered hereby.

This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

Our common stock is currently traded on the NASDAQ Global Market under the symbol "HEAT." On October 13, 2010, the last reported sales price for our common stock was \$7.05 per share. We will apply to list any shares of common stock sold by us under this prospectus and any prospectus supplement on the NASDAQ Global Market. The prospectus supplement will contain information, where applicable, as to any other listing of the securities on the NASDAQ Global Market or any other securities market or exchange covered by the prospectus supplement.

As of October 13, 2010, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$135,254,426, based on 32,811,125 shares of outstanding common stock, of which approximately 19,185,025 shares are held by non-affiliates, and a per share price of \$7.05, based on the closing sale price of our common stock on October 13, 2010.

The securities offered by this prospectus involve a high degree of risk. See "Risk Factors" beginning on page 9, in addition to Risk Factors contained in the applicable prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

We may offer the securities directly or through agents or through underwriters or dealers. If any agents or underwriters are involved in the sale of the securities, their names, and any applicable purchase price, fee, commission or discount arrangement between or among them, will be set forth, or will be calculable from the information set forth, in an accompanying prospectus supplement. We can sell the securities through agents, underwriters or dealers only with delivery of a prospectus supplement describing the method and terms of the offering of such securities. See "Plan

of Distribution” in this prospectus.

This prospectus is dated November 2, 2010

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf registration process, we may offer from time to time securities having a maximum aggregate offering price of \$100,000,000. Each time we offer securities, we will prepare and file with the SEC a prospectus supplement that describes the specific amounts, prices and terms of the securities we offer. The prospectus supplement also may add, update or change information contained in this prospectus or the documents incorporated herein by reference. You should read carefully both this prospectus and any prospectus supplement together with additional information described below under the caption “Where You Can Find More Information,” before making an investment decision.

This prospectus does not contain all the information provided in the registration statement we filed with the SEC. For further information about us or our securities offered hereby, you should refer to that registration statement, which you can obtain from the SEC as described below under “Where You Can Find More Information.”

You should rely only on the information contained or incorporated by reference in this prospectus or a prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell securities, and it is not soliciting an offer to buy securities, in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or any prospectus supplement, as well as information we have previously filed with the SEC and incorporated by reference, is accurate as of the date of those documents only. Our business, financial condition, results of operations and prospects may have changed since those dates.

We may sell securities through underwriters or dealers, through agents, directly to purchasers or through a combination of these methods. We and our agents reserve the sole right to accept or reject in whole or in part any proposed purchase of securities. The prospectus supplement, which we will prepare and file with the SEC each time we offer securities, will set forth the names of any underwriters, agents or others involved in the sale of securities, and any applicable fee, commission or discount arrangements with them. See “Plan of Distribution.”

Unless otherwise mentioned or unless the context requires otherwise, when used in this prospectus, the terms “SmartHeat,” “Company,” “we,” “us”, and “our” refer to SmartHeat Inc. (“SmartHeat”) and its subsidiaries. “China” and the “People’s Republic of China” refer to the People’s Republic of China.

NOTE ON FORWARD-LOOKING STATEMENTS

This prospectus or any accompanying prospectus supplement, including the documents that we incorporate by reference, may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets or future development and/or otherwise are not statements of historical fact. Any forward-looking statements are based on our current expectations and projections about future events and are subject to risks and uncertainties known and unknown that could cause actual results and developments to differ materially from those expressed or implied in such statements.

In some cases, you can identify forward-looking statements by terminology, such as “expects,” “anticipates,” “intends,” “estimates,” “plans,” “believes,” “seeks,” “may,” “should”, “could” or the negative of such terms or other similar expressions. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to

the risk factors described herein and those included in any accompanying prospectus supplement or in any document incorporated by reference into this prospectus.

You should read this prospectus and any accompanying prospectus supplement and the documents that we reference herein and therein and have filed as exhibits to the registration statement, of which this prospectus is part, completely and with the understanding that our actual future results may be materially different from what we currently expect. You should assume that the information appearing in this prospectus, any accompanying prospectus supplement and any document incorporated herein by reference is accurate as of its date only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information that constitutes forward-looking statements presented in this prospectus, any accompanying prospectus supplement and any document incorporated herein by reference, by these cautionary statements.

These forward-looking statements include but are not limited to statements relating to:

- our goals and strategies;
- our expansion plans;
- our future business development, financial conditions and results of operations;
- the expected growth of the market for PHE products and heat meters in China;
- our expectations regarding demand for our products;
- our expectations regarding keeping and strengthening our relationships with key customers;
- our ability to stay abreast of market trends and technological advances;
- our ability to effectively protect our intellectual property rights and not infringe on the intellectual property rights of others;
- our ability to attract and retain quality employees;
- our ability to pursue strategic acquisitions and alliances;
- competition in our industry in China;
- general economic and business conditions in the regions in which we sell our products;
- relevant government policies and regulations relating to our industry; and
- market acceptance of our products.

PROSPECTUS SUMMARY

The following summary highlights selected information contained elsewhere in this prospectus, and the documents incorporated herein by reference. This summary does not contain all of the information you should consider before investing in our securities. Before deciding to invest in our securities, you should read this entire prospectus, any prospectus supplement, and the documents incorporated herein and therein, including the discussion of “Risk Factors” and our consolidated financial statements and the related notes. Moreover, the information contained in this prospectus includes “forward-looking statements,” which are based on current expectations and beliefs concerning future developments and their potential effects on us. There can be no assurance that future developments actually affecting us will be those anticipated. Please see page 3 of the accompanying prospectus for cautionary information regarding forward-looking statements.

Our Company

We are a leading designer, manufacturer and seller of clean technology heat exchangers and related systems in the People’s Republic of China (“China”). Our products are used by our customers in the industrial, residential and commercial markets in China to improve energy utilization and efficiencies and reduce pollution by reducing the need for coal fired boilers. We design, manufacture, sell and service plate heat exchangers (“PHEs”), PHE units, which combine PHEs with various pumps, temperature sensors, valves and automated control systems (“PHE Units”), and heat meters for use in commercial and residential buildings. We also design, manufacture, and sell spiral heat exchangers and tube heat exchangers. Our products and systems are an important element in providing a clean technology, mission-critical solution to energy consumption and air pollution problems in China and are commonly used in a wide variety of industrial processes where heat transfer is required. Common applications include energy conversion for heating, ventilation and air conditioning (“HVAC”) and industrial use in petroleum refining, petrochemicals, metallurgy, food and beverage and chemical processing. Our PHE Units are custom designed by our own in-house engineers and sold under our own Taiyu brand name, while our PHEs are sold under both our Taiyu brand as well as the Sondex brand name.

A PHE is a device that transfers energy from one fluid to another across a solid surface. PHEs are made of stainless steel, titanium or nickel alloy plates that are sealed by gaskets and then bolted together in a large metal frame that holds the plates together. Plates come in a variety of sizes and wave patterns; have large heat transfer surfaces and high thermal conductivity. The quantity and size of the plates and size of the PHEs and PHE Units vary according to particular application requirements.

Among the primary advantages of plate heat exchangers as compared to traditional shell and tube heat exchangers are their efficiency, compact design and ease of customization. PHEs have larger heat transfer surface areas and therefore greater thermal conductivity. As a result, PHEs can transfer the same amount of heat as a traditional shell and tube heat exchanger despite the small size of the PHE. In China, coal is the predominant source of heat energy, and coal burning is a significant contributor to carbon dioxide (“CO2”) emissions. According to International Energy Statistics provided by the Energy Information Administration, a subdivision of the United States Department of Energy, in 2007, the consumption of coal accounted for 27% of the total primary energy consumption in the world. China was the largest producer of CO2 from the consumption of coal in 2008, accounting for 41.7% of the world total.

The PRC government’s 11th Five-Year Plan (the “11th Five-Year Plan”), announced in 2006, targeted a 20% reduction in energy consumption per unit of GDP and a 10% reduction in industry expulsion of pollutant particles by 2010. Management expects further reductions will be included in the upcoming 12th Five-Year Plan. As the Chinese government begins to require the use of machines that produce more efficient heat transfer and utilize waste heat energy, PHEs will be an important element in reducing overall coal consumption in China, which will translate into lower heating costs, lower CO2 emissions for users and less pollution to the environment. According to the Chinese government, China has cut energy use per unit of GDP by 14.38 percent between 2006 and 2009 and it aims to cut carbon dioxide output per unit of GDP by at least 40 percent by 2020 compared with 2005 levels.

We currently focus predominantly on the Chinese market. All designs of our PHEs and PHE Units are done in-house by our engineers utilizing advanced software and our proprietary in-house CAD software. In May of 2009, we acquired the production assets of Siping Beifang Heat Exchanger, Manufacture Co., Ltd. (“Siping Beifang”), one of the major plate heat exchanger manufacturers in China, and began a program to vertically integrate our supply chain for our own PHE components and, at the same time, supplement our relationship with our main supplier, Sondex. As a result, we now manufacture our own plates, tubes, and gaskets and can design and manufacture PHEs and PHE Units using either supply source for the component plates. Our new plates provide solutions for a market segment with strong demand for PHE products that are priced 10-15% lower than PHE products with Sondex plates.

In early 2006 we launched a third product line, heat meters, which utilize the same sales channels and allow us to provide heat consumption information to users. Heat meters precisely measure the volume of heat usage, which is an important revenue stream for utility companies. While home owners commonly use heat meters in western countries, widespread incorporation of heat meters has only recently taken hold in China. As of July 2003, heat meters were required nationally by law for new construction installed with central heating and the law was extended in April of 2008 by the Energy Conservation Law, Article 38, to existing buildings being retrofitted. This law implies that heat meters be installed in new residential construction and retrofitted buildings. We believe there are significant opportunities for strong incremental growth as the Chinese government continues to focus on ways to cost effectively monitor and conserve energy.

PHE

PHE Unit

Heat Meter

Source: The Company

From 2006 to 2009, our total revenue increased from \$8.2 million to \$82.6 million, a compound annual growth rate (“CAGR”) of 116.0%. Our net income has grown at a 168.0% CAGR from \$0.8 million in 2006 to \$15.4 million in 2009.

Our company is headquartered in Shenyang China where we have a 210,137 square foot state of the art production facility. We operate two other production and assembly facilities in China. As of September 24, 2010 we had approximately 744 regular full-time employees and approximately 149 seasonal employees.

Our principal offices are located at A-1, 10, Street 7, Shenyang Economic and Technological Development Zone, Shenyang, China 110027. Our telephone number is 86 (24) 2519-7699

Our Industry

We address the utility and industrial sectors throughout China. Participants in these industries are large users of PHEs, PHE Units and related accessories. We also address the HVAC sector. Participants in this industry are large users of heat meters. We also provide after sale services on our PHEs, PHE Units and heat meters to these industries. These services include maintenance, repair, and supplying spare parts.

According to “China Heat Exchanger Industry Report” (hereinafter referred to as the “Industry Report”) issued by Zero Power Intelligence Co., Ltd., an independent market research firm in China, the world heat exchanger market has grown significantly in the past several years. Global sales of heat exchangers grew from \$29.7 billion in 2005 to \$38.6 billion in 2008, or 30%, and are expected to grow to \$55.3 billion in 2012, or 43% in the four-year period from 2009 to 2012.

According to the Industry Report, China has become the second largest market and one of the fastest growing markets for heat exchangers. The sales of heat exchangers in China grew from \$3.2 billion in 2005 to \$5.4 billion in 2008, or 70%, and are projected to grow to \$11.0 billion in 2012, or 106% in the four-year period from 2009 to 2012.

Currently, there are social, economic, environmental, regulatory and government stimulus-related factors driving demand for environmentally-friendly solutions which reduce pollution and advance energy efficiency, many of which utilize PHEs. These include:

◆ **Environmental Conditions in China.** According to the report entitled “The Cost of Pollution in China,” published in 2007 by the World Bank, the combined health and non-health cost of air and water pollution in China amounted to an estimated \$100 billion a year. Moreover, the report found that air pollution, especially in large Chinese cities, is leading to higher incidences of lung diseases, cancer, and respiratory problems. According to a report commissioned by the Energy Foundation published in 2008, these problems are directly attributable to the fact that 80% of China’s carbon dioxide emissions come from burning coal.

◆ **Growing Demand for Heating Water.** China currently provides households throughout 17 of its 34 northern provinces with heating water. As new cities grow along with the emerging middle class, so does the demand to expand this supply into new cities, industrial parks and other provinces. Heating water in China is generated by local power plants which pump emitted hot water from the power plant through a closed loop system to a water heating company and then through a network of pipes up to a distance of 50 kilometers. These systems of heating stations and sub-stations utilize numerous PHEs and PHE Units, which provide a dual purpose: a cooling system for the power plants and a heat source for residents and factories.

◆ **Heightened Environmental Awareness.** Management expects the PRC government’s upcoming 12th Five Year Plan to target a 40-45% reduction in energy consumption per unit of GDP from 2005 levels. The implementation of PHEs

and PHE Units in new construction facilities, and as replacements for legacy shell-and-tube heat exchangers, can help meet these goals because of their increased energy efficiency.

•**Urbanization.** According to the CIA World Factbook, 43% of China's population lived in urban settings in 2008. Additionally, according to the National Bureau of Statistics of China, 15 cities near and around SmartHeat's sales and service centers have a population of more than five million. Eight of these Chinese cities are among the world's fastest growing, increasing at an annual rate of 2.5% or more. China's urbanization has led to new infrastructure development and existing infrastructure improvements that require ongoing investment in heating solutions.

•**Government Stimulus.** On November 5, 2008, China's State Council approved a \$586 billion plan to invest in infrastructure and social welfare. On March 6, 2009, China's National Development and Reform Commission revised this plan to include \$31 billion to be partially allocated to energy-saving projects. These funds are required to be spent by the end of 2010. In addition, on April 2, 2010 the Chinese National Development and Reform Commission issued an Opinion on Expediting the Implementation of Energy Performance Contracting for Promoting Energy Saving Service Industry Development which directed all local governments to budget funds to invest in and support energy saving industries.

Emerging Wealth. The rapidly expanding middle class in China is now demanding access to quality heating during the winter months. This demand is often met by using hot water supplied from a power station and district heating network that utilizes a system of PHEs and PHE Units.

Our Competitive Strengths

We believe we have the following competitive strengths:

Provider of Key Elements Used to Improve Energy Efficiencies and Reduce Coal Pollution. We offer a full line of PHEs, PHE Units and heat meters. The primary advantages of plate heat exchanger technology, compared to traditional shell and tube heat exchanger technology, are efficiency, compact design, and ease of customization. PHEs have larger heat transfer surface areas and therefore also have greater thermal conductivity. As a result, PHEs can transfer the same amount of heat as a traditional shell and tube heat exchanger, but with the benefit of a smaller size unit.

Established Leader and Brand Name in the Growing China Heating Industry. We have established a leading brand name in the fragmented Chinese heating industry and seek to utilize this awareness to become the leading Chinese supplier of PHEs, PHE Units and related products in the rapidly growing Chinese market. We are a leading domestic producer of PHE Units under the Taiyu brand and management estimates that we have approximately a 10-12% share of the PHE Unit market based on our internal market research which tracks PHE projects in China valued over \$1.5 million. We believe the Taiyu brand name is recognized for its quality and efficiency, which we believe we can leverage to improve our reputation as a leading seller of high quality PHE Units in China.

Quality Engineering, Research and Development. We emphasize efficiency, durability and quality engineering in all of our products. All of our products utilize the latest technologies, and our designs are created using advanced software systems. We have nine registered patents in China for PHE products and heat meters. We have two patents for our plate heat exchangers, one for our heat transfer system for space heating and domestic hot water, one for a heat meter cleaning pipe, two for our heat meter testing system, one for an integrated heat transfer system, one for an efficient-heat testing bench, and one for a filter. Five of our patents expire in 2014, one expires in 2016, one expires in 2010, and two expire in 2017. To maintain our competitive edge in the marketplace and keep pace with new technologies, we fund research and development on an on-going basis to find improved efficiencies in design, cost and energy capture. Research and development costs for 2008 and 2009 were \$1,020,000 and \$1,360,000, respectively. We plan to continue to invest in research and development to identify new industry applications for PHEs, improve our product lines, develop multifunctional PHE Units and modify PHE designs to meet current market demand.

Strong Technical Support. The selection of PHEs and PHE Units requires technical knowledge regarding the operating temperature, pressure, corrosivity, viscosity and purity of the fluid as well as the pressure loss within the system. Our unique design software enables us to provide high quality and timely technical support to ensure our customers receive the right equipment for each project. We also provide a streamlined and error free installation process to minimize project complications.

Enterprise-Wide Design, Production and Control Systems for Efficient Pricing and Streamlined Manufacturing. Our technologically advanced CAD design systems are integrated with our real-time enterprise resource planning (“ERP”) and finance systems. This advanced, integrated platform allows our field salespeople to input orders, obtain draft models, access quotes and confirm delivery dates within minutes. The platform also enables inventory and production personnel to accurately schedule and reduce lead production times to five days for PHEs and ten days for PHE Units. We believe these lead times are some of the best in the industry and provide an unparalleled level of customer service.

Focus on Quality. We have a National Safety Certification for our PHE products, and are an ISO 9001 certified manufacturer.

First Rate Customer Service and Reliable Product Delivery. We believe that our employees provide first rate customer service, technical expertise and product knowledge to streamline the selection, design and installation processes. We provide after sale service through our local service centers and deliver products on time to meet tight project deadlines. Our focus on delivering premium service separates us from our competitors and has been critical in helping us win a number of projects for various multinational companies and local governments.

Diversified End Markets and Customers. Our PHEs and PHE Units are broadly used across a variety of industrial end markets including the energy (i.e., conventional and nuclear power plants), HVAC, petroleum refining, petrochemicals, metallurgy, food and beverage and chemical processing end markets. We also benefit from a diverse customer mix. For the fiscal year ended December 31, 2009, our ten largest customers accounted for 47% of sales and our largest customer accounted for 7% of sales. This end market and customer diversification helps to insulate us from sales volatility that would occur if we concentrated in specific industries. The bulk of our customers are utilities, engineering and construction companies and industrial companies.

Proven Ability to Identify and Acquire Strategic Targets. Over the past 24 months, we have completed two strategic acquisitions. Each acquisition has accelerated our strategic plan by: (i) adding manufacturing capacity; (ii) broadening our product offering to include multiple heat exchange systems; (iii) facilitating access into new geographic regions throughout China; (iv) improving our cost structure; (v) enhancing our engineering capabilities; or (vi) helping us enter new and higher growth end markets. We have proven our ability to complete successful acquisitions and believe there are additional acquisition opportunities both in the Chinese domestic market and internationally which we may potentially pursue.

Experienced Management Team. Our senior management team has extensive business and industry experience. Mr. Jun Wang, our president and CEO, was the founder of Taiyu in 2002. He was a sales manager for Honeywell International Inc. from 1996 to 1999 and was a sales manager for Alfa Laval from 1994 to 1996. Mr. Wang obtained his Master's degree in Engineering from Tsinghua University in 1989. Ms. Zhijuan Guo, our CFO, has 14 years of finance and accounting experience and has been with the Company since its inception in 2002. Mr. Xudong Wang, our VP of strategy and development has served as the VP of an international financial firm. Mr. Wen Sha, our VP of marketing, has extensive sales experience and industry contacts. He joined SmartHeat as a Regional Sales Manager in 2005. Prior to that, he served as the General Manager of Nanjing Hui Dun Ltd. and as sales director of APV Accessen in Shanghai, a leading international PHE firm. Mr. Feng Chen, Ph.D., our CTO, joined SmartHeat in 2008 as part of our SanDeKe acquisition. Prior to founding SanDeKe, he served in a leading engineering position in China with Alfa Laval.

Our Growth Strategy

Our goal is to further penetrate the many market segments throughout China for PHEs, PHE Units and related accessories, expand our PHE Unit sales both domestically and internationally, promote the sale of heat meters and execute strategic acquisitions that are accretive and synergistic to our business.

Pursue High Growth Chinese End Markets. We are targeting our sales efforts on a number of high growth Chinese end markets such as power and petrochemical. We currently have a presence in these segments but believe there are significant opportunities to improve our market share by leveraging our premium product quality and high quality service. Our solutions are commonly used in many of these industries and customers continue to assess the cost savings and positive environmental attributes of PHEs.

Continue Organic Growth Initiatives. We believe that the current PHE market is fragmented and represents an excellent opportunity for us to gain additional market share from our competitors. We intend to open new sales offices, hire additional sales personnel, expand into new distribution channels and improve the quality of our products. We also intend to leverage our strong brand, quality customer service, engineering and reliable product delivery to gain incremental business with our existing clients. Finally, we believe that as we continue to grow, economies of scale and improved cost control measures will drive stronger profitability across all product lines.

Promote Heat Meters. In response to rising energy costs and an increased focus on energy efficiency, the Chinese government and local utility companies have made the use of heat meters compulsory in China. As of July 2003, heat meters were required nationally by law for new buildings installed with central heating and the law was extended in April of 2008 by the Energy Conservation Law, Article 38, to buildings being retrofitted. We are currently working with the General Administration of Quality Supervision and Quarantine, an administrative organ established under the PRC's State Council, to establish a national heating standard in China. We also intend to leverage the Taiyu brand and our reputation in the PHE market to gain market share.

Expand Internationally. We are continuing to seek additional opportunities to expand our business internationally. We plan to cooperate with a number of international energy contractors to help promote our products outside of China and

will review international acquisition opportunities and joint venture opportunities for international growth.

Execute Strategic Acquisitions. We intend to continue to selectively acquire domestic or international targets that would enable us to enter new customer segments or gain entry into new industries. For example, the acquisition of the plant and machinery and land use rights from Siping Beifang in May of 2009 provided us with an entrance into the petrochemical and high pressure chemical end markets, which were previously immaterial segments for us. We also acquired SanDeKe in September of 2008 which increased our PHE and PHE Unit production capacity. Due to the high pressure and heat tolerance demands of the petrochemical industry, we have also acquired valuable engineering expertise that may help us address the nuclear energy segment in a meaningful way. Management believes it has a strong track record of acquiring companies that fit our strategic goals of reducing pollution and saving energy, and of successfully integrating their operations so they are accretive to earnings and contribute to our rapid growth. We will continue to identify and review targets that are accretive to our earnings, easily integrated into our existing infrastructure and synergistic to our operations.

RISK FACTORS

Investing in our securities involves risk. The prospectus supplement applicable to a particular offering of securities will contain a discussion of the risks applicable to an investment in the Company and to the particular types of securities that we are offering under that prospectus supplement. Before making an investment decision, you should carefully consider the risks described under “Risk Factors” in the applicable prospectus supplement and the risks described in our most recent Annual Report on Form 10-K, or any updates to our risk factors in our Quarterly Reports on Form 10-Q, together with all of the other information appearing in or incorporated by reference into this prospectus and any applicable prospectus supplement, in light of your particular investment objectives and financial circumstances. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment.

RATIO OF EARNINGS TO FIXED CHARGES

Not applicable to smaller reporting companies.

USE OF PROCEEDS

Except as otherwise provided in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities covered by this prospectus for capital expenditures and acquisitions of new technologies or businesses. While we have not identified any specific acquisition candidates at this time, we believe that we will require additional financing to complete acquisitions that fit our strategic objectives. The precise amount, use and timing of the application of such proceeds will depend upon our funding requirements and the availability and cost of other capital. Additional information on the use of net proceeds from an offering of securities covered by this prospectus may be set forth in the prospectus supplement relating to the specific offering.

PLAN OF DISTRIBUTION

We may sell the securities described in this prospectus to or through underwriters, through dealers, through agents, or directly to one or more purchasers or through a combination of these methods. The applicable prospectus supplement will describe the terms of the offering of the securities, including:

- the name or names of any underwriters, if any, and if required, any dealers or agents;
- the public offering price or purchase price of the securities and the net proceeds to us from the sale of the securities;
- any underwriting discounts and other items constituting underwriters’ compensation;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed or traded.

We may distribute the securities from time to time in one or more transactions at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;

- prices related to such prevailing market prices; or
- negotiated prices.

Sales Through Underwriters or Dealers

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in an offering, we will execute an underwriting agreement with such underwriters and will specify the name of each underwriter and the terms of the transaction (including any underwriting discounts and other terms constituting compensation of the underwriters and any dealers) in a prospectus supplement. The securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more investment banking firms or others, as designated. If an underwriting syndicate is used, the managing underwriter(s) will be specified on the cover of the prospectus supplement. If underwriters are used in the sale, the offered securities will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time. Unless otherwise set forth in the prospectus supplement, the obligations of the underwriters to purchase the offered securities will be subject to conditions precedent, and the underwriters will be obligated to purchase all of the offered securities, if any are purchased.

We may grant to the underwriters options to purchase additional securities to cover over-allotments, if any, at the public offering price, with additional underwriting commissions or discounts, as may be set forth in a related prospectus supplement. The terms of any over-allotment option will be set forth in the prospectus supplement for those securities.

If we use a dealer in the sale of the securities we will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. The names of the dealers and the terms of the transaction will be specified in a prospectus supplement.

In connection with the sale of the securities, underwriters, dealers or agents may receive compensation from us or from purchasers of the securities for whom they act as agents, in the form of discounts, concessions or commissions. Underwriters may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of the securities, and any institutional investors or others that purchase securities directly for the purpose of resale or distribution, may be deemed to be underwriters, and any discounts or commissions received by them from us and any profit on the resale of the common stock by them may be deemed to be underwriting discounts and commissions under the Securities Act. Pursuant to a requirement by the Financial Industry Regulatory Authority, or FINRA, the maximum commission or discount to be received by any FINRA member or independent broker-dealer may not be greater than eight percent (8%) of the gross proceeds received by us for the sale of any securities being registered pursuant to SEC Rule 415 under the Securities Act of 1933.

Direct Sales and Sales Through Agents

We may sell the securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, any agent will act on a best-efforts basis for the period of its appointment.

Delayed Delivery Contracts

We may authorize agents or underwriters to solicit offers by institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

Market Making, Stabilization and Other Transactions

To facilitate the public offering of a series of securities, persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the market price of the securities. This may include over-allotments or short sales of the securities, which involves the sale by persons participating in the offering of more securities than have been sold to them by us. In addition, those persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to underwriters or dealers participating in any such offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. Such transactions, if commenced, may be discontinued at any time. We make no representation or prediction as to the direction or magnitude of any effect that the transactions described above, if implemented, may have on the price of our securities.

Unless otherwise specified in the applicable prospectus supplement, any common stock sold pursuant to a prospectus supplement will be eligible for listing on The NASDAQ Global Market, subject to official notice of issuance. Any underwriters to whom securities are sold by us for public offering and sale may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice.

Derivative Transactions

In addition, we may enter into derivative transactions with third parties (including the writing of options), or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with such a transaction, the third parties may, pursuant to this prospectus and the applicable prospectus supplement, sell securities covered by this prospectus and the applicable prospectus supplement. If so, the third party may use securities borrowed from us or others to settle such sales and may use securities received from us to close out any related short positions. We may also loan or pledge securities covered by this prospectus and the applicable prospectus supplement to third parties, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and the applicable prospectus supplement. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement or in a post-effective amendment.

Electronic Auctions

We may also make sales through the Internet or through other electronic means. Since we may from time to time elect to offer securities directly to the public, with or without the involvement of agents, underwriters or dealers, utilizing the Internet or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you will want to pay particular attention to the description of that system we will provide in a prospectus supplement.

Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us, and which may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called "real-time" basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder's individual bids would be accepted, prorated or rejected. Of course, many pricing methods can and may also be used.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

General Information

We may provide agents, underwriters and other purchasers with indemnification against particular civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents, underwriters or other purchasers may make with respect to such liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

In order to comply with the securities laws of some states, if applicable, the securities offered pursuant to this prospectus will be sold in those states only through registered or licensed brokers or dealers. In addition, in some states securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and complied with.

DESCRIPTION OF THE SECURITIES WE MAY OFFER

General

We, directly or through agents, dealers or underwriters designated from time to time, may offer, issue and sell, together or separately, up to \$100,000,000 in the aggregate of

- shares of our common stock;
- debt securities, in one or more series;

- warrants to purchase our debt or equity securities; or
- rights to purchase our debt, equity securities, or units consisting of one or more of the foregoing; or
- any combination of the foregoing, either individually or as units consisting of one or more of the foregoing, each on terms to be determined at the time of sale.

We may issue debt securities that are exchangeable for or convertible into shares of our common stock. When a particular series of securities is offered, a supplement to this prospectus will be delivered with this prospectus, which will set forth the terms of the offering and sale of the offered securities, as well as complete descriptions of the security or securities to be offered pursuant to the prospectus supplement. The summary descriptions of securities included in this prospectus are not meant to be complete descriptions of each security. This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

Common Stock

The following description of common stock, together with the additional information we include in any applicable prospectus supplement, summarizes the material terms and provisions of the common stock that we may offer under this prospectus. For the complete terms of our common stock, please refer to our articles of incorporation, as may be amended from time to time, and our bylaws, as amended from time to time. The Nevada Business Corporation Act may also affect the terms of these securities. While the terms we have summarized below will apply generally to any future common stock that we may offer, we will describe the specific terms of any series of these securities in more detail in the applicable prospectus supplement. If we so indicate in a prospectus supplement, the terms of any common stock we offer under that prospectus supplement may differ from the terms we describe below.

As of October 13, 2010, our authorized capital stock consists of 75,000,000 shares of common stock, par value \$0.001 per share, of which 32,811,125 shares are issued and outstanding. The authorized and unissued shares of common stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange on which our securities may be listed. Unless approval of our stockholders is so required, our board of directors will not seek stockholder approval for the issuance and sale of our common stock.

The holders of our common stock are entitled to one vote for each share held of record. The affirmative vote of a majority of shares present in person or represented by proxy at a meeting of stockholders that commences with a lawful quorum is sufficient for approval of matters upon which stockholders may vote, including questions presented for approval or ratification at the annual meeting. Our common stock does not carry cumulative voting rights, and holders of more than 50% of our common stock have the power to elect all directors and, as a practical matter, to control our company. Holders of our common stock are not entitled to preemptive rights, conversion rights, and no redemption provisions are applicable to our common stock. Any action other than the election of directors shall be authorized by a majority of the votes cast, except where the Nevada Business Corporation Act prescribes a different percentage of votes and/or exercise of voting power.

After the satisfaction of requirements with respect to preferential dividends, if any, holders of our common stock are entitled to receive, pro rata, dividends when and as declared by our board of directors out of funds legally available therefore. Upon our liquidation, dissolution or winding-up, after distribution in full of the preferential amount, if any, holders of our common stock are entitled to share ratably in our assets legally available for distribution to our stockholders. All outstanding shares of common stock are fully paid and non-assessable.

As of October 13, 2010 we had outstanding warrants to purchase a total of 96,775 shares of our Common Stock and we had outstanding options to purchase 63,333 shares of our Common Stock.

Our common stock is listed on The NASDAQ Global Market under the symbol “HEAT” The transfer agent and registrar for our common stock is Interwest Transfer Company, Inc., located at 1981 Murray Holladay Road, Suite 100, Salt Lake City, UT 84117. Their telephone number is (801) 272-9249.

Debt Securities

The following description, together with the additional information we include in any applicable prospectus supplement, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. While the terms we have summarized below will generally apply to any future debt securities we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities we offer under a prospectus supplement may differ from the terms we describe below. As of the date of this prospectus, we have no outstanding registered debt securities.

As used in this prospectus, debt securities means the debentures, notes, bonds and other evidences of indebtedness that we may issue from time to time. The debt securities may be either secured or unsecured and will either be senior debt securities or subordinated debt securities. The debt securities will be issued under one or more separate indentures between us and a trustee to be specified in an accompanying prospectus supplement. Senior debt securities will be issued under a new senior indenture. Subordinated debt securities will be issued under a subordinated indenture. Together, the senior indentures and the subordinated indentures are sometimes referred to in this prospectus as the indentures. This prospectus, together with the applicable prospectus supplement, will describe the terms of a particular series of debt securities.

The indentures will be qualified under the Trust Indenture Act of 1939. We use the term “debenture trustee” to refer to either the senior trustee or the subordinated trustee, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplement related to the debt securities that we sell under this prospectus, as well as the complete indentures that contain the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior and the subordinated indentures are identical.

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in an officers’ certificate or by a supplemental indenture. Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series. The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series, including any pricing supplement.

The prospectus supplement will set forth:

- the title;
- the name of the trustee(s) and the nature of any material relationship with the registrant or with any of its affiliates;
- the principal amount being offered, and, if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form and, if so, the terms and who the depositary will be;

- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a U.S. person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate, the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
 - whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
 - the terms of the subordination of any series of subordinated debt;
 - the place where payments will be payable;
 - restrictions on transfer, sale or other assignment, if any;

- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, the conditions upon which, and the price at which we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions, and any other applicable terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
 - whether the indenture will restrict our ability and/or the ability of our subsidiaries to, among other things,:
 - incur additional indebtedness;
 - issue additional securities;
 - create liens;
 - pay dividends and make distributions in respect of our capital stock and the capital stock of our subsidiaries;
 - redeem capital stock;
 - place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
 - make investments or other restricted payments;
 - sell or otherwise dispose of assets;
 - enter into sale-leaseback transactions;
 - engage in transactions with stockholders and affiliates;
 - issue or sell stock of our subsidiaries; or
 - effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of any material or special U.S. federal income tax considerations applicable to the debt securities;
 - information describing any book-entry features;
 - provisions for a sinking fund purchase or other analogous fund, if any;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code;
 - the procedures for any auction and remarketing, if any;

- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;

- if other than dollars, the currency in which the series of debt securities will be denominated; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any events of default that are in addition to those described in this prospectus or any covenants provided with respect to the debt securities that are in addition to those described above, and any terms that may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for common stock or other securities of ours or a third party, including the conversion or exchange rate, as applicable, or how it will be calculated, and the applicable conversion or exchange period. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of our securities or the securities of a third party that the holders of the series of debt securities receive upon conversion or exchange would, under the circumstances described in those provisions, be subject to adjustment, or pursuant to which those holders would, under those circumstances, receive other property upon conversion or exchange, for example in the event of our merger or consolidation with another entity.

Consolidation, Merger or Sale

The indentures in the forms initially filed as exhibits to the registration statement of which this prospectus is a part do not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor of ours or the acquirer of such assets must assume all of our obligations under the indentures and the debt securities.

If the debt securities are convertible for our other securities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default Under the Indenture

The following are events of default under the indentures in the forms initially filed as exhibits to the registration statement with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended or deferred;
- if we fail to pay the principal, sinking fund payment or premium, if any, when due and payable and the time for payment has not been extended or delayed;
- if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the debenture trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
 - if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the debenture trustee or the holders of at least 35% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the debenture trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the debenture trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the debenture trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the debenture trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the debenture trustee, or exercising any trust or power conferred on the debenture trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act of 1939, the debenture trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will only have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the debenture trustee of a continuing event of default with respect to that series;
- the holders of at least 35% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity, to the debenture trustee to institute the proceeding as trustee; and
- the debenture trustee does not institute the proceeding and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the debenture trustee regarding our compliance with specified covenants in the indentures.

Modification of Indenture; Waiver

We and the debenture trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under “—Consolidation, Merger or Sale”;
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act of 1939;
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;

- to add to, delete from, or revise the conditions, limitations and restrictions on the authorized amount, terms or purposes of issuance, authorization and delivery of debt securities or any series, as set forth in the indenture;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under “—General” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;

- to add to our covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default, or to surrender any of our rights or powers under the indenture; or
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, we and the debenture trustee may only make the following changes with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except that the following obligations survive until the maturity date or the redemption date:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
 - maintain paying agencies;
 - hold monies for payment in trust; and
 - appoint any successor trustee;

and the following obligations survive the maturity date or the redemption date:

- recover excess money held by the debenture trustee; and
- compensate and indemnify the debenture trustee.

In order to exercise our rights to be discharged, we must deposit with the debenture trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, known as DTC, or another depository named by us and identified in a prospectus supplement with respect to that series. See “Legal Ownership of Securities” for a further description of the terms relating to any book-entry securities.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of any series being redeemed in part during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Debenture Trustee

The debenture trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the debenture trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the debenture trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that, unless we otherwise indicate in the applicable prospectus supplement, we may make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in a prospectus supplement, we will designate the corporate office of the debenture trustee in the City of New York as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a

particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the debenture trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act of 1939 is applicable.

Subordination of Subordinated Debt Securities

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. The indentures in the forms initially filed as exhibits to the registration statement of which this prospectus is a part do not limit the amount of indebtedness that we may incur, including senior indebtedness or subordinated indebtedness, and do not limit us from issuing any other debt, including secured debt or unsecured debt.

Warrants

The following description, together with the additional information we may include in any applicable prospectus supplement, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and any related warrant agreement and warrant certificate. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the specific terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement that includes this prospectus or as an exhibit to a report filed under the Exchange Act.

General

We may issue warrants for the purchase of common stock, and/or debt securities in one or more series. We may issue warrants independently or together with common stock and/or debt securities, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we may issue under a separate agreement. We may enter into a warrant agreement with a warrant agent. Each warrant agent may be a bank that we select which has its principal office in the United States. We may also choose to act as our own warrant agent. We will indicate the name and address of any such warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock, the number or amount of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which and currency in which these shares may be purchased upon such exercise;
- the manner of exercise of the warrants, including any cashless exercise rights;

- the warrant agreement under which the warrants will be issued;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
 - anti-dilution provisions of the warrants, if any;
 - the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;

- the dates on which the right to exercise the warrants will commence and expire or, if the warrants are not continuously exercisable during that period, the specific date or dates on which the warrants will be exercisable;
 - the manner in which the warrant agreement and warrants may be modified;
 - the identities of the warrant agent and any calculation or other agent for the warrants;
 - federal income tax consequences of holding or exercising the warrants;
 - the terms of the securities issuable upon exercise of the warrants;
- any securities exchange or quotation system on which the warrants or any securities deliverable upon exercise of the warrants may be listed or quoted; and
 - any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to 5:00 P.M. Eastern time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required exercise price by the methods provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate, and in the applicable prospectus supplement, the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants.

Enforceability of Rights By Holders of Warrants

Any warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of

any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action the holder's right to exercise, and receive the securities purchasable upon exercise of, its warrants in accordance with their terms.

Warrant Agreement Will Not Be Qualified Under Trust Indenture Act

No warrant agreement will be qualified as an indenture, and no warrant agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of warrants issued under a warrant agreement will not have the protection of the Trust Indenture Act with respect to their warrants.

Governing Law

Each warrant agreement and any warrants issued under the warrant agreements will be governed by New York law.

Calculation Agent

Any calculations relating to warrants may be made by a calculation agent, an institution that we appoint as our agent for this purpose. The prospectus supplement for a particular warrant will name the institution that we have appointed to act as the calculation agent for that warrant as of the original issue date for that warrant, if any. We may appoint a different institution to serve as calculation agent from time to time after the original issue date without the consent or notification of the holders. The calculation agent's determination of any amount of money payable or securities deliverable with respect to a warrant will be final and binding in the absence of manifest error.

Rights

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the rights that we may offer under this prospectus and the related rights agreements. While the terms summarized below will apply generally to any rights that we may offer under this prospectus, we will describe the particular terms of any series of rights that we may offer in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any rights offered under that prospectus supplement may differ from the terms described below. However, no prospectus supplement shall fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness. Specific rights agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement that includes this prospectus or as an exhibit to a report filed under the Exchange Act.

General

We may issue rights to purchase common stock, debt securities, warrants, or units. These rights may be issued independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the rights in such offering. In connection with any offering of such rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

Each series of rights will be issued under a separate rights agreement which we may enter into with a bank or trust company, as rights agent, all as set forth in the applicable prospectus supplement. We may also choose to act as our own rights agent. The rights agent will act solely as our agent in connection with the certificates relating to the rights and will not assume any obligation or relationship of agency or trust with any holders of rights certificates or beneficial owners of rights. We will file the rights agreement and the rights certificates relating to each series of rights with the SEC, and incorporate them by reference as an exhibit to the registration statement of which this prospectus is a part on or before the time we issue a series of rights.

We will describe in the applicable prospectus supplement the terms of the series of rights, including:

- the date of determining the stockholders entitled to the rights distribution;
- the number of rights issued or to be issued to each stockholder;
- the exercise price payable for each share of common stock, preferred stock or other securities upon the exercise of the rights;
- the number and terms of the shares of common stock, preferred stock or other securities which may be purchased per each right;

- the extent to which the rights are transferable;
- the date on which the holder's ability to exercise the rights shall commence, and the date on which the rights shall expire;
- the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities;
- if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of such rights; and
- any other terms of the rights, including the terms, procedures, conditions and limitations relating to the exchange and exercise of the rights.

The description in the applicable prospectus supplement of any rights that we may offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable rights certificate, which will be filed with the SEC.

Exercise of Rights

Each right will entitle the holder of the right to purchase for cash such amount of shares of common stock, debt securities, warrants or units at such exercise price as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the rights offered thereby. Rights may be exercised at any time up to the close of business on the expiration date for such rights set forth in the prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void.

Rights may be exercised as set forth in the prospectus supplement relating to the rights offered thereby. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or any other office indicated in the prospectus supplement, we will forward, as soon as practicable, the shares of common stock, debt securities, warrants or units purchasable upon such exercise. We may determine to offer any unsubscribed offered securities directly to persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as set forth in the applicable prospectus supplement.

Governing Law

The rights and rights agreements will be governed by and construed in accordance with the laws of the State of New York.

Units

We may issue units comprised of one or more of the other securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date or occurrence.

The applicable prospectus supplement may describe:

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the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and

- any unit agreement under which the units will be issued;
- whether the units will be issued in fully registered or global form.

The applicable prospectus supplement will describe the terms of any units. The preceding description and any description of units in the applicable prospectus supplement does not purport to be complete and is subject to and is qualified in its entirety by reference to the unit agreement and, if applicable, collateral arrangements and depository arrangements relating to such units.

LEGAL MATTERS

Certain legal matters governed by the laws of the State of Nevada with respect to the validity of the offered securities will be passed upon for us by Holland & Hart LLP, Reno, Nevada.

EXPERTS

The consolidated balance sheet of SmartHeat Inc. and subsidiaries as of December 31, 2009 and 2008 and the related consolidated statements of income and other comprehensive income, changes in stockholders' equity, and cash flows for the year ended December 31, 2009 and 2008 incorporated by reference herein have been audited by Goldman Kurland Mohidin LLP, independent registered public accountants, as stated in their report, and have been incorporated by reference in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION ABOUT US

We have filed a registration statement on Form S-3 with the SEC for the securities we are offering by this prospectus. This prospectus does not include all of the information contained in the registration statement. You should refer to the registration statement and its exhibits for additional information. We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in the prospectus but not delivered with the prospectus. We will provide this information upon oral or written request, free of charge. Any requests for this information should be made by calling or sending a letter to the Secretary of the Company, c/o SmartHeat Inc., at our office located at A-1, 10, Street 7, Shenyang Economic and Technological Development Zone, Shenyang, China 110027. Our telephone number is (86) (24) 2519-7699.

We are required to file annual and quarterly reports, current reports, proxy statements, and other information with the SEC. You can read our SEC filings, including the registration statement, on the SEC's website at <http://www.sec.gov>. You also may read and copy any document we file with the SEC at its public reference facility at:

Public Reference Room
100 F Street N.E.
Washington, DC 20549.

Please call the SEC at 1-800-732-0330 for further information on the operation of the public reference facilities.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The following documents filed by us with the Securities and Exchange Commission are incorporated by reference in this prospectus:

- Annual Report on Form 10-K for the fiscal year ended December 31, 2009, filed on March 31, 2010;

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Quarterly Reports on Form 10-Q for the fiscal quarter ended March 31, 2010, filed on May 11, 2010, and for the fiscal quarter ended June 30, 2010, filed on August 11, 2010; and

- Current Reports on Form 8-K, filed on February 4, 2010, March 31, 2010, May 11, 2010, May 26, 2010, and August 12, 2010; and
- The description of our Common Stock set forth in our Registration Statement on Form 8-A (Registration No. 001-3426) filed with the SEC on January 27, 2009, including any amendments thereto or reports filed for the purpose of updating such description.

Notwithstanding the foregoing, information furnished under Items 2.02 and 7.01 of any Current Report on Form 8-K, including the related exhibits, is not incorporated by reference in this prospectus.

All documents subsequently filed with the Securities and Exchange Commission by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date of the initial registration statement (other than current reports or portions thereof furnished under Items 2.02 or 7.01 of Form 8-K), prior to the termination of this offering, shall be deemed to be incorporated by reference herein and to be part of this prospectus from the respective dates of filing of such documents. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof or of the related prospectus supplement to the extent that a statement in any other subsequently filed document which is also incorporated or deemed to be incorporated herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES LAW VIOLATIONS

Under Sections 78.7502 and 78.751 of the Nevada Revised Statutes, the Company has broad powers to indemnify and insure its directors and officers against liabilities they may incur in their capacities as such. The Company's By-laws implement the indemnification and insurance provisions permitted by Chapter 78 of the Nevada Revised Statutes by providing that:

•The Company shall indemnify all its directors and officers to the fullest extent permitted by Chapter 78 of the Nevada Revised Statutes or any other law then in effect or as it may hereafter be amended. The Company shall indemnify each of its present and future directors and officers who becomes a party or is threatened to be made a party to any suit or proceeding, against expenses, including, but not limited to, attorneys' fees, judgments, fines, and amounts paid in settlement actually and reasonably incurred by him in connection with the action, suit, proceeding or settlement, provided such person acted in good faith and in a manner which he reasonably believed to be in or not opposed to the best interest of the Company, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful.

•The expenses of directors and officers incurred in defending a civil or criminal action, suit, or proceeding may be paid by the Company as they are incurred and in advance of the final disposition of the foregoing actions, if such person undertakes to repay said expenses if it is ultimately determined by a court that he is not entitled to be indemnified by the Company, meaning, a final adjudication establishes that the person's acts or omissions involved a breach of any fiduciary duties, where applicable, intentional misconduct, fraud or a knowing violation of the law which was material to the cause of action.

These indemnification provisions may be sufficiently broad to permit indemnification of the Company's directors and officers for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or controlling persons pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

\$100,000,000

SMARTHEAT, INC.

Common Stock

Debt Securities

Warrants

Units

Rights

PROSPECTUS

November 2, 2010

We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained in or incorporated by reference into this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any shares in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.
