Ocean Power Technologies, Inc. Form 10-K July 30, 2007

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

#### Form 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
 For the fiscal year ended April 30, 2007

or

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to .

**Commission File Number 001-33417** 

(Exact name of registrant as specified in its charter)

**Delaware** 

22-2535818

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

### 1590 REED ROAD PENNINGTON, NJ 08534

(Address of principal executive offices, including zip code)

Registrant s telephone number, including area code (609) 730-0400

Securities registered or to be registered pursuant to Section 12(b) of the Act:

**Title of Each Class** 

Name of Exchange on Which Registered

Common Stock, par value \$0.001

The Nasdaq Global Market

### Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No b

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes o No b

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes b No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405) is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. b

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer o Accelerated Filer o Non-Accelerated Filer b

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o  $No \, b$ 

The aggregate market value of the common stock of the registrant held by non-affiliates as of October 31, 2006, the last business day of the registrant s most recently completed second fiscal quarter, was \$49.5 million based on the closing sale price of the registrant s common stock on that date as reported on the AIM market of the London Stock Exchange plc. The registrant s common stock was not publicly traded in the United States on that date.

The number of shares outstanding of the registrant s common stock, as of June 30, 2007 was 10,190,604.

### DOCUMENTS INCORPORATED BY REFERENCE

**Document** 

Part of the Form 10-K into Which Incorporated

Proxy Statement for the registrant s 2007 Annual Meeting of Stockholders

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PowerBuoy® is a registered trademark of Ocean Power Technologies, Inc. The Ocean Power Technologies logo, CellBuoy<sup>tm</sup>, Talk on Water<sup>tm</sup> and Making Waves in Power<sup>sm</sup> are trademarks or service marks of Ocean Power Technologies, Inc. All other trademarks appearing in this annual report are the property of their respective holders.

### **Special Note Regarding Forward-Looking Statements**

We have made statements in this Annual Report on Form 10-K (the Annual Report ) in, among other sections, Item 1 Business, Item 1A Risk Factors, Item 3 Legal Proceedings, and Item 7 Management s Discussion and Analys Financial Condition and Results of Operations that are forward-looking statements. Forward-looking statements convey our current expectations or forecasts of future events. Forward-looking statements include statements regarding our future financial position, business strategy, budgets, projected costs, plans and objectives of management for future operations. The words may, continue, estimate, intend, plan, will, believe, projec anticipate and similar expressions may identify forward-looking statements, but the absence of these words does not necessarily mean that a statement is not forward-looking.

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Any or all of our forward-looking statements in this Annual Report may turn out to be inaccurate. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. They may be affected by inaccurate assumptions we might make or unknown risks and uncertainties, including the risks, uncertainties and assumptions described in Item 1A Risk Factors. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this report may not occur as contemplated, and actual results could differ materially from those anticipated or implied by the forward-looking statements.

You should not unduly rely on these forward-looking statements, which speak only as of the date of this filing. Unless required by law, we undertake no obligation to publicly update or revise any forward-looking statements to reflect new information or future events or otherwise.

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#### PART I

### ITEM 1. BUSINESS

#### Overview

We develop and are commercializing proprietary systems that generate electricity by harnessing the renewable energy of ocean waves. The energy in ocean waves is predictable, and electricity from wave energy can be produced on a consistent basis at numerous sites located near major population centers worldwide. Wave energy is an emerging segment of the renewable energy market. Based on our proprietary technology, considerable ocean experience, existing products and expanding commercial relationships, we believe we are the leading wave energy company.

We currently offer two products as part of our line of PowerBuoy<sup>®</sup> systems: a utility PowerBuoy system and an autonomous PowerBuoy system. Our PowerBuoy system is based on modular, ocean-going buoys, which we have been ocean testing for nearly a decade. The rising and falling of the waves moves the buoy-like structure creating mechanical energy that our proprietary technologies convert into electricity. We have tested and developed wave power generation and control technology using proven equipment and processes in novel applications. Our two products are designed for the following applications:

Our utility PowerBuoy system is capable of supplying electricity to a local or regional electric power grid. Our wave power stations will be comprised of a single PowerBuoy system or an integrated array of PowerBuoy systems, plus the remaining components required to deliver electricity to a power grid. We intend to sell our utility PowerBuoy system to utilities and other electrical power producers seeking to add electricity generated by wave energy to their existing electricity supply. Our PowerBuoy interface with the electrical utility power grid has been certified as compliant with international standards. An independent laboratory provided testing and evaluation services to certify that the OPT systems comply with designated national and international standards. The PowerBuoy grid interface will bear the Electrical Testing Laboratories (ETL) listing mark, and can be connected to the utility grid.

Our autonomous PowerBuoy system is designed to generate power for use independent of the power grid in remote locations. There are a variety of potential applications for this system, including sonar and radar surveillance, tsunami warning, oceanographic data collection, offshore platforms and offshore aquaculture.

From October 2005 to October 2006, we operated a demonstration PowerBuoy system with a maximum peak, or rated, output of 40 kilowatts, or kW, off the coast of New Jersey under a contract with the New Jersey Board of Public Utilities. This PowerBuoy system was removed from the ocean in October 2006 and underwent planned maintenance and diagnostic testing of the system. We are currently awaiting delivery of replacement mooring lines for this PowerBuoy system, after which we plan to immediately redeploy the system.

Our product development and engineering efforts are focused on increasing the maximum rated output of our utility PowerBuoy system from the current 40kW to 150kW in 2007, then to 250kW in 2008 and ultimately to 500kW in 2010. We believe that by increasing system output, we will be able to decrease the cost per kW of our PowerBuoy system and the cost per kilowatt hour of the energy generated. We have made substantial progress in the design, analysis and commencement of fabrication of what we believe to be the first utility-grade underwater substation, or pod, for wave power. The pod serves as the point at which energy generated by several PowerBuoys is aggregated and the voltage is increased, prior to transmission ashore and being fed into the power grid. The required switching and protection circuits for the individual PowerBuoys are also included in the pod. In addition, our 150kW PowerBuoy

design effort is well underway. The power conversion and controls system is substantially complete for the 150kW PowerBuoy system, and we expect to commence ocean testing in 2008.

In addition, we are focusing on expanding our key commercial opportunities for both the utility and the autonomous PowerBuoy systems. We currently have commercial relationships with the following:

Iberdrola S.A., or Iberdrola, which is a large electric utility company located in Spain and one of the largest renewable energy producers in the world, Total S.A., or Total, which is one of the world s largest oil and gas companies, and two Spanish governmental agencies for the first phase of the construction of a 1.39

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megawatt, or MW, wave power station off the coast of Santoña, Spain. We currently plan for the initial 40kW PowerBuoy system for this project to be ready for deployment by late 2007.

Total and Iberdrola to evaluate the development of a wave power station off the coast of France.

The United States Navy to develop and build wave power systems at the US Marine Corps Base in Oahu. One PowerBuoy system was installed in connection with this project for a total of eight months over a two-year period. Another PowerBuoy system was deployed in June 2007. After four weeks of initial testing and operation, the system was returned to shore for diagnostic analysis and repair. Work is currently in progress on the design and construction of a third PowerBuoy system, which is expected to be ready for deployment at the Marine Corps Base in Oahu by the end of 2007.

Lockheed Martin Corporation to market cooperatively with us our autonomous PowerBuoy system for use with Lockheed Martin equipment. Lockheed Martin successfully completed an ocean test of an autonomous PowerBuoy system in September 2004.

As part of our marketing efforts, we use demonstration wave power stations to establish the feasibility of wave power generation. In addition to the demonstration PowerBuoy system operated off the coast of New Jersey, we plan to develop and operate two additional demonstration wave power stations. Unlike the New Jersey power system, these demonstration wave power stations will, if approved and constructed as planned, be connected to the local power grids.

In February 2006, we received approval from the South West of England Regional Development Agency to install a 5MW demonstration wave power station off the coast of Cornwall, England.

In February 2007, the US Federal Energy Regulatory Commission granted us a preliminary permit to evaluate the feasibility of a location off the coast of Reedsport, Oregon for the proposed construction and operation of a wave power station with an anticipated maximum rated output of 50MW, of which up to the first 5MW will be a demonstration wave power station. In February 2007, we signed a cooperative agreement with a utility partner, Pacific Northwest Generating Cooperative, or PNGC, for the development of a wave power station. In July 2007, we filed a Pre-Application Document and Notice of Intent with the US Federal Energy Regulatory Commission for Reedsport, which provides notice of our intent to seek a license for the Reedsport wave park and information regarding the project. We believe this is the first Pre-Application Document and Notice of Intent filed by a wave power company, and is an important step in the full licensing process for the Reedsport project.

We plan to generate revenue from the demonstration wave power stations in Cornwall and Reedsport by selling electricity to utilities.

In March 2007, we were awarded funding from the Scottish Ministers Wave and Tidal Energy Support Scheme, managed by the Scottish Executive. This funding is to support the design, manufacture and installation of a single 150kW PowerBuoy system in Orkney, Scotland.

In January 2007, we filed applications with the US Federal Energy Regulatory Commission for preliminary permits to evaluate the feasibility of two locations, off the coasts of Coos Bay, Oregon and Newport, Oregon, for the proposed construction and operation of wave power stations, each with an anticipated maximum rated output of 100MW.

In June 2007, we received a \$1.7 million contract from the US Navy to provide our PowerBuoy technology to a unique program for ocean data gathering. Under this 18-month program, the Navy will conduct an ocean test of our autonomous PowerBuoy as the power source for the Navy s Deep Water Acoustic Detection System.

We were incorporated under the laws of the State of New Jersey in April 1984 and began commercial operations in 1994. On April 23, 2007, we reincorporated in Delaware. Our principal executive offices are located at 1590 Reed Road, Pennington, New Jersey 08534, and our telephone number is (609) 730-0400. Our website address is <a href="https://www.oceanpowertechnologies.com">www.oceanpowertechnologies.com</a>. The information on our website is not a part of this Annual Report. Our common stock has been listed on the AIM market of the London Stock Exchange plc since October 2003 and on the NASDAQ Global Market since April 24, 2007, the date on which we commenced our initial public offering in the

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United States. In that offering, we sold 5,000,000 shares of our common stock at a price to the public of \$20.00 per share.

#### Our Market

Global demand for electric power is expected to increase from 14.8 trillion kilowatt hours in 2003 to 30.1 trillion kilowatt hours by 2030, according to the Energy Information Administration, or the EIA. To meet this demand, the International Energy Agency, or the IEA, estimates that investments in new generating capacity will exceed \$4 trillion in the period from 2003 to 2030, of which \$1.6 trillion will be for new renewable energy generation equipment.

According to the IEA, fossil fuels such as coal, oil and natural gas generated over 60% of the world s electricity in 2002. However, a variety of factors are contributing to the increasing development of renewable energy systems that capture energy from replenishable natural resources, including ocean waves, flowing water, wind and sunlight, and convert it into electricity.

Rising cost of fossil fuels. The cost of fossil fuel used to generate electricity has been rising. From 2000 to 2005 in the United States, the cost of coal used for electricity generation increased by 28%, the cost of natural gas used for electricity generation increased by 91% and the cost of oil used for electricity generation increased by 64%.

Dependence on energy from foreign sources. Many countries, including the United States, Japan and much of Europe, depend on foreign resources for a majority of their domestic energy needs. Concerns over political and economic instability in some of the leading energy producing regions of the world are encouraging consuming countries to diversify their sources of energy.

*Environmental concerns*. Environmental concerns regarding the by-products of fossil fuels have led many countries and several US states to agree to reduce emissions of carbon dioxide and other gases associated with the use of fossil fuels and to adopt policies promoting the development of cleaner technologies.

Government incentives. Many countries have adopted policies to provide incentives for the development and use of renewable energy sources, such as subsidies to encourage the commercialization of renewable energy power generation.

*Infrastructure constraints*. In many parts of the world, the existing electricity infrastructure is insufficient to meet projected, and in some places existing, demand. Expansion of generating capacity from existing energy sources is frequently hindered by significant regulatory, political and economic constraints.

As a result of these and other factors, the EIA projects that grid-connected generating capacity fueled by renewable energy resources will continue to grow over the next 25 years.

### Wave Energy

The energy in ocean waves is a form of renewable energy that can be harnessed to generate electricity. Ocean waves are created when wind moves across the ocean surface. The interaction between the wind and the ocean surface causes energy to be exchanged. At first, small waves occur on the ocean surface. As this process continues, the waves become larger and the distance between the tops of the waves becomes longer. The size of the waves, and the amount of energy contained in the waves, depends on the wind speed, the time the wind blows over the waves and the distance covered. The rising and falling of the waves moves our PowerBuoy system creating mechanical energy that our proprietary technologies convert into usable electricity.

There are a variety of benefits to using wave energy for electricity generation.

Scalability within a small site area. Due to the tremendous energy in ocean waves, wave power stations with high capacity 50MW and above can be installed in a relatively small area. We estimate that, upon completion of the development of our 500kW PowerBuoy system, we would be able to construct a wave power station that would occupy less than one-tenth of the ocean surface occupied by an offshore wind power station of equivalent capacity.

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*Predictability*. The supply of electricity from wave energy can be forecasted in advance. The amount of energy a wave thousands of miles away will have when it arrives at a wave power station days later can be calculated based on satellite images and meteorological data with a high degree of accuracy. Customers can use this information to develop sourcing plans to meet their short-term electricity needs.

Constant Source of Energy. The annual flow of waves at specific sites can be relatively constant. Based on our studies and analysis of our target sites, we believe our wave power stations will be able to produce usable electricity for approximately 90% of all hours during a year.

There are currently several approaches, in different stages of development, for capturing wave energy and converting it into electricity. Methods for generating electricity from wave energy can be divided into two general categories: onshore systems and offshore systems. Our PowerBuoy system is an offshore system. Offshore systems are typically located one to five miles offshore and in water depths of between 100 and 200 feet. The system can be above, on or below the ocean surface. Many offshore systems utilize a floatation device to harness wave energy. The heaving or pitching of the floatation device due to the force of the waves creates mechanical energy, which is converted into electricity by various technologies. Onshore systems are located at the edge of the shore, often on a sea cliff or a breakwater, and typically must concentrate the wave energy first before using it to drive an electrical generator. Although maintenance costs of onshore systems may be less than those associated with offshore systems, there are a variety of disadvantages with these systems. As waves approach the shore, the energy in the waves decreases; therefore, onshore wave power stations do not take full advantage of the amount of energy that waves in deeper water produce. In addition, there are a limited number of suitable sites for onshore systems and there are environmental and possible aesthetic issues with these wave power stations due to their size and location on the seashore.

The scalability, predictability, constancy and limited environmental impact of offshore wave energy systems such as ours compare favorably with many other renewable energy technologies.

Hydroelectric power generates electricity by capturing energy from flowing waters typically stored in and then released from reservoirs. The expansion of hydroelectric power may be limited due to the environmental and ecological impact of hydroelectric power stations.

Wind power generates electricity by using wind turbines to harness the energy produced as a result of the wind s motion and to convert it into electricity. Wind turbine structures, which can be over 300 feet high and have blades with a span over 200 feet wide, require locations with plenty of open space and high average wind speeds. Due to the perceived aesthetic impact of wind turbines, some local governments have zoning restrictions prohibiting the installation of wind farms. In addition, because they are often close to the shore, offshore wind farms share some of the same perceived aesthetic challenges as onshore wind farms.

Solar (photo-voltaic) power generates electricity from sunlight. Since the sun s energy is not always available and is widely scattered, current solar power technology is not scalable to create a large power station for supplying power to the grid.

Tidal power captures energy contained in moving water due to tides and water current power captures energy contained in ocean and river flows and non-tidal currents. Both of these technologies require specific geographic characteristics for installation, which limits the availability of suitable sites.

#### **Our Competitive Advantages**

We believe that our technology for generating electricity from wave energy and our commercial relationships give us several potential competitive advantages in the renewable energy market.

Our PowerBuoy system uses an ocean-tested technology to generate electricity.

We have been conducting ocean tests for a decade in order to prove the viability of our technology. We initiated our first ocean installation in 1997 and have had several deployments of our systems for testing and operation since then, the longest of which has lasted 12 months. Our PowerBuoy systems have survived several hurricanes and winter storms while installed in the ocean.

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We had an operational demonstration PowerBuoy system off the coast of New Jersey from October 2005 until October 2006 when the system was removed from the ocean for planned maintenance and diagnostic testing. We currently plan to build and deploy two additional demonstration wave power stations that, unlike the PowerBuoy system in New Jersey, will provide electricity to the local power grids. In February 2006, we received approval from the South West of England Regional Development Agency to install a demonstration wave power station off the coast of Cornwall, England and in February 2007, the US Federal Energy Regulatory Commission granted us a preliminary permit to evaluate the feasibility of a wave power station off the coast of Reedsport, Oregon, a portion of which will be for demonstration purposes.

Our PowerBuoy system s grid connection has been certified.

On July 2, 2007, we announced that our PowerBuoy grid connection system had been certified as compliant with designated national and international standards. This qualifies our technology for integration into utility grid systems.

Our PowerBuoy system is efficient in harnessing wave energy.

Our PowerBuoy system is designed to efficiently convert wave energy into electricity by using onboard sensors to detect actual wave conditions and then to automatically adjust the performance of the generator using our proprietary electrical and electronics-based control systems in response to that information.

One measure of the efficiency of an electric power generation system is load factor. The load factor is the percent of kilowatt hours produced by a system in a given period as compared to the maximum kilowatt hours that could be produced by the system in that period. A high load factor indicates a high degree of utilization of the capacity of the system and provides a means to compare the efficiencies of different energy sources to produce equivalent power outputs (without taking into account the relative costs of constructing such systems). Since we have not yet operated a wave power station, we do not have a measured load factor. However, based on our research and analysis, we believe the load factor for a PowerBuoy wave power station located at most of our targeted sites would be in the range of 30% to 45%.

Our PowerBuoy system takes advantage of time-tested and well-known technology.

Our PowerBuoy system is designed to combine features of ocean-going buoys with advanced electrical and electronics-based systems. Since standard ocean-going buoys have been deployed in maritime applications for decades, their survival and risk profiles are known and proven. By using electrical, rather than mechanical, engineering solutions whenever possible, we are able to control materials, construction and other capital costs while maintaining reliability.

Our PowerBuoy system can be built using easily sourced components supplied by third parties. Due to the PowerBuoy system s modular design, total construction time is minimized as multiple components can be built simultaneously, and generating capacity can be scaled up or down by incrementally adding or subtracting groups of PowerBuoy units. In addition, our PowerBuoy system can be deployed using common maritime techniques.

Numerous potential sites for our wave power stations are located near major population centers worldwide.

Our systems are designed to work in sites with average annual wave energy of at least 20kW per meter of wave front, which can be found in many coastal locations around the world. In particular, we are targeting

coastal North America, the west coast of Europe, the coasts of Australia and the east coast of Japan. These potential sites not only have appropriate natural resources for harnessing wave energy, but they are also located near large population centers with significant and increasing electricity requirements.

We have significant commercial relationships.

Our current projects with Iberdrola and Total provide us with an initial opportunity to sell our wave power stations to utilities. By collaborating with leaders in renewable energy development, we believe we are able to accelerate both our in-house knowledge of the utility power generation market and our reputation as a credible renewable energy equipment supplier. If these projects are successful, we intend to leverage

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our experiences with the Spain and France projects to add wave power stations, new customers and complementary revenue streams from operations and maintenance contracts similar to the agreement we have in connection with the Spain project.

For certain customers in need of electricity solutions independent of the grid in defense and related markets, our marketing relationship with Lockheed Martin will enable us to offer a complete solution both equipment and power generation for that equipment thereby maximizing the marketability of our autonomous PowerBuoy system for these remote applications.

With the funding from the US Navy, we have been able to refine our PowerBuoy system while simultaneously preparing for commercial deployment to address a particular customer need. If we are able to successfully deploy PowerBuoy systems for the US Navy, we believe our market visibility will be significantly enhanced.

Our PowerBuoy system has the potential to offer a cost competitive renewable energy power generation solution.

Our product development and engineering efforts are focused on increasing the maximum rated output of our utility PowerBuoy system from the current 40kW to 150kW in 2007, then to 250kW in 2008 and ultimately to 500kW in 2010. Assuming we are able to reach manufacturing levels of at least 300 units of 500kW PowerBuoy systems per year, we believe, based upon our research and analysis, that the economies of scale we would have with our fabricators would allow us to offer a renewable electricity solution that competes on a non-subsidized basis with the price of wholesale electricity in key markets. We expect to complete development of our 500kW PowerBuoy system in 2010.

Prior to achieving full production levels of the 500kW PowerBuoy system, if we achieve economies of scale for our 150kW or 250kW PowerBuoy systems, we expect to be able to offer a renewable electricity solution that competes with the price of electricity from traditional sources in certain local markets where the current retail price of electricity is relatively high or where sufficient subsidies are available.

*Our systems are environmentally benign and aesthetically non-intrusive.* 

We believe that our PowerBuoy system does not present significant risks to marine life and does not emit significant levels of pollutants. In connection with our project at the US Marine Corps Base in Hawaii, our customer, the US Navy, obtained an independent environmental assessment of our PowerBuoy system prior to installation, as required by the National Environmental Policy Act. Although our project for the US Navy only contemplates an array of up to six PowerBuoy systems in Hawaii, we believe that PowerBuoy systems deployed in other geographic locations, including larger PowerBuoy systems under development and multiple-system wave power stations, would have minimal environmental impact due to the physical similarities with the tested system.

Since our PowerBuoy systems are typically located one to five miles offshore, PowerBuoy wave power stations are usually not visible from the shore. Visual impact is often cited as one of the reasons that many communities have opposed plans to develop power stations. Our PowerBuoy system has the distinct advantage of having only a minimal visual profile. Only a small portion of the unit is visible at close range, with the bulk of the unit hidden below the water.

### **Our Business Strategy**

Our goal is to strengthen our leadership in developing wave energy technologies and commercializing wave power stations and related services. In order to achieve this goal, we are pursuing the following business strategies:

Concentrate sales and marketing efforts on four geographic markets. We are focusing our sales and marketing efforts over the next three years on coastal North America, the west coast of Europe, the coasts of Australia and the east coast of Japan. We believe that each of these areas represents a strong potential market for our PowerBuoy wave power stations because they combine appropriate wave conditions, political and economic stability, large population centers, high levels of industrialization and significant and increasing electricity requirements.

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Continue to increase PowerBuoy system output. Our product development and engineering efforts are focused on increasing the output of our PowerBuoy systems from 40kW to 500kW. We plan to increase the rated output of our PowerBuoy system to 150kW in 2007, to 250kW in 2008 and ultimately to 500kW in 2010. The key to increasing the rated output of the PowerBuoy system is to increase the system s efficiency as well as its diameter. If we increase the size of a PowerBuoy system, we will be able to increase the amount of wave energy the system can capture and, in turn, increase the output of the system. For example, if we double the size of the unit s diameter, we will approximately quadruple its power capacity. We believe that by increasing system output, we will be able to decrease the cost per kW of our PowerBuoy system and the cost per kilowatt hour of the energy generated.

Construct demonstration wave power stations to encourage market adoption of our wave power stations. Our demonstration wave power stations are intended to allow us to prove the viability of our PowerBuoy systems in a particular region. By enabling customers to experience our technology first-hand, we believe we will be able to facilitate our entry into our target markets. In addition, demonstration wave power stations provide us with the opportunity to test and refine our technology in actual operating conditions. In February 2006, we were approved by the South West of England Regional Development Agency to install a 5MW demonstration wave power station off the coast of Cornwall, England. In February 2007, the US Federal Energy Regulatory Commission granted us a preliminary permit to evaluate the feasibility of a location off the coast of Reedsport, Oregon for the proposed construction and operation of a wave power station with a maximum rated output of 50MW, of which up to the first 5MW will be a demonstration wave power station. We have also filed in July 2007 with the US Federal Energy Regulatory Commission for the Reedsport project what we believe to be the first Pre-Application Document and Notice of Intent filed by a wave power company. This filing provides notice to the US Federal Energy Regulatory Commission of our intent to seek a license for the Reedsport wave park, and provides information regarding the project. The Cornwall and Reedsport power stations will, if approved and constructed as planned, be connected to local power grids.

Leverage customer relationships to enhance the commercial acceptance of our utility PowerBuoy system. We currently have commercial relationships with Iberdrola and Total for two projects. We are in the first phase of the construction of a 1.39MW wave power station off the coast of Santoña, Spain, which phase is to be completed by June 30, 2008. We, along with affiliates of Iberdrola and Total, are currently assessing the viability of a 2 to 5MW power station off the coast of France. In addition, we believe that our project at the US Marine Corps Base in Oahu, Hawaii will serve as a prototype wave power station for the installation of wave power stations at other US Navy bases. We intend to build on these existing commercial relationships both by expanding the number and size of projects we have with our current customers and by entering into new alliances and commercial relationships with other utilities and independent power producers.

Expand revenue streams from our autonomous PowerBuoy system. The autonomous PowerBuoy system addresses specific power generation needs of customers requiring off-grid electricity generation in remote locations in the open ocean. Since our PowerBuoy systems are well suited for many of these uses, we do not expect that they will require subsidies or other price incentives for commercial acceptance. This equipment might be used for powering sonar and radar surveillance, tsunami warning, oceanographic data collection, offshore platforms and offshore aquaculture. We have entered into a marketing cooperation agreement with Lockheed Martin to identify marketing opportunities for use of our autonomous PowerBuoy system to power Lockheed Martin equipment in remote locations.

*Maximize revenue opportunities with existing customers*. In January 2007, we entered into an agreement under which we are responsible for the monitoring, operation and maintenance of the 40kW PowerBuoy system and the ocean-based substation and infrastructure to be manufactured and deployed in connection with the first

phase of the Spain project. Under this agreement, we will be paid a fixed fee for scheduled maintenance, ongoing operations and other routine services and fees to be negotiated for unscheduled repairs. We plan to pursue similar operations and maintenance contracts with future customers, including for our France project, in order to provide us with ongoing revenue streams.

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#### **Our Products**

We offer two types of PowerBuoy systems: our utility PowerBuoy system, which is designed to supply electricity to a local or regional electric power grid, and our autonomous PowerBuoy system, which is designed to generate power for use independent of the power grid in remote locations. Both products use the same PowerBuoy technology.

Pictured below is our 40kW utility PowerBuoy system at our facilities in New Jersey and installed in the ocean off the coast of New Jersey.

Our PowerBuoy system consists of a floating buoy-like device that is loosely moored to the seabed so that it can freely move up and down in response to the rising and falling of the waves, as well as a power take off device, an electrical generator, a power electronics system and our control system, all of which are sealed in the unit.

The power take off device converts the mechanical stroking created by the movement of the unit caused by ocean waves into rotational mechanical energy, which, in turn, drives the electrical generator. The power electronics system then conditions the output from the generator into usable electricity. The operation of the PowerBuoy system is controlled by our customized control system.

The control system uses sophisticated sensors and an onboard computer to continuously monitor the PowerBuoy subsystems as well as the height, frequency and shape of the waves interacting with the PowerBuoy system. The control system collects data from the sensors and uses proprietary algorithms to electrically adjust the performance of the PowerBuoy system in real-time and on a wave-by-wave basis. By making these electrical adjustments automatically, the PowerBuoy system is able to maximize the amount of usable electricity generated from each wave. We believe that this ability to optimize the performance of the PowerBuoy system in real-time is a significant advantage of our product.

In the event of storm waves larger than 23 feet, the control system automatically locks down the PowerBuoy system and electricity generation is suspended. When the wave heights return to a normal operating range of 23 feet or less, the control system automatically unlocks the PowerBuoy system and electricity generation and transmission recommences. This safety feature prevents the PowerBuoy system from being damaged by the increased amount of energy in storm waves.

Our 40kW PowerBuoy system has a maximum diameter of 12 feet near the surface, and is 52 feet long, with approximately 13 feet of the PowerBuoy system protruding above the surface of the ocean. Larger PowerBuoy systems will be longer and have a larger diameter. For example, our 500kW PowerBuoy system, once developed and manufactured, is expected to have a maximum diameter of approximately 62 feet and be approximately 128 feet long with approximately 26 feet protruding above the ocean surface.

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#### Utility PowerBuoy System

The utility PowerBuoy system is designed to transmit electricity to shore by an underwater power cable, which would then be connected to a power grid. Our utility PowerBuoy system presently has a capacity of 40kW, which we are working to increase to 150kW in 2007, to 250kW in 2008 and ultimately to 500kW in 2010. The utility PowerBuoy system is designed to be positioned in water with a depth of 100 to 200 feet, which can usually be found one to five miles offshore. This depth allows the system to capture meaningful amounts of energy from the waves, since decreasing water depth depletes the energy in the waves.

The mooring system for keeping a utility PowerBuoy system in position connects it by slack lines to three floats that, in turn, are connected by slack lines to three anchors. This is a well-established mooring system, referred to as three-point mooring, which we have improved upon with various technologies that reduce cost and deployment time.

We refer to the entire utility power generation system at one location as a wave power station, which can either be comprised of a single PowerBuoy system or an integrated array of PowerBuoy systems connected to an underwater cable to transmit the electricity to shore. Our system is designed to be scalable as multiple PowerBuoy units can be integrated to create a wave power station with a larger output capacity. An array of PowerBuoy systems would typically be arranged in three staggered rows parallel to the incoming wave front to form a long rectangle. This staggered arrangement would maximize the level of wave energy that the wave power station can capture. For example, to create the planned 1.39MW station off the coast of Santoña, Spain, we intend to use an array of one 40kW PowerBuoy system and nine 150kW PowerBuoy systems arranged in three staggered parallel rows of two or four PowerBuoy systems each.

We are also exploring the use of our utility PowerBuoy systems for applications that include generating electricity for desalination of water, hydrogen production, water treatment and natural resource processing. In these instances, the power generated by the utility PowerBuoy system would bypass the grid and be delivered directly to the point of electricity consumption for these special applications.

#### Status of Utility PowerBuoy Systems

We have made substantial progress in the design, analysis and commencement of fabrication of what we believe to be the first utility-grade underwater substation, or pod, for wave power. The pod serves as the point at which energy generated by several PowerBuoys is aggregated and the voltage is increased, prior to transmission ashore and being fed into the power grid. The required switching and protection circuits for the individual PowerBuoys are also included in the pod.

In addition, our 150kW PowerBuoy design effort is well underway. The power conversion and controls system is substantially complete for the 150kW PowerBuoy system, and we expect to commence ocean testing in 2008.

Our PowerBuoy interface with the electrical utility power grid has been certified as compliant with international standards. An independent laboratory provided testing and evaluation services to certify that the OPT systems comply with designated national and international standards. The PowerBuoy grid interface will bear the ETL listing mark, and can be connected to the utility grid.

Our projects in Spain, France and Hawaii are being conducted in conjunction with third-party customers. We have completed the planning phase for the wave power station to be located at Santoña, Spain and currently have begun construction of a 40kW PowerBuoy system and the underwater infrastructure for the wave power station. This infrastructure includes the underwater substation (pod) designed by us and the undersea transmission cables that allow the power station to be connected to the grid. We are paid in connection with this project as we complete milestones,

which include deployment of a 40kW PowerBuoy system. Under our agreement for this first phase of construction, our revenues are limited to reimbursement for our construction costs without any mark-up and we are required to bear the first 0.5 million, or approximately \$0.7 million, of any cost overruns and to absorb certain other costs as set forth in the agreement. As of April 30, 2007, we had recognized an anticipated loss of approximately \$1.3 million under this contract, which includes costs incurred to date and our current estimate of other amounts we may be required to bear under the agreement. Consistent with our revenue recognition policies, each quarter we evaluate if additional loss amounts need to be recognized. In addition, the second phase of this

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project contemplates deployment of nine additional 150kW PowerBuoy systems and connection of the ten total PowerBuoy systems in an integrated array. The economic and other terms relating to the second phase of the project have not been negotiated. We currently plan for the initial 40kW PowerBuoy system for this project to be ready for deployment by late 2007 and we expect the remainder of the PowerBuoy systems to be deployed during the summer of 2009.

The wave power station to be located off the west coast of France is in the planning and development phase. We currently anticipate extending the current development contract until June 2008. Before we begin construction of this wave power station, we must enter into an additional agreement with affiliates of Total and Iberdrola. We currently plan to enter into an agreement for the construction of a wave power station prior to the expiration of any extension of the current agreement in June 2008.

At the Marine Corps Base in Oahu, Hawaii, we had installed a wave power system for a total of eight months over a two-year period. Another PowerBuoy system was deployed in June 2007. After four weeks of initial testing and operation, the system was returned to shore for diagnostic analysis and repair. Work is currently in progress on the design and construction of a third PowerBuoy system, which is expected to be ready for deployment at the Marine Corps Base in Oahu by the end of 2007. The US Navy reimburses us for our costs and pays us a fixed fee in connection with this project. Our current contract with the US Navy expires in April 2008.

In February 2006, we received approval from the South West of England Regional Development Agency to install a wave power station off the coast of Cornwall, England, and this project is currently being funded solely by us. We are currently in the planning and development stage. This wave power station will serve as a demonstration wave power station, which we intend to operate as an independent power producer. We plan to collect revenue from the sale of power to electrical utilities.

In February 2007, the US Federal Energy Regulatory Commission granted us a preliminary permit to evaluate the feasibility of a location off the coast of Reedsport, Oregon for the proposed construction and operation of a wave power station with anticipated capacity of 50MW. We plan to operate up to the first 5MW as an independent producer, whereby we would collect revenue from the sale of power to electrical utilities. However, we currently do not have any revenue-generating contracts in place for the sale of energy with respect to this project. We plan to construct the additional 45MW under a supply contract with a third-party customer who, in turn, would own and operate the wave power station. We have begun the planning and development phase of the initial wave power station and have signed a cooperative agreement with PNGC. We have also filed in July 2007 with the US Federal Energy Regulatory Commission a Pre-Application Document and Notice of Intent for Reedsport, which provides notice of our intent to seek a license for the Reedsport wave park, and provides information regarding the project. This is an important step in the full licensing process for the Reedsport project.

Also, in March 2007, we were awarded funding from the Scottish Ministers Wave and Tidal Energy Support Scheme, managed by the Scottish Executive. This funding is to support the design, manufacture and installation of a 150kW PowerBuoy system in Orkney, Scotland.

#### Autonomous PowerBuoy System

The autonomous PowerBuoy system is based on the same technology as the utility PowerBuoy system but is designed for electricity generation of relatively low amounts of power for use independent of the power grid in remote locations. The autonomous PowerBuoy system currently has a maximum rated output ranging from 300 watts to 40kW, depending on the application. Our autonomous PowerBuoy system is designed to operate anywhere in the ocean and in any depth of water.

We expect that autonomous PowerBuoy systems will generally be suitable for use on a stand-alone basis for providing power for specific applications, including sonar and radar surveillance, tsunami warning, oceanographic data collection, offshore platforms and offshore aquaculture.

Status of Autonomous PowerBuoy Systems

Our PowerBuoy system off the coast of New Jersey was deployed from October 2005 to October 2006 when it was removed from the ocean for planned maintenance. We have conducted extensive diagnostic tests on the system,

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providing us with information about the effects of ocean deployments, that will help us implement improvements in future PowerBuoy systems. We have discovered no significant problems with the system, and the system has required only routine maintenance. This system was not designed to supply electricity to the power grid, but rather to provide us with operational data and marketing opportunities. We are awaiting delivery of new mooring lines for this PowerBuoy system, after which we plan to immediately redeploy the system. We were partially funded for the construction of this PowerBuoy system by the New Jersey Board of Public Utilities. We do not anticipate recognizing any additional revenue in connection with this project, nor do we expect to incur significant additional investment.

In June 2007, we received a \$1.7 million contract from the US Navy to provide our PowerBuoy technology to a unique program for ocean data gathering. Under this 18-month program, the Navy will conduct an ocean test of our autonomous PowerBuoy as the power source for the Navy s Deep Water Acoustic Detection System.

In September 2004, Lockheed Martin completed testing of a PowerBuoy system with a maximum rated output of 1kW for distributed power use on location. Subsequently, we entered into a marketing arrangement with Lockheed Martin whereby we have agreed to market cooperatively our autonomous PowerBuoy system. We expect to generate revenue after entering into agreements with new customers.

### **Marketing and Sales**

We are developing our sales capabilities and have begun commercial marketing and selling of our PowerBuoy systems. Our marketing and sales efforts are currently led and coordinated by Dr. George W. Taylor, our chief executive officer, and Mr. Mark R. Draper, our chief operating officer and the chief executive of Ocean Power Technologies Limited, our wholly-owned subsidiary located in the United Kingdom. Because our products use a new commercial technology, the decision process of a customer requires substantial educational efforts, in which many of our employees may participate. We are currently seeking to hire a vice president of business development and marketing.

In addition to our own direct sales, we will continue to enter into development agreements and strategic alliances with regional utility and energy companies committed to providing electricity from renewable energy sources. We plan to leverage these relationships to sell and market our PowerBuoy wave power stations to these companies and their affiliates and to other customers in the region. We plan to expand our relationships by entering into long-term operations and maintenance contracts to support completed wave power stations. For example, in January 2007, we entered into an agreement for the monitoring, operation and maintenance of the 40kW PowerBuoy system and the ocean-based substation and infrastructure to be manufactured and deployed in connection with the first phase of the Spain project. Under this operations and maintenance agreement, we are required to provide services for two years following provisional acceptance of the PowerBuoy system and substation and infrastructure. We are to be paid a fixed fee for scheduled maintenance, ongoing operations and other routine services, subject to adjustment for unscheduled repairs.

In order to penetrate certain international markets, we plan to implement marketing strategies that respond to local market demands. In particular markets, we may grant licenses to local businesses, including independent power producers, to sell, manufacture or operate PowerBuoy wave power stations.

#### Utility PowerBuoy System Marketing

We plan to market our utility PowerBuoy systems to utilities and independent power producers interested in adding electricity generated from renewable sources to their existing electricity supply. We are currently targeting customers in coastal North America, the west coast of Europe, the coasts of Australia and the east coast of Japan. In addition, we are exploring the use of our utility PowerBuoy systems for applications that include desalination of water, hydrogen

production, water treatment and natural resource processing. In these instances, the power generated by the utility PowerBuoy system would bypass the grid and be delivered directly to the point of electricity consumption for these special applications.

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