

Filed by Luna Innovations Incorporated
Pursuant to Rule 425 under the Securities Act of 1933, as amended,
and deemed filed pursuant to Rule 14a-12
of the Securities Exchange Act of 1934, as amended
Subject Company: Advanced Photonix, Inc.
(Commission File No. 1-11056)

Dear Luna team,

I'd like to share some exciting news.

Today, Luna and Advanced Photonix, Inc. (API) have announced the signing of an agreement to merge. API is a leading supplier of optoelectronic sensors, devices, and instrumentation. API targets the test and measurement, military/aerospace, medical and telecommunication markets.

The merger of our two companies will provide greater capability across a broader market base, with a strong balance sheet and potential operating synergies. Combined with the cost savings from only a single public company infrastructure, Luna will be fundamentally better positioned for improved profitability.

The combined company, which will keep the Luna name and be headquartered in Roanoke, will have a strong foundation from Luna's core OBR/OVA test & measurement products, API's High Speed Optical Receivers (located in Ann Arbor, Michigan) and API's Optoelectronic components and subsystems (located in Camarillo, California), enabling the continued investment in the growth of areas such as Luna's strain & temperature sensing business and API's next generation of receivers and detectors.

Additionally, the combined company will continue to develop a pipeline of technologies for future commercialization in Luna's Technology Development Division and API's Terahertz operations.

We will be hosting a series of All-Hands meetings at each of Luna's offices over the next two days to provide you with more details about the transaction. In addition, I will be participating in a joint conference call with API's chief executive officer tomorrow morning at 9:00 am ET, during which we will provide more details about the transaction. We will be broadcasting the call live in each Luna office. Team members who are in the field are also invited to listen to the call, which will be accessible via the Investor Relations section of the Luna website.

I will continue as CEO of the combined company, and the board of directors will consist of myself, three directors nominated by API and three additional existing Luna directors. We view this as a merger of equal companies and not an acquisition. We'll elaborate more on this at the All-Hands meetings.

The next steps to finalizing this proposed merger are the filing of certain documents with the SEC, which will later be mailed to our stockholders, followed by approval of the merger and related matters by both companies' stockholders. The merger could close as early as the end of March, but it could take several more months before closing. Until the merger closes, Luna and API will continue to operate as separate companies. Therefore, it is imperative that we continue to execute our strategic and operating plans and not lose focus on taking care of our day-to-day responsibilities.

I look forward to being the CEO of the combined company as we work together toward our 2015 goals and objectives.

This transaction will help us accelerate our strategic growth initiative and path to profitability!

All my best,

My

No Offer or Solicitation

This communication is not intended to and does not constitute an offer to sell or the solicitation of an offer to subscribe for or buy or an invitation to purchase or subscribe for any securities or the solicitation of any vote or approval in any jurisdiction in connection with the transaction or otherwise, nor shall there be any sale, issuance or transfer of securities in any jurisdiction in contravention of applicable law. No offer of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

Important Additional Information Will Be Filed with the SEC

Luna will file with the SEC a registration statement on Form S-4 that will include the joint proxy statement of Luna and API that also constitutes a prospectus of Luna. Luna and API plan to mail the joint proxy statement/prospectus to their respective stockholders in connection with the transaction.

INVESTORS AND STOCKHOLDERS ARE URGED TO READ THE JOINT PROXY STATEMENT/PROSPECTUS AND OTHER RELEVANT DOCUMENTS FILED OR TO BE FILED WITH THE SEC CAREFULLY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT LUNA, API, THE TRANSACTION AND RELATED MATTERS.

Investors and stockholders will be able to obtain free copies of the joint proxy statement/prospectus and other documents filed with the SEC by Luna and API through the website maintained by the SEC at www.sec.gov. In addition, investors and stockholders will be able to obtain free copies of the joint proxy statement/prospectus and other documents filed by Luna with the SEC by contacting Luna at One Riverside Circle, Suite 400, Roanoke, Virginia 24016, Attention: Investor Relations or by calling 540-769-8400, and will be able to obtain free copies of the joint proxy statement/prospectus and other documents filed by API by contacting API at 2925 Boardwalk Drive, Ann Arbor, Michigan 48104, Attention: Investor Relations or by calling 734-864-5699.

Participants in the Solicitation

Luna and API and their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from the respective stockholders of Luna and API in respect of the transaction described in the joint proxy statement/prospectus. Information regarding the persons who may, under the rules of the SEC, be deemed participants in the solicitation of the respective stockholders of Luna and API in connection with the proposed transaction, including a description of their direct or indirect interests, by security holdings or otherwise, will be set forth in the joint proxy statement/prospectus when it is filed with the SEC. Information regarding Luna's directors and executive officers is contained in Luna's Annual Report on Form 10-K for the year ended December 31, 2013 filed with the SEC on April 10, 2014 and its proxy statement on Schedule 14A, filed with the SEC on April 15, 2014. Information regarding API's directors and executive officers is contained in API's Annual Report on Form 10-K for the year ended March 31, 2014, filed with the SEC on June 30, 2014, and its proxy statement on Schedule 14A, filed with the SEC on July 11, 2014.

Forward Looking Statements

This communication includes information that constitutes "forward-looking statements" made pursuant to the safe harbor provision of the Private Securities Litigation Reform Act of 1995 that involve risk and uncertainties. These statements include our expectations regarding the completion of the merger, the prospects of the combined company and the companies' future

growth, as well as the potential synergies from the proposed merger and the future profitability of the combined company. Management cautions the reader that these forward-looking statements are only predictions and are subject to a number of both known and unknown risks and uncertainties, and actual results, performance, and/or achievements of the companies may differ materially from the future results, performance and/or achievements expressed or implied by these forward-looking statements as a result of a number of factors. These factors include, but are not limited to: the approval of the merger and related matters by the companies' respective stockholders and satisfaction of other closing conditions of the merger; the uniqueness and advantages of Luna's or API's technology and intellectual property; potential costs savings and synergies from the merger; potential for greater profitability; potential for future commercialization of their technologies; the competitive advantage afforded by Luna's or API's technology; the potential efficacy of Luna's or API's technology; and growth potential of certain markets. Statements that describe the companies' business strategies, goals, prospects, opportunities, outlook, plans or intentions are also forward-looking statements. Uncertainties regarding technical and scientific difficulties, issues that might arise in any particular business relationship and other risks and uncertainties are set forth in the companies' periodic reports and other filings with the Securities and Exchange Commission. Such filings are available at the SEC's website at <http://www.sec.gov>, and at the companies' websites at <http://www.lunainc.com> and <http://www.advancedphotonix.com>. The statements made in this communication are based on information available to the companies as of the date of this communication and Luna and API undertake no obligation to update any of the forward-looking statements after the date of this communication.