TOWER SEMICONDUCTOR LTD Form 6-K November 17, 2015

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month November 2015 No. 2

TOWER SEMICONDUCTOR LTD. (Translation of registrant's name into English)

Ramat Gavriel Industrial Park P.O. Box 619, Migdal Haemek, Israel 2310502 (Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F x Form 40-F o

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes o No x

On November 17, 2015 the registrant Announce Availability of its Next-Generation Power Management Platform Enabling up to 30% Efficiency Boost and Form Factor Reduction

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

By:

TOWER SEMICONDUCTOR LTD.

Date: November 17, 2015

/s/ Nati Somekh Name: Nati Somekh Title: Corporate Secretary

TowerJazz Announces Availability of its Next-Generation Power Management Platform Enabling up to 30% Efficiency Boost and Form Factor Reduction

Improvement enabled by an industry-best 9 mohm-mm2 Rdson at 30V, applicable to a large segment of the \$15B computer, wireless, industrial and automotive power management IC market

MIGDAL HA'EMEK, Israel and NEWPORT BEACH, Calif., November 17, 2015 – TowerJazz, the global specialty foundry leader, today announced a new 0.18um power management process with an industry best-in-class on-resistance (Rdson) of 9 mohm-mm2 for a 30V device. Low on-resistance helps power ICs achieve higher efficiency, lower power consumption, lower temperature rise and smaller form factor. This platform targets more than 40% of today's power market, including computer, wireless, industrial, and automotive applications.

Applications benefiting from this new device are mostly high power charging and power hungry applications, like processor applications demanding fast power delivery. In addition, mobile and portable applications with a high demand for PCB (printed circuit board) real estate reduction will benefit greatly. Reducing the size of a power stage enables use of smaller or alternative packaging and thus optimization of the system architectures sensitive to the small form factors.

"Our present platforms' capability allowed us to enter the market and gain strong partners with a 2015 revenue level of about \$50 million and strong double digit growth demand for 2016. This new technology will provide our customers additional ability to optimize cost (chip size) and performance (power consumption and temperature rise) to create an advantage over their competitors in their specific application sector(s). Hence, it will allow us to grow together, gaining additional share with platforms that can now compete effectively with IDMs in the large, and IDM dominated, \$15 billion power management IC market," said Dr. Marco Racanelli, Sr. Vice President and General Manager of the Power Business Unit, TowerJazz.

For more information, please visit: http://www.towerjazz.com/power-management.html.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM) and its fully owned U.S. subsidiary Jazz Semiconductor, Inc. operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits, offering a broad range of customizable process technologies including: SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, integrated power management (BCD and 700V), and MEMS. TowerJazz also provides a world-class design enablement platform for a quick and accurate design cycle as well as Transfer Optimization and development Process Services (TOPS) to IDMs and fabless companies that need to expand capacity. For more information, please visit www.towerjazz.com.

To provide multi-fab sourcing and extended capacity for its customers, TowerJazz operates two manufacturing facilities in Israel (150mm and 200mm), one in the U.S. (200mm) and three additional facilities in Japan (two 200mm and one 300mm) through TowerJazz Panasonic Semiconductor Co. (TPSCo), established with Panasonic Corporation of which TowerJazz has the majority holding. Through TPSCo, TowerJazz provides leading edge 45nm CMOS, 65nm RF CMOS and 65nm 1.12um pixel technologies, including the most advanced image sensor technologies. For more information, please visit www.tpsemico.com.

Safe Harbor Regarding Forward-Looking Statements

This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results may vary from those projected or implied by such forward-looking statements. A complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect TowerJazz's business is included under the heading "Risk Factors" in Tower's most recent filings on

Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority and Jazz's most recent filings on Forms 10-K and 10-Q, as were filed with the SEC, respectively. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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