TOWER SEMICONDUCTOR LTD
Form 6-K
May 25, 2011

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of May 2011 No. 2

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

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 23105
(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 May 25, 2011, registrant announces IME and TowerJazz combine expertise to accelerate MEMS device industry development. Attached please find the press release.

This Form 6-K is being incorporated by reference into all effective registration statements filed by us under the Securities Act of 1933.

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.

TOWER SEMICONDUCTOR LTD.

Date: May 25, 2011

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

NEWS ANNOUNCEMENT FOR IMMEDIATE RELEASE

IME AND TOWERJAZZ COMBINE EXPERTISE TO
ACCELERATE MEMS DEVICE INDUSTRY DEVELOPMENT

Singapore and Israel, 25 May 2011 – The Institute of Microelectronics (IME), an institute of the Agency for Science, Technology and Research (A*STAR) have announced today their cooperation with TowerJazz, the global specialty foundry leader, on breakthrough projects in micro-electro-mechanical systems (MEMS), packaging and application-specific integrated circuits (ASICs).

IME seeks to advance research and development (R&D) in microelectronics in the area of MEMS, packaging and IC design. IME engages with fabless or fab-lite product companies as R&D partners, along with TowerJazz as a manufacturing partner in a three-party collaboration framework. This joint effort with TowerJazz has yielded outcomes in the areas of inertial sensors, pressure sensors and micromirrors with MEMS product companies. Potential future collaborations include those in the fields of through-silicon via (TSV) and advanced packaging, 3-dimensional integrated chips, photonics and nanoelectronics.

MEMS devices are an approximately US$8 billion market globally1, and projected to grow further. Found in an increasingly wide spectrum of applications ranging from consumer electronics to devices in the industrial and medical sectors, MEMS devices are expected to revolutionize the quality of life everywhere in much the same way that integrated circuits (ICs) have done in the past.

Prof. Dim-Lee Kwong, the Executive Director of IME, commented: “By leveraging TowerJazz’s rich technology portfolio and specialty manufacturing excellence, IME has been able to help its partners maintain a development edge and competitive position in their respective fields. In addition, by utilizing existing high volume of Complementary Metal Oxide Semiconductor (CMOS) manufacturing processes, it permits us to drive down MEMS cost and increase integration with other CMOS-based technologies.”

“IME’s capabilities and experience as an 8-inch technology development site for MEMS and ASICs, combined with TowerJazz’s blend of business and technical competency for MEMS and IC fabrication, creates an advantage for our customers by reducing total project cost and time-to-market,” said Zmira Lavie, VP, Process Engineering R&D and GM of Transfer, Development, and Optimization Process Services Business Unit.

About MEMS

MEMS are a class of enabling technologies that are revolutionizing silicon-based micro-electronics through use of micro-machining technology. The integration of MEMS into high volume CMOS manufacturing facilities, and the promise of monolithic integration of CMOS + MEMS, allows lower cost production of devices with integrated electronics and moving parts. These devices have and will continue to enable novel performance unachievable by other means. Everyday examples include accelerometers for airbag sensors or handheld gaming devices, extremely high performance switches for communications, fluidic devices used in inkjet printer heads, and micromirrors for digital light projection. These fours examples include highly diverse physics for the MEMS sensor, spanning mechanical motion sensing, tuning of high speed radio frequencies, actuation of fluidic valves, and optical reflection and tuning, respectively, for the products mentioned above.

About the Institute of Microelectronics (IME)

The Institute of Microelectronics (IME) is a research institute of the Science and Engineering Research Council of the Agency for Science, Technology and Research (A*STAR). Positioned to bridge the R&D between academia and industry, IME's mission is to add value to Singapore's semiconductor industry by developing strategic competencies, innovative technologies and intellectual property; enabling enterprises to be technologically competitive; and cultivating a technology talent pool to inject new knowledge to the industry. Its key research areas are in integrated circuits design, advanced packaging, bioelectronics and medical devices, MEMS, nanoelectronics, and photonics. For more information, visit IME on the Internet: http://www.ime.a-star.edu.sg.

About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is the lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based and innovation-driven Singapore. A*STAR oversees 14 biomedical sciences, and physical sciences and engineering research institutes, and seven consortia & centre, which are located in Biopolis and Fusionopolis, as well as their immediate vicinity. A*STAR supports Singapore's key economic clusters by providing intellectual, human and industrial capital to its partners in industry. It also supports extramural research in the universities, hospitals, research centres, and with other local and international partners.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader and its fully owned U.S. subsidiary Jazz Semiconductor, operate collectively under the brand name TowerJazz, manufacturing integrated circuits with geometries ranging from 1.0 to 0.13-micron. TowerJazz provides industry leading design enablement tools to allow complex designs to be achieved quickly and more accurately and offers a broad range of customizable process technologies including SiGe, BiCMOS, Mixed-Signal and RFCMOS, CMOS Image Sensor, Power Management (BCD), and Non-Volatile Memory (NVM) as well as MEMS capabilities. To provide world-class customer service, TowerJazz maintains two manufacturing facilities in Israel and one in the U.S. with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.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 Tower and/or Jazz'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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For TowerJazz

Company Contact:
Melinda Jarrell
+1 949/435-8181
melinda.jarrell@towerjazz.com

Media Contact:
Lauri Julian
+1 949/715-3049
lauri.julian@towerjazz.com

Investor Relations Contact:
Levi Noit
+972 4 604 7066
noit.levi@towerjazz.com

For IME

Media Contact:
Bernadette Lee
Industry Development
+65-6770 5376
eehmb@scei.a-star.edu.sg