FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of June 2011 No. 1

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 June 05, 2011, the registrant announces Acquisition completion - TowerJazz Nearly Doubles its 2010 Production Capacity with Micron's Fabrication Facility in Nishiwaki, Japan.

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: June 5, 2011 By: /s/ Nati Somekh Gilboa

Name: Nati Somekh Gilboa Title: Corporate Secretary

Acquisition Completed:
TowerJazz Nearly Doubles its 2010 Production Capacity with
Micron's Fabrication Facility in Nishiwaki, Japan

MIGDAL HAEMEK, Israel, June 05, 2011 – TowerJazz, the global specialty foundry leader, announced today that it completed its previously announced acquisition of Micron Technology's fabrication facility in Nishiwaki City, Hyogo, Japan. The acquisition nearly doubles TowerJazz's current internal manufacturing capacity, cost-effectively increasing production by 60,000 wafers per month. The added capacity to serve the growing needs of its expanding blue chip customer base, combined with the additional business potential in Japan, is expected to help position TowerJazz to achieve its expressed \$1 billion annual revenue run rate target by 2014.

This acquisition provides TowerJazz with operational facilities that span the globe with two fabs in Israel, one fab in the United States, additional capacity available in China through manufacturing partnerships, and the newly acquired fab in Japan. As a result, this acquisition enhances the company's geographic reach and distribution capabilities which TowerJazz believes will create a significant opportunity for revenue enhancement and increased efficiencies in manufacturing.

The total value of the transaction, including assumption of liabilities, is approximately \$140 million, of which \$40 million was paid in cash, approximately 19.7 million Tower ordinary shares and the remainder reflects assumed long-term retirement liabilities that are payable incrementally upon employee retirements. In addition, under a "take-or-pay" supply agreement between the companies, TowerJazz will manufacture products for Micron in the Japan facility for at least the next three years with processing technology licensed from Micron.

"We are excited about the potential of this acquisition and believe this is an opportunity for us to bring our analog specialty leadership to the next level. This acquisition is an excellent strategic fit for TowerJazz; it sends a clear message to our customers that we are positioned to meet their growing needs," said Russell Ellwanger, TowerJazz Chief Executive Officer. "This latest addition of substantial capacity and a well experienced and highly talented technical work force, along with the dedication of our worldwide management and employees will further increase TowerJazz's ability to support our customers' success now and for years to come."

"The acquisition of a high volume manufacturing facility in Japan was not an opportunistic event, but rather a board approved strategy that the management aggressively pursued and executed upon," said Amir Elstein, Chairman of the TowerJazz Board of Directors, "I have personally met with the management of the Nishiwaki facility and am most positive that the employee talent and large factory capacity will be seamlessly incorporated into TowerJazz's global specialty foundry growth and performance leadership."

The facility can support geometries down to 95nm and can also be used to manufacture other products using TowerJazz process technologies. TowerJazz plans to quickly qualify its core power management platforms to serve the substantial growth demand from its Korean customers and then build high end RF capabilities. Increased manufacturing scale and expanded addressable market further supports TowerJazz's position as the number one specialty foundry worldwide.

For this deal, TowerJazz was represented by Yigal Arnon & Co. and DLA Piper Japan. Micron was represented by Wilson Sonsini and Nagashima Ohno & Tsunematsu Japan.

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 1.00 micron to 95 nanometer. 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, one in the U.S., one in Japan and an 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, including statements concerning TowerJazz's acquisition of Micron's Japanese fab. These statements are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described in the forward-looking statements. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. For example, statements of expected increased revenue levels, qualification of the fab in Japan with new technologies, customer engagements, cost efficiencies, financial guidance, industry ranking, execution of integration plans and management and organizational structure are all forward-looking statements. The potential risks and uncertainties include, among others, the possibility that expected customer engagements and cost efficiencies will not be achieved, that TowerJazz will not be able to successfully execute its integration strategies, that TowerJazz's business may suffer due to uncertainty, as well as other risks applicable to TowerJazz's business described in the reports filed by Tower with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority. These filings identify and address other important factors that could cause Tower's financial and operational results to differ materially from those contained in the forward-looking statements set forth in this document. Accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do so, what impact they will have on the results of operations or financial condition of Tower. Tower is providing this information as of the date of this press release and Tower does not undertake any obligation to update any forward-looking statements contained in this document as a result of new information, future events or otherwise.

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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Contacts:

Investor Relations Contact Company Contact Media Contact
Noit Levi Melinda Jarrell Lauri Julian
+972 4 604 7066 +1 949 435 8181 +1 949 715 3049

noit.levi@towerjazz.com melinda.jarrell@towerjazz.comlauri.julian@towerjazz.com