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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13A-16 OR 15D-16
OF THE SECURITIES EXCHANGE ACT OF 1934

For the month of June 2010
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 Form 40-F

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 No

Attached hereto and incorporated by reference herein is the registrant's press release dated June 2, 2010 announcing the letter agreement signed between the registrant and its banks.

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

Exhibits

99.1 Press release issued by the registrant on June 2, 2010 announcing the letter agreement signed between the registrant and its banks.

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 2, 2010

By: /s/ Nati Somekh Gilboa

Name: Nati Somekh Gilboa

Title: Corporate Secretary



Tower Semiconductor Signs Agreement with Current Lender Banks

Working with Banks and Institutional Bondholders to Further Strengthen Its Balance Sheet and Restructure Its Debt Schedule

MIGDAL HAEMEK, Israel –June 2, 2010 – Tower Semiconductor, the global specialty foundry leader, today announced that it had signed an agreement with its Israeli lender banks, according to which it will prepay \$20 million of its long term bank debt, originally due in September 2011, funded by its improved operating margins, which have recently been much better than expected.

The company is working with its lender banks, Bank Leumi and Bank Hapoalim and institutional bondholders, to restructure and re-finance its long-term bank and institutional debt with a view towards further strengthening its balance sheet and debt structure, as well as enabling its business plan planned growth.

Pursuant to the agreement, the banks consented to the issuance by the Company of up to \$100 million of new long term debentures, which may include long-term debentures issued in exchange for its current debentures due 2011 and 2012. The Company expects these long-term debentures to have an average duration of five to seven years, but has not yet made any decision as to the issuance of any new long-term debentures nor as to the scope, terms or timing thereof.

Russell Ellwanger, Tower's chief executive officer, said, "The signing of the agreement with our Israeli lender banks is the initial step towards the execution of a comprehensive debt restructuring plan with our banks and bond holders, designed to significantly strengthen our balance sheet. The planned restructuring will position us as a much stronger competitor in the industry, improving our debt schedule while we work to achieve our \$500 million revenue target for 2010. It demonstrates the confidence of our lenders in our growth strategies and our future."

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.

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 and you should not place any undue reliance on such forward-looking statements. The success of the Company's debt restructuring efforts is subject to many factors, including the following: (i) negotiation of mutually acceptable arrangements with the Company's lenders and institutional and other debenture holders; (ii) market interest in any new debt securities the Company may propose to issue; (iii) the overall global economy conditions as well as the situation of the credit and financial markets; and (iv) the Company's operating results, cash flow, financial position and future prospects.

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 our business is included under the heading "Risk Factors" in Tower's most recent filing on Form 20-F. The Company does not intend to update, and expressly disclaims any obligation to update, the information contained in this release.

Contacts

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