FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of June 2010 No. 7

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 S

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 S

On June 30, 2010, the registrant announces TowerJazz Signs Agreement with Wells Fargo Capital Finance to Extend Credit Lines to 2014.

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: June 30, 2010 By: /s/ Nati Somekh Gilboa

Name: Nati Somekh Gilboa Title: Corporate Secretary

TowerJazz Signs Agreement with Wells Fargo Capital Finance to Extend Credit Lines to 2014

Agreement is an Additional Stage within a Comprehensive Debt Restructuring Plan

Company in further negotiations with institutional bondholders and Israeli banks to strengthen balance sheet

Newport Beach, California and MIGDAL HAEMEK, Israel –June 30, 2010 – TowerJazz, the global specialty foundry leader, today announced it has signed an agreement with its lender, Wells Fargo Capital Finance, part of Wells Fargo & Company (NYSE:WFC) to extend its credit lines from September 2011 to September 2014. Under the agreement, the four-year lines totaling \$45 million will bear an interest rate equal to, at the Company's option, the USD LIBOR rate plus a margin ranging from 2.25% to 2.75% per annum, or the lender's prime rate plus a margin ranging from 0.50% to 1.00%. As of March 31, 2010 and December 31, 2009, outstanding borrowings under Wachovia Capital Finance Corporation (Western), now part of Wells Fargo Capital Finance, were \$22.0 and \$27.0 m illion, respectively.

As previously announced, the company is continuing to work with its institutional bondholders and Israeli lender banks, to restructure and re-finance its long-term debt with a view towards further strengthening its balance sheet and debt structure, as well us enabling its business plan growth.

Russell Ellwanger, Tower's chief executive officer, said, "I am extremely pleased that we have extended our relationship with Wells Fargo Capital Finance, one of the largest asset-based lenders in the US. Following our June 2, 2010 release, this announcement is the second with more to come on executing a comprehensive debt restructuring plan as we are committed to increasing shareholder value. I am very pleased to end today, the second quarter, with this important financial release."

"Following a strong, four-year relationship, we are pleased to provide this three-year extension to the facility's maturity date," said Andy Robin, head of the Business Finance division of Wells Fargo Capital Finance. "We look forward to providing support to the company as it achieves its strategic goals."

About Wells Fargo Capital Finance

Wells Fargo Capital Finance is the trade name for certain asset-based lending, accounts receivable and purchase order finance services of Wells Fargo & Company and its subsidiaries, including Wachovia Capital Finance Corporation (Western). Dedicated teams within Wells Fargo Capital Finance provide financing solutions for companies in specific industries such as retail, software publishing and high-technology, commercial finance, staffing, government contracting, timeshare development and others. For more information, visit wellsfargocapitalfinance.com

Wells Fargo & Company is a diversified financial services company with \$1.2 trillion in assets, providing banking, insurance, investments, mortgage, and consumer and commercial finance through more than 10,000 stores and 12,000 ATMs and the Internet (wellsfargo.com and wachovia.com) across North America and internationally.

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 any undue reliance should not be placed 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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