FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of June 2011 No. 4

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 13, 2011, th	he registrant announces	Second Quarter Rev	venue Guidance, The	Highest in Company's	History.

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 13, 2011 By: /s/ Nati Somekh Gilboa

Name: Nati Somekh Gilboa Title: Corporate Secretary

TowerJazz Provides Second Quarter Revenue Guidance; The Highest in Company's History

MIGDAL HAEMEK, Israel – June 13, 2011 – TowerJazz (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader, today announced that it expects revenues for the second quarter of 2011 to be between \$136 million and \$142 million. The mid-range of the current guidance is a record high since inception and represents a 15% increase from previous quarter revenues of \$120.6 million and an 11% increase year-over-year.

TowerJazz will issue its second quarter 2011 earnings release on Thursday, August 4, 2011. The Company will hold a conference call to discuss its second quarter 2011 financial results and third quarter 2011 guidance on Thursday, August 4, 2011, at 10:00 a.m. Eastern Time (09:00 a.m. Central, 08:00 a.m. Mountain, 07:00 a.m. Pacific and 05:00 p.m. Israel time).

This call will be webcast by Thomson/CCBN and can be accessed on TowerJazz's website at www.towerjazz.com, or can also be accessed in the U.S. and in Israel by calling a domestic number:

1-888-668-9141 (U.S. Toll-Free) 03-918-0609 (Israel) +972-3-918-0609 (International)

The webcast is also being distributed through the Thomson Street Events Network to both institutional and individual investors. Individual investors can listen to the call at www.earnings.com, Thomson/CCBN's individual investor portal powered by StreetEvents. Institutional investors can access the call via Thomson's password-protected event management site, StreetEvents (www.streetevents.com).

The teleconference will be available for replay for 90 days.

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, one in the U.S., and one in Japan 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. There is no assurance that results for the full quarter will be in line with the company's current expectations. Potential risk and uncertainties that may affect the final results include (i) possible significant production event that may prevent uninterrupted production and timely product delivery, due to operating our facilities at high utilization rates or any other reason, (ii) failure to receive orders currently expected, (iii) cancellation of orders, (iv) our ability to accurately forecast financial performance, which is affected by limited order backlog, (v) credit to customers for product returns or any other reason, (vi) uncertainty associated with the manufacturing and revenues to be derived from the recently acquired manufacturing facility in Nishiwaki, Japan, which revenues following the closing date of the acquisition are included in our consolidated revenues guidance and (vii) business interruption due to fire, the security situation in Israel and other events beyond the company's control, including possible direct and indirect consequences of the recent earthquake and tsunami. A more 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 the Tower's most recent filing on Form 20-F as was 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. Future results may differ materially from those previously reported. The Company does not intend to update, and expressly disclaims any obligation to update, the information contained in this release.

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