

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of April No. 2 2007

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

On April 17, 2007, the Registrant announced that Tower Semiconductor Announces First Quarter 2007 Results Conference Call. Attached hereto is a copy of 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: April 17, 2007

By: /s/ Nati Somekh Gilboa

-----  
Nati Somekh Gilboa  
Corporate Secretary

TOWER SEMICONDUCTOR ANNOUNCES FIRST QUARTER 2007 RESULTS  
CONFERENCE CALL

Migdal Haemek, Israel- April, 17 2007 - Tower Semiconductor (Nasdaq: TSEM, TASE: TSEM), a pure-play independent specialty foundry, will hold its quarterly conference call to discuss first quarter 2007 results on Tuesday, May 1, 2007, at 12:00 p.m. (noon) Eastern Time (11:00 a.m. Central, 10:00 a.m. Mountain, 9:00 a.m. Pacific and 19:00 Israel Time).

Tower Semiconductor will issue the first quarter of 2007 earnings release on Tuesday, May 1st, 2007 during pre-market hours.

This call is being webcast by Thomson/CCBN and can be accessed at Tower's Web site at [www.towersemi.com](http://www.towersemi.com), or you can call in the U.S. and in Israel to participate in the conference 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 StreetEvents Network to both institutional and individual investors. Individual investors can listen to the call at [www.earnings.com](http://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](http://www.streetevents.com)).

The teleconference will be available for replay for 90 days.

ABOUT TOWER SEMICONDUCTOR LTD.

Tower Semiconductor Ltd. is a pure-play independent specialty foundry established in 1993. The company manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron; it also provides complementary technical services and design support. In addition to digital CMOS process technology, Tower offers advanced non-volatile memory solutions, mixed-signal & RF-CMOS, and CMOS image-sensor technologies. To provide world-class customer service, the company maintains two manufacturing facilities: Fab 1 has process standard and specialized technologies from 1.0 to 0.35 micron and Fab 2 features standard and specialized technologies of 0.18, 0.16 and 0.13-micron. Tower's Web site is located at <http://www.towersemi.com/>.

CONTACT INFORMATION:

Tower Semiconductor  
Noit Levi, +972 4 604 7066  
noitle@towersemi.com

or:

Shelton Group  
Melissa Conger, (972) 239-5119 ext. 137  
mconger@sheltongroup.com