

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of December 2007 No.4

TOWER SEMICONDUCTOR LTD.
(Translation of registrant's name into English)

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 December 19, 2007, the Registrant announces Conference Call to Discuss Newly Established Partnership. 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: December 19, 2007

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

TOWER SEMICONDUCTOR ANNOUNCES CONFERENCE CALL TO DISCUSS
NEWLY ESTABLISHED PARTNERSHIP

Partnership will Develop and Market X-ray Detectors for Medical
Applications; Target Market Estimated at Over
\$500 Million per Year

Migdal Haemek, Israel- December 19, 2007- Tower Semiconductor (Nasdaq: TSEM, TASE: TSEM), an independent specialty foundry, announced that it has scheduled a conference call and webcast to take place today, December 19th, 2007, at 9:30 a.m. (noon) Eastern Time (8:30 a.m. Central, 7:30 a.m. Mountain, 6:30 a.m. Pacific and 16:30 Israel Time), to discuss the company's announcement regarding the establishment of a partnership with CMT Medical Technologies to develop and market X-ray detectors for medical applications.

Tower's CEO, Russell Ellwanger, will discuss the agreement, as well as its strategic impact on the Company.

This call is being webcast by Thomson/CCBN and can be accessed at Tower's Web site at 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, 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 TOWER SEMICONDUCTOR LTD.:

Tower Semiconductor Ltd. (Nasdaq: TSEM, TASE: TSEM) is an independent specialty foundry that delivers customized solutions in a variety of advanced CMOS technologies, including digital CMOS, mixed-signal and RF (radio frequency) CMOS, CMOS image sensors, power management devices, and embedded non-volatile memory solutions. Tower's customer orientation is complemented by its uncompromising attention to quality and service. Its specialized processes and engineering expertise provides highly flexible, customized manufacturing solutions to fulfill the increasing variety of customer needs worldwide. Offering two world-class manufacturing facilities with standard and specialized process technologies ranging from 1.0- to 0.13-micron, Tower Semiconductor provides exceptional design support and technical services to help customers sustain long-term, reliable product performance, while delivering on-time and on-budget results. More information can be found at <http://www.towersemi.com>.

CONTACT INFORMATION:

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