

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of November 2006 No. 5

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 November 7, 2006, the Registrant announced its financial results for the three and nine month periods ended September 30, 2006. Attached hereto 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: November 7, 2006

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

TOWER SEMICONDUCTOR ANNOUNCES RECORD SALES
OF \$51.5M FOR THIRD QUARTER 2006

THIRD SEQUENTIAL QUARTER OF RECORD SALES, A 2.5 TIMES YEAR TO YEAR
INCREASE Q3'06 VS Q3'05 WITH FURTHER GROWTH GUIDED FOR Q4'06

MIGDAL HAEMEK, Israel - November 7, 2006 - Tower Semiconductor Ltd. (NASDAQ:
TSEM; TASE: TSEM), a pure-play independent specialty foundry, today announced
third quarter 2006 results.

HIGHLIGHTS:

- o Achieved record sales of \$51.5 million, a 2.5X year to year increase,
as compared with third quarter 2005
- o Achieved fourth consecutive quarter of positive EBITDA and EBITDA
growth
- o Announced expansion of 0.13-micron manufacturing capacity with volume
production purchase commitment by SanDisk Corporation
- o Signed long-term foundry agreement with International Rectifier for
volume manufacturing
- o Selected by Atheros Communications to produce its latest RF on
standard digital CMOS, wireless LAN 802.11g chip
- o Announced image sensor volume agreement with SuperPix, Tower's first
volume agreement in China.

The Company reported total sales of \$51.5 million, representing a 2.5 times
increase as compared with the \$20.6 million reported in the third quarter of
2005 and an increase of 15% over the \$44.6 million reported in the second
quarter of 2006. The 2006 third quarter net income was \$39.5 million, or \$0.46
per share, which included a one-time gain of \$80.1 million, resulting from the
recently announced closing of the bank restructuring deal, and depreciation and
amortization expenses of \$38.2 million. Loss for the third quarter of 2006,
excluding the above described one-time gain of \$80.1 million, would have been
\$40.6 million, or (\$0.48) per shares, including depreciation and amortization
expenses of \$38.2 million, as compared with loss for the third quarter of 2005
which was \$55.4 million, or (\$0.83) per share, including \$36.9 million
depreciation and amortization expenses.

"We continue to execute on our business plan, as represented by achieving a
significant milestone of higher than \$50 million in quarterly sales", said
Russell Ellwanger, chief executive officer, Tower Semiconductor. "We are
encouraged that our business model and diversified customer base has enabled us
to guide for continued growth for the fourth quarter of 2006. Building upon the
several major agreements signed and announced during the third quarter, we are
optimistic about further growth throughout 2007."

BUSINESS OUTLOOK:

Tower expects continued growth in the fourth quarter of 2006 and forecasts sales
of \$53 to \$57 million.

THIRD QUARTER 2006 FINANCIAL RESULTS CONFERENCE CALL AND WEB CAST

Tower will host a conference call to discuss these results on Tuesday, November 7, 2006, at 11:00 a.m. Eastern Daylight Time / 6 p.m. Israel time. To participate, please call: 1-866-527-8676 (U.S. toll-free number) or 972-3-918-0609 (international) and mention ID code: TOWER. Callers in Israel are invited to call locally 03-918-0609. The conference call will also be web cast live at <http://www.earnings.com> and at www.towersemi.com and will be available thereafter on both websites for replay for 90 days, starting at 2:00 p.m. Eastern Daylight Time on the day of the call.

As used in this release, the term EBITDA consists of loss, according to GAAP (Generally Accepted Accounting Principles), excluding interest and financing expenses (net), tax and depreciation and amortization expenses. EBITDA is not a required GAAP financial measure and may not be comparable to a similarly titled measure employed by other companies. EBITDA should not be considered in isolation or as a substitute for operating income, net income or loss, cash flows provided by operating, investing and financing activities, or other income or cash flow statement data prepared in accordance with GAAP.

ABOUT TOWER SEMICONDUCTOR LTD.

Tower Semiconductor Ltd. is a pure-play independent specialty wafer 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 technologies from 1.0 to 0.35 micron and can produce up to 16,000 150mm wafers per month. Fab 2 features 0.18 and 0.13-micron, standard and specialized process technologies, and has the current capacity of up to 15,000 200mm wafers per month. Tower's Web site is located at <http://www.towersemi.com>.

CONTACT:

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SAFE HARBOR

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. Potential risks and uncertainties include, without limitation, risks and uncertainties associated with: (i) the completion of the equipment installation, technology transfer and ramp-up of production in Fab 2, (ii) having sufficient funds to operate the company in the short-term and raising the funds required to implement the current ramp up plan and complete Fab 2, (iii) the cyclical nature of the semiconductor industry and the resulting periodic overcapacity, fluctuations in operating results, future average selling price erosion that may be more severe than our expectations, (iv) operating our facilities at satisfactory utilization rates which is critical in order to cover the high level of fixed costs associated with operating a foundry, (v) our ability to satisfy certain of the covenants stipulated in our amended facility agreement, (vi) our ability to capitalize on increases in demand for foundry services, (vii) meeting the conditions to receive Israeli government grants and tax benefits approved for Fab 2 and obtaining the approval of the Israeli Investment Center for a new expansion program, (viii) attracting additional customers, (ix) not receiving orders from our wafer partners, customers and technology providers, (x) failing to maintain and develop our technology processes and services, (xi) competing effectively, (xii) our large amount of debt and our ability to repay our debt on a timely basis, (xiii) achieving acceptable device yields, product performance and delivery times, (xiv) the timely development, internal qualification and customer acceptance of new processes and products and (xv) business interruption due to terror attacks, including the current effect of the military situation, earthquakes, and other acts of God.

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 our most recent filings on Forms 20-F, F-1, F-3 and 6-K, as were filed with the Securities and Exchange Commission and the Israel Securities Authority. Future results may differ materially from those previously reported. We do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

TOWER SEMICONDUCTOR LTD. AND SUBSIDIARY
CONDENSED CONSOLIDATED BALANCE SHEETS
(DOLLARS IN THOUSANDS)

	SEPTEMBER 30, ----- 2006 -----	DECEMBER 31, ----- 2005 -----
A S S E T S		
CURRENT ASSETS		
CASH AND CASH EQUIVALENTS	\$ 61,746	\$ 7,337
DESIGNATED CASH AND SHORT-TERM INTEREST-BEARING DEPOSITS	--	31,661
TRADE ACCOUNTS RECEIVABLE	25,636	16,776
OTHER RECEIVABLES	12,807	9,043
INVENTORIES	38,519	24,376
OTHER CURRENT ASSETS	1,737	1,048
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TOTAL CURRENT ASSETS	140,445	90,241
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PROPERTY AND EQUIPMENT, NET	522,018	510,645
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OTHER ASSETS, NET	50,748	77,800
	=====	=====
TOTAL ASSETS	\$ 713,211	\$ 678,686
	=====	=====
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES		
CURRENT MATURITIES OF LONG-TERM DEBT	\$ --	\$ 21,103
CURRENT MATURITIES OF CONVERTIBLE DEBENTURES	6,522	6,453
TRADE ACCOUNTS PAYABLE	59,687	59,741
OTHER CURRENT LIABILITIES	15,354	8,972
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TOTAL CURRENT LIABILITIES	81,563	96,269
LONG-TERM DEBT	355,138	497,000
CONVERTIBLE DEBENTURES	61,657	19,358
LONG-TERM LIABILITY IN RESPECT OF CUSTOMERS' ADVANCES	50,004	59,621
OTHER LONG-TERM LIABILITIES	15,547	11,012
	-----	-----
TOTAL LIABILITIES	563,909	683,260
	-----	-----
CONVERTIBLE DEBENTURES	--	25,493
	-----	-----
SHAREHOLDERS' EQUITY (DEFICIT)	149,302	(30,067)
	=====	=====
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 713,211	\$ 678,686
	=====	=====

TOWER SEMICONDUCTOR LTD. AND SUBSIDIARY
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(dollars in thousands, except share data and per share data)

	NINE MONTHS ENDED SEPTEMBER 30,		THREE MONTHS ENDED SEPTEMBER 30,	
	2006	2005	2006	2005
REVENUES				
SALES	\$ 131,933	\$ 62,928	\$ 51,503	\$ 20,553
REVENUES RELATED TO A JOINT DEVELOPMENT AGREEMENT	--	8,000	--	--
	131,933	70,928	51,503	20,553
COST OF SALES	194,666	179,598	68,244	57,130
	(62,733)	(108,670)	(16,741)	(36,577)
OPERATING COSTS AND EXPENSES				
RESEARCH AND DEVELOPMENT	11,107	12,849	4,179	4,200
MARKETING, GENERAL AND ADMINISTRATIVE	18,106	13,481	7,308	4,715
	29,213	26,330	11,487	8,915
	(91,946)	(135,000)	(28,228)	(45,492)
FINANCING EXPENSE, NET	(37,957)	(25,428)	(12,382)	(9,900)
GAIN ON DEBT RESTRUCTURING	80,071	--	80,071	--
OTHER INCOME, NET	597	2,518	6	42
	\$ (49,235)	\$(157,910)	\$ 39,467	\$ (55,350)
BASIC EARNING (LOSS) PER ORDINARY SHARE				
(*) EARNING (LOSS) PER SHARE	\$ (0.63)	\$ (2.39)	\$ 0.46	\$ (0.83)
INCOME (LOSS) USED TO COMPUTE BASIC EARNING (LOSS) PER SHARE	(49,235)	(157,910)	39,467	(55,350)
WEIGHTED AVERAGE NUMBER OF ORDINARY SHARES OUTSTANDING - IN THOUSANDS	78,607	66,190	85,087	66,671
DILUTED EARNING (LOSS) PER ORDINARY SHARE				
(*) EARNING (LOSS) PER SHARE	\$ (0.63)	\$ (2.39)	\$ 0.30	\$ (0.83)
INCOME (LOSS) USED TO COMPUTE DILUTED EARNING (LOSS) PER SHARE	(49,235)	(157,910)	41,433	(55,350)
WEIGHTED AVERAGE NUMBER OF ORDINARY SHARES OUTSTANDING - IN THOUSANDS	78,607	66,190	139,214	66,671

(*) BASIC AND DILUTED LOSS PER SHARE IN ACCORDANCE WITH U.S. GAAP FOR THE NINE AND THREE MONTHS PERIODS ENDED SEPTEMBER 30, 2006 ARE \$1.67 AND \$0.52, RESPECTIVELY, AND ARE THE SAME AS THE ISR. GAAP DATA FOR THE NINE AND THREE MONTHS PERIODS ENDED SEPTEMBER 30, 2005.