

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of August 2007 (No. 2)

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 August 15, 2007, the Registrant announced its financial results for the six and three months ended June 30, 2007. Attached hereto are the following exhibits

Exhibit 99.1 Press release dated August 15, 2007

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.

Date: August 15, 2007

TOWER SEMICONDUCTOR LTD.

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

TOWER SEMICONDUCTOR REPORTS 28 PERCENT YEAR-OVER-YEAR
REVENUE GROWTH IN THE SECOND QUARTER 2007 AND 40
PERCENT GROWTH IN THE FIRST HALF 2007

COMPANY RECORDS POSITIVE CASH FLOW FROM OPERATIONS AND POSITIVE EBITDA
AND ACHIEVES EIGHTH CONSECUTIVE QUARTERLY REVENUE GROWTH

MIGDAL HAEMEK, Israel - August 15, 2007 - Tower Semiconductor Ltd. (Nasdaq: TSEM, TASE: TSEM), an independent specialty foundry, today announced second quarter 2007 financial results.

MAJOR HIGHLIGHTS:

- o Achieved record quarterly revenues of \$57.1 million representing the eighth consecutive quarter of revenue growth, representing year-over-year growth of approximately 28 percent
- o Achieved positive cash flow from operations for the third consecutive quarter and positive EBITDA for the seventh consecutive quarter
- o Achieved 40 percent revenue growth in the first half of 2007, compared to the same period for 2006
- o Plans to Further expand Fab2 capacity at a low cost model, to be funded by the previously announced long-term bonds financing and by credit lines from banks & Israel Corporation.

For the second quarter of 2007, the Company reported total revenues of \$57.1 million, representing a 28 percent increase as compared to revenues of \$44.6 million reported in the second quarter of 2006. For the first half of 2007, the Company reported total revenues of \$112.7 million, representing a 40 percent increase when compared to revenues of \$80.4 million reported in the first half of 2006. Net loss in accordance with Generally Accepted Accounting Principles (GAAP) for the second quarter of 2007 has improved by \$9.2 million to \$34.4 million, or \$0.28 per share, as compared to a GAAP net loss of \$43.6 million, or \$0.55 per share, for the second quarter of 2006. Non-GAAP gross profit (as described and reconciled below) for the second quarter of 2007 was \$19.2 million, representing a gross margin of 34 percent. Non-GAAP operating profit (as described and reconciled below) for the second quarter of 2007 was \$11.5 million, representing a 20 percent operating margin.

"The second quarter 2007 marked the two year anniversary of Tower's new management team", Said Russell Ellwanger, chief executive officer of Tower Semiconductor. "The ensuing 8 quarters demonstrated sequential Sales growth, resulting in a 3x sales increase and a \$25 million positive shift in cash flow from operations as compared to two years ago quarterly run rate. We have continued to run at very high utilization levels in Fab 2, and even with the capacity ramp reaching 24,000 wafer starts per month in the third quarter of 2007, we will need to increase the capacity further to fully meet the current as well as longer term forecasted customer demand. To this end, we have raised moneys in, predominantly, non share diluting, long term debt vehicles, to enable the next phase of fab 2 capacity ramp targeting acquisition of low cost, short period of return tool sets. We have experienced a recent decrease in the Fab 1 utilization rates, which we expect will be corrected in the second half of Q4 and will remain high throughout 2008, as a function of multiple new projects with several very large customers. We see our overall business strong and target continued sequential growth."

BUSINESS OUTLOOK:

Tower forecasts revenue in the third quarter 2007 to be between \$56 and \$60 million, which will represent between 9 and 17 percent year-over-year revenue growth.

SECOND QUARTER 2007 FINANCIAL RESULTS CONFERENCE CALL AND WEB CAST

Tower will host a conference call to discuss these results on Wednesday, August 15, 2007, at 10 a.m. Eastern Standard Time / 5 p.m. Israel time. To participate, please call: 1-888-668-9141 (U.S. toll-free number) or 972-3-918-0687 (international) and mention ID code: TOWER. Callers in Israel are invited to call locally by dialing 03-918-0687. 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 Web sites for replay for 90 days, starting at approximately 2 p.m. Eastern Standard 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.

This release, including the financial tables below, presents other financial information that may be considered "non-GAAP financial measures" under Regulation G and related reporting requirements promulgated by the Securities

and Exchange Commission as they apply to our company. These non-GAAP financial measures exclude (1) depreciation and amortization expenses and (2) compensation expenses in respect of options granted to directors, officers and employees. Non-GAAP financial measures should be evaluated in conjunction with, and are not a substitute for, GAAP financial measures. The tables also present the GAAP financial measures which are most comparable to the non-GAAP financial measures, as well a reconciliation between the non-GAAP financial measures and the most comparable GAAP financial measures. The non-GAAP financial information presented herein should not be considered in isolation from 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. (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>.

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 and raising the funds therefor, (ii) 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, (iii) having sufficient funds to operate the company in the short-term and the funding needs for its ramp-up plan, (iv) operating our facilities at satisfactory utilization rates which is critical in order to defray the high level of fixed costs associated with operating a foundry and reduce our losses, (v) our ability to satisfy the covenants stipulated in our amended credit 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 and customers, (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 short-term and long-term 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, (xv) the entering into and the consummation of definitive agreements with Israel Corporation Ltd. and the banks based on the terms of the letters of intent previously disclosed on July 16, 2007, including the receipt of corporate and/or other approvals as required under applicable law, which, following the determination of our audit committee and board of directors that the transactions are on market terms, in the ordinary course of business and to our benefit, may include our shareholders approval if we receive by the end of August 29, 2007 (Israel time) a written request by any shareholder or shareholders who hold at least 1% of our issued and outstanding shares to bring the terms of such transactions to a shareholders meeting, (xvi) the entering into and the consummation of agreements to purchase the equipment to increase Fab2 capacity beyond 24,000 wafers per month and timely installation thereof, and (xvii) business interruption due to terror attacks, earthquakes, other acts of God and the security situation in Israel.

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-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. The Company does not intend to update, and expressly disclaims any obligation to update, the information contained in this release.

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

	JUNE 30,	DECEMBER 31,
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	2007	2006
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	(UNAUDITED)	
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A S S E T S

CURRENT ASSETS

CASH, CASH EQUIVALENTS AND DEPOSITS	\$ 20,723	\$ 40,940
TRADE ACCOUNTS RECEIVABLE	45,476	31,498
OTHER RECEIVABLES	2,769	5,425
INVENTORIES	37,691	34,763
OTHER CURRENT ASSETS	1,465	1,473
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TOTAL CURRENT ASSETS	108,124	114,099
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PROPERTY AND EQUIPMENT, NET	507,414	539,292
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INTANGIBLE ASSETS, NET	39,482	44,981
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OTHER ASSETS, NET	1,303	1,346
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TOTAL ASSETS	\$656,323	\$699,718
	=====	=====

LIABILITIES AND SHAREHOLDERS' EQUITY

CURRENT LIABILITIES

CURRENT MATURITIES OF CONVERTIBLE DEBENTURES	\$ 6,611	\$ 6,632
TRADE ACCOUNTS PAYABLE	55,922	55,128
OTHER CURRENT LIABILITIES	20,907	22,096
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TOTAL CURRENT LIABILITIES	83,440	83,856

LONG-TERM DEBT FROM BANKS	360,689	356,947
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CONVERTIBLE DEBENTURES	58,609	62,175
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LONG-TERM CUSTOMERS' ADVANCES	42,070	46,042
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OTHER LONG-TERM LIABILITIES	19,441	17,708
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TOTAL LIABILITIES	564,249	566,728
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SHAREHOLDERS' EQUITY	92,074	132,990
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TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$656,323	\$699,718
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TOWER SEMICONDUCTOR LTD. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)
(DOLLARS IN THOUSANDS, EXCEPT SHARE DATA AND PER SHARE DATA)

	SIX MONTHS ENDED JUNE 30,			THREE MONTHS ENDED JUNE 30,		
	2007	2006	2005	2007	2006	2005
	GAAP	GAAP	GAAP	GAAP	GAAP	GAAP
REVENUES	\$ 112,666	\$ 80,430	\$ 50,375	\$ 57,062	\$ 44,555	\$ 27,208
COST OF SALES	142,878	126,422	122,468	71,384	65,142	61,254
GROSS PROFIT (LOSS)	(30,212)	(45,992)	(72,093)	(14,322)	(20,587)	(34,046)
OPERATING COSTS AND EXPENSES						
RESEARCH AND DEVELOPMENT	6,952	6,928	8,649	3,355	3,574	3,886
MARKETING, GENERAL&ADMINISTRATIVE	15,176	10,798	8,766	7,351	5,474	4,238
	22,128	17,726	17,415	10,706	9,048	8,124
OPERATING PROFIT (LOSS)	(52,340)	(63,718)	(89,508)	(25,028)	(29,635)	(42,170)
FINANCING EXPENSE, NET	(19,554)	(25,575)	(15,528)	(9,406)	(14,051)	(7,353)
OTHER INCOME, NET	73	591	2,476	4	40	2,283
NET LOSS FOR THE PERIOD	\$ (71,821)	\$ (88,702)	\$(102,560)	\$ (34,430)	\$ (43,646)	\$ (47,240)
LOSS PER ORDINARY SHARE						
(*) BASIC AND DILUTED LOSS PER SHARE	\$ (0.63)	\$ (1.18)	\$ (1.56)	\$ (0.28)	\$ (0.55)	\$ (0.71)
WEIGHTED AVERAGE NUMBER OF ORDINARY SHARES OUTSTANDING - IN THOUSANDS	113,584	75,313	65,946	122,014	78,716	66,190

(*) BASIC AND DILUTED LOSS PER SHARE IN ACCORDANCE WITH U.S. GAAP FOR THE SIX AND THREE MONTHS PERIODS ENDED JUNE 30, 2007 ARE \$0.65 AND \$0.28, RESPECTIVELY, FOR THE SIX AND THREE MONTHS PERIODS ENDED JUNE 30, 2006 ARE \$1.16 AND \$0.60, RESPECTIVELY, AND ARE THE SAME AS THE ISR. GAAP DATA FOR THE SIX AND THREE MONTHS PERIODS ENDED JUNE 30, 2005.

TOWER SEMICONDUCTOR LTD. AND SUBSIDIARY
RECONCILIATION OF REPORTED GAAP TO NON-GAAP
CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)
(DOLLARS IN THOUSANDS)

	SIX MONTHS ENDED JUNE 30, 2007			THREE MONTHS ENDED JUNE 30, 2007		
	DEPRECIATION, AMORTIZATION AND STOCK BASED COMPENSATION EXPENSES			DEPRECIATION, AMORTIZATION AND STOCK BASED COMPENSATION EXPENSES		
	NON-GAAP (SEE A, B, C BELOW)		GAAP	NON-GAAP (SEE A, B, C BELOW)		GAAP
REVENUES	\$ 112,666	\$ --	\$ 112,666	\$ 57,062	\$ --	\$ 57,062
COST OF SALES	72,607	70,271(A)	142,878	37,889	33,495(A)	71,384
GROSS PROFIT (LOSS)	40,059	(70,271)	(30,212)	19,173	(33,495)	(14,322)
OPERATING COSTS AND EXPENSES						
RESEARCH AND DEVELOPMENT	5,227	1,725(B)	6,952	2,475	880(B)	3,355
MARKETING, GENERAL&ADMINISTRATIVE	11,468	3,708(C)	15,176	5,164	2,187(C)	7,351
	16,695	5,433	22,128	7,639	3,067	10,706
OPERATING PROFIT (LOSS)	\$ 23,364	\$ (75,704)	\$ (52,340)	\$ 11,534	\$ (36,562)	\$ (25,028)

(A) INCLUDES DEPRECIATION AND AMORTIZATION EXPENSES IN THE AMOUNTS OF \$69,916 AND \$33,295 FOR THE SIX AND THREE MONTHS ENDED JUNE 30 2007, RESPECTIVELY AND STOCK BASED COMPENSATION EXPENSES IN THE AMOUNTS OF \$355 AND \$200 FOR THE SIX AND THREE MONTHS ENDED JUNE 30 2007, RESPECTIVELY.

(B) INCLUDES DEPRECIATION AND AMORTIZATION EXPENSES IN THE AMOUNTS OF \$1,427 AND \$721 FOR THE SIX AND THREE MONTHS ENDED JUNE 30 2007, RESPECTIVELY AND STOCK BASED COMPENSATION EXPENSES IN THE AMOUNTS OF \$298 AND \$159 FOR THE SIX AND THREE MONTHS ENDED JUNE 30 2007, RESPECTIVELY.

(C) INCLUDES DEPRECIATION AND AMORTIZATION EXPENSES IN THE AMOUNTS OF \$20 AND \$17 FOR THE SIX AND THREE MONTHS ENDED JUNE 30 2007, RESPECTIVELY AND STOCK BASED COMPENSATION EXPENSES IN THE AMOUNTS OF \$3,688 AND \$2,170 FOR THE SIX AND THREE MONTHS ENDED JUNE 30 2007, RESPECTIVELY.