

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of August 2008 (No. 6)

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 20, 2008, the Registrant announced its financial results for the six and three months ended June 30, 2008. Attached hereto are the following exhibits

Exhibit 99.1 Press release dated August 20, 2008

This report on Form 6-K is not incorporated by reference into any effective Registration Statement filed by us under the Securities Act of 1933, including on Form F-4 (File No. 333-151919).

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.

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

Date: August 20, 2008

Tower Semiconductor Reports Second Quarter 2008 Financial Results

*Achieves second highest quarterly revenue in the Company's history of
\$58.1 million*

*Signed a Memorandum of Understanding to Reduce Debt by \$250 Million
and Significantly Improve Balance Sheet and Financial Position*

MIGDAL HAEMEK, Israel – August 20, 2008 – Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), an independent specialty foundry, today announced financial results for the second quarter ended June 30, 2008.

Highlights

- Achieved revenue of \$58.1 million, compared to \$57.6 million in the prior quarter and \$57.1 million in the same period one year ago
- Recorded positive cash flow from operations for the seventh consecutive quarter and positive EBITDA for the eleventh consecutive quarter
- Decreased net loss in the first six months of 2008 by \$13 million year-over-year
- Signed a Memorandum of Understanding to significantly improve balance sheet and financial position, by lowering debt \$250 million and increasing shareholders equity by a similar amount
- Announced a definitive agreement to acquire Jazz Technologies
- Initiated cost reduction plan expected to result in approximately \$40 million of savings annually
- Announced customer engagements and production ramps, including those with ON Semiconductor, QuickLogic, Cypress Semiconductor and Panavision Imaging

Revenue for the second quarter of 2008 was \$58.1 million, which was slightly above the mid-point of the company's previously stated guidance range. This compares to revenue of \$57.1 million in the second quarter of 2007 and \$57.6 million in the prior quarter.

Second quarter 2008 non-GAAP gross profit and operating profit, as described and reconciled below, totaled \$20.5 million and \$11.6 million, respectively, representing 35 percent gross margin and 20 percent operating margin. Calculated in accordance with Generally Accepted Accounting Principles (GAAP), net loss for the second quarter was \$31.3 million, or \$0.25 per share, an improvement of \$2.8 million when compared to \$34.1 million, or \$0.28 per share, for the same period in 2007.

Russell Ellwanger, Tower's chief executive officer, stated "Over the past few years, Tower has substantially improved its revenue and operational results as evidenced by becoming the number one revenue growth foundry for 2007 over 2005. Today's announcement of a memorandum of understanding signed with our banks and Israel Corporation provides a much stronger corporate capital structure from which we can continue this momentum. We expect that these financial improvements combined with the expected closing of the Jazz merger will maintain our growth trajectory, while substantially improving EBITDA and cash generation in the course of transitioning into the worldwide leading specialty foundry."

"The response from both the Jazz and Tower customers with regard to the combined product platform offerings and roadmaps has been overwhelmingly positive, and we have begun to leverage the cross-selling opportunities through joint meetings with customers of both companies. Integration efforts are well underway in anticipation of the completion of the transaction by the end of this quarter. We have established an inter-company cross-functional team tasked with ensuring a seamless transition, and we expect to realize approximately \$40 million in annual cost savings from the Jazz merger."

As previously disclosed, Tower announced a definitive agreement to acquire Jazz Technologies, which will create a leading specialty pure-play foundry with trailing twelve month revenues of approximately \$440 million. Additionally, the merger will significantly increase the Company's scale, providing the opportunity for substantial growth in revenue, cash flow and operating results. The proposed transaction is subject to approval by Jazz's shareholders and other customary closing conditions. Jazz announced that August 8, 2008 will serve as the record date for a special meeting of shareholders, which will be convened on September 17, 2008 to vote on, adopt and approve the proposed transaction, with the closing of the transaction expected to occur prior to the end of the third quarter of 2008.

Second Quarter 2008 Financial Results Conference Call and Web Cast

Tower will host a conference call to discuss these results today, August 20, 2008, at 10:00 a.m. Eastern Time (ET) / 5:00 p.m. Israel time. To participate, please call: 1-888-668-9141 (U.S. toll-free number) or 972-3-918-0691 (international) and mention ID code: TOWER. Callers in Israel are invited to call locally by dialing 03-918-0691. 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. ET on the day of the call.

As previously announced, beginning with the fourth quarter of 2007, the Company presents its financial statements in accordance with U.S. GAAP. All historical amounts presented in this release, including the financial tables below, were recast to reflect the application of U.S. GAAP.

As used in this release, the term Earnings Before Interest Tax Depreciation and Amortization (EBITDA) consists of loss, according to U.S. GAAP, excluding interest and financing expenses (net), tax, depreciation and amortization and stock based compensation 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>.

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. 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 therefore, (ii) the cyclical nature of the semiconductor industry and the resulting periodic overcapacity, fluctuations in operating results, future average selling price erosion, (iii) having sufficient funds to satisfy our short-term and long-term debt obligations and other liabilities, (iv) operating our facilities at high 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 Fab2, the possibility of the government requiring us to repay all or a portion of the grants already received and obtaining the approval of the Israeli Investment Center for a new expansion program, (viii) our ability to accurately forecast financial performance, which is affected by limited order backlog and lengthy sales cycles, (ix) maintaining existing customers and attracting additional customers, (x) not receiving orders from our wafer partners and customers, which can result in excess capacity, (xi) our dependence on a relatively small number of products for a significant portion of our revenue, (xii) product returns, (xiii) our ability to maintain and develop our technology processes and services to keep pace with new technology, evolving standards, changing customer and end-user requirements, new product introductions and short product life cycles, (xiv) competing effectively, (xv) our large amount of debt and our ability to repay our short-term and long-term debt on a timely basis, (xvi) achieving acceptable device yields, product performance and delivery times, (xvii) our ability to manufacture products on a timely basis and to purchase the equipment to increase Fab2 capacity up to 30,000 wafers per month and timely installation thereof, (xviii) our dependence on intellectual property rights of others and our ability to operate our business without infringing others' intellectual property rights, (xix) exposure to inflation, currency exchange and interest rate fluctuations and risks associated with doing business internationally and in Israel, (xx) the closing of the definitive agreement to acquire all of the outstanding shares of Jazz, subject to the approval of Jazz's shareholders and other customary closing conditions, (xxi) the closing of the definitive agreement with the lender banks, Bank Hapoalim and Bank Leumi, and Israel Corporation for the debt restructuring and investment and (xxii) business interruption due to fire, the security situation in Israel and other events beyond our control.

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,
	2008	2007
	unaudited	

ASSETS

CURRENT ASSETS

Cash and cash equivalents	\$	19,833	\$	44,536
Trade accounts receivable		34,286		44,977
Other receivables		4,428		4,748

Inventories	37,432	27,806
Other current assets	1,017	1,580
Total current assets	96,996	123,647
LONG-TERM INVESTMENTS	16,767	15,093
PROPERTY AND EQUIPMENT, NET	510,640	502,287
INTANGIBLE ASSETS, NET	29,081	34,711
OTHER ASSETS, NET	11,521	11,044
TOTAL ASSETS	\$ 665,005	\$ 686,782

LIABILITIES AND SHAREHOLDERS' EQUITY

CURRENT LIABILITIES		
Current maturities of convertible debenture	\$ 9,237	\$ 7,887
Trade accounts payable	50,235	49,025
Deferred revenue	8,182	-
Other current liabilities	22,799	20,024
Total current liabilities	90,453	76,936
LONG-TERM DEBT FROM BANKS	386,336	379,314
DEBENTURES	120,048	117,460
LONG-TERM CUSTOMERS' ADVANCES	14,360	27,983
OTHER LONG-TERM LIABILITIES	57,648	40,380
Total liabilities	668,845	642,073
SHAREHOLDERS' EQUITY (DEFICIT)	(3,840)	44,709
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 665,005	\$ 686,782

**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,		
	2008	2007	2006	2008	2007	2006
	GAAP	GAAP	GAAP	GAAP	GAAP	GAAP
REVENUES	\$ 115,679	\$ 112,666	\$ 80,430	\$ 58,072	\$ 57,062	\$ 44,555
COST OF SALES	139,307	142,931	126,492	71,052	71,412	65,161
GROSS LOSS	(23,628)	(30,265)	(46,062)	(12,980)	(14,350)	(20,606)
OPERATING COSTS AND EXPENSES						
Research and development	6,190	6,979	6,962	3,214	3,370	3,583
Marketing, general and administrative	14,957	15,713	11,511	7,189	7,636	5,662

	21,147	22,692	18,473	10,403	11,006	9,245
OPERATING LOSS	(44,775)	(52,957)	(64,535)	(23,383)	(25,356)	(29,851)
FINANCING EXPENSE, NET	(15,611)	(21,414)	(23,781)	(7,811)	(8,704)	(17,719)
OTHER INCOME (EXPENSE), NET	(529)	73	591	(101)	4	40
LOSS FOR THE PERIOD	\$ (60,915)	\$ (74,298)	\$ (87,725)	\$ (31,295)	\$ (34,056)	\$ (47,530)
BASIC LOSS PER ORDINARY SHARE						
Loss per share	\$ (0.49)	\$ (0.65)	\$ (1.16)	\$ (0.25)	\$ (0.28)	\$ (0.60)
Weighted average number of ordinary shares outstanding - in thousands	124,777	113,584	75,313	125,327	122,014	78,716

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, 2008			Three months ended June 30, 2008		
	non-GAAP	Depreciation, Amortization and stock based compensation expenses (see a, b, c below)	GAAP	non-GAAP	Depreciation, Amortization and stock based compensation expenses (see a, b, c below)	GAAP
REVENUES	\$ 115,679	\$ -	\$ 115,679	\$ 58,072	\$ -	\$ 58,072
COST OF SALES	74,173	65,134(a)	139,307	37,523	33,529(a)	71,052
GROSS PROFIT (LOSS)	41,506	(65,134)	(23,628)	20,549	(33,529)	(12,980)
OPERATING COSTS AND EXPENSES						
Research and development	5,738	452(b)	6,190	2,994	220(b)	3,214
Marketing, general & administrative	12,163	2,794(c)	14,957	5,994	1,195(c)	7,189
	17,901	3,246	21,147	8,988	1,415	10,403
OPERATING PROFIT (LOSS)	\$ 23,605	\$ (68,380)	\$ (44,775)	\$ 11,561	\$ (34,944)	\$ (23,383)

- (a) Includes depreciation and amortization expenses in the amounts of \$64,592 and \$33,264 and stock based compensation expenses in the amounts of \$542 and \$265 for the six and three months periods ended June 30, 2008, respectively.
- (b) Includes depreciation and amortization expenses in the amounts of \$122 and \$64 and stock based compensation expenses in the amounts of \$330 and \$156 for the six and three months periods ended June 30, 2008, respectively.
- (c) Includes depreciation and amortization expenses in the amounts of \$29 and \$13 and stock based compensation expenses in the amounts of \$2,765 and \$1,182 for the six and three months periods ended June 30, 2008, respectively.