

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

SCHEDULE 13G/A

Under the Securities Exchange Act of 1934

(Amendment No. 1)*

TOWER SEMICONDUCTOR LTD.

(Name of Issuer)

Ordinary Shares, NIS 1.00 par value per share

(Title of Class of Securities)

M87915100

(CUSIP Number)

December 31, 2005

(Date of Event which requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d - 1(b)

Rule 13d - 1(c)

Rule 13d - 1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

- 1 NAME OF REPORTING PERSON
I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

ONTARIO TEACHERS' PENSION PLAN BOARD
- 2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)
(b)
- 3 SEC USE ONLY
- 4 CITIZENSHIP OR PLACE OF ORGANIZATION

ONTARIO, CANADA
- | | | | |
|---|---|--------------------------|-----------|
| | 5 | SOLE VOTING POWER | |
| | | | 6,312,273 |
| NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON WITH | 6 | SHARED VOTING POWER | N/A |
| | 7 | SOLE DISPOSITIVE POWER | |
| | | | 6,312,273 |
| | 8 | SHARED DISPOSITIVE POWER | |
| | | | N/A |
- 9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

6,312,273
- 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES

N/A
- 11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

9.0%
- 12 TYPE OF REPORTING PERSON

E.P.

Item 1: Issuer

(a) NAME OF ISSUER: Tower Semiconductor Ltd. ("Corporation")

(b) ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:

P.O. Box 619, Migdal Haemek, 23105, ISRAEL

Item 2: Person Filing and Securities Statement Being Filed in Respect Of

(a) NAME OF PERSON FILING: Ontario Teachers' Pension Plan Board (the "Board")

(b) ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE:

(c) CITIZENSHIP: The Board is a corporation incorporated under the laws of the Province of Ontario, Canada.

(d) TITLE OF CLASS OF SECURITIES: This statement relates to Ordinary Shares, NIS 1.00 par value per share, of the Corporation.

(e) CUSIP NUMBER: M87915100

Item 3: If this statement is filed pursuant to Rule 13d-1(b), or 13d-2(b) or (c), check whether the person filing is a:

The Board is filing this statement pursuant to the "no-action" relief granted to it by the Office of Tender Offers, Division of Corporation Finance of the United States Securities and Exchange Commission in a letter dated May 6, 1992.

(a) Broker or dealer registered under Section 15 of the Exchange Act.

(b) Bank as defined in Section 3(a)(6) of the Exchange Act.

(c) Insurance company as defined in Section 3(a)(19) of the Exchange Act.

(d) Investment company registered under Section 8 of the Investment Company Act.

(e) An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);

(f) An employee benefit plan or endowment fund in accordance with 13d-1(b)(1)(ii)(F);

(g) A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G)

(h) A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act;

(i) A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act;

(j) Group, in accordance with Rule 13d-1(b)(1)(ii)(J).

Item 4: Ownership

(a) AMOUNT BENEFICIALLY OWNED: 6,312,273 (as of December 31, 2005)

(b) PERCENT OF CLASS: 9.0%

(c) NUMBER OF SHARES AS TO WHICH THE PERSON HAS:

I. Sole power to vote or direct the vote: 6,312,273 II. Shared power to vote or direct the vote: NONE III. Sole power to dispose or direct the disposition: 6,312,273 IV. Shared power to dispose or to direct the disposition: NONE

Item 5: Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following o.

Item 6: Ownership of More than Five Percent on Behalf of Another Person

Not Applicable.

Item 7: Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person

Not Applicable.

Item 8: Identification and Classification of Members of the Group

Not Applicable.

Item 9: Notice of Dissolution of Group

Not Applicable.

Item 10: Certification

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

January 30, 2006

/s/ Roger Barton

Roger Barton
Vice President, General Counsel and
Secretary