

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16
of the Securities Exchange Act of 1934

Date of Report: February 20, 2007
Commission File No.: 000-30688

NOVA MEASURING INSTRUMENTS LTD.

**Building 22 Weitzmann Science Park, Rehovoth
P.O.B 266
Israel**

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 is submitting this Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): _____

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 12g3-2(b) under the Securities Exchange Act of 1934:

Yes ☐ No ☒

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with 12g3-2(b):

N/A.

Attached hereto and incorporated by way of reference herein is the Registrant's press release entitled "Nova Announces 60% Revenue Increase in 2006 with Significant Reduction in Net Loss".

This report on Form 6-K is hereby incorporated by reference into Nova Measuring Instruments Ltd.'s registration statements on Form S-8, filed with the Securities and Exchange Commission on the following dates: September 13, 2000 (File No. 333-12546); March 5, 2002 (File No. 333-83734); December 24, 2002 (File No. 333-102193, as amended by Amendment No. 1, filed on January 5, 2006); March 24, 2003 (File No. 333-103981); May 17, 2004 (three files, File Nos. 333-115554, 333-115555, and 333-115556, as amended by Amendment No. 1, filed on January 5, 2006); March 7, 2005 (File No. 333-123158); December 29, 2005 (File No. 333-130745); and September 21, 2006 (File No. 333-137491).

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.

NOVA MEASURING INSTRUMENTS LTD.
(the "Registrant")

By: */S/ Dror David*

Dror David
Chief Financial Officer

Date: February 20, 2007



partnering for process control

Company Contact:

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Company Press Release

**NOVA ANNOUNCES 60% REVENUE INCREASE IN 2006
WITH SIGNIFICANT REDUCTION IN NET LOSS**

Rehovot, Israel, - February 20, 2007 - Nova Measuring Instruments Ltd. (Nasdaq: NVMI), provider of leading edge stand alone metrology and the market leader of integrated metrology solutions to the semiconductor process control market, today reported its 2006 fourth quarter and full year financial results, announcing a 60% annual increase in 2006 revenues.

Total revenues for the fourth quarter of 2006 were \$14.1 million, an increase of 59% over the fourth quarter of 2005, and an increase of 13% over the third quarter of 2006.

Gross margin for the fourth quarter of 2006 was 41%, compared with 42% for the fourth quarter of 2005, and compared with 41% for the third quarter of 2006.

Total operating expenses were \$6.6 million, or 47% of revenues, for the fourth quarter of 2006, compared with \$5.4 million, or 61% of revenues, in the fourth quarter of 2005, and \$6.0 million, or 48% of revenue, in the third quarter of 2006.

Net loss for the fourth quarter of 2006 declined to \$0.8 million, or \$0.05 per share, compared with a net loss of \$1.5 million for the fourth quarter of 2005, or \$0.10 per share, and compared with a net loss of \$0.8 million, or \$0.05 per share, for the third quarter of 2006. The results for the fourth quarter of 2006 included a one-time charge of \$0.3 million related to headcount reduction and realignment of activities as part of the company's cost reduction initiative, and a \$0.6 million share based compensation expense and amortization of intangible assets.

Total revenues for year 2006 were \$48.3 million, a 60% increase over total revenues of \$30.1 million reported for year 2005. Gross margin was 43% in 2006, compared with 36% in 2005. Total operating expenses in 2006 were \$23.1 million, or 48% of revenues, compared with \$19.9 million, or 66% of revenues in 2005.

Net loss for the year declined substantially to \$1.9 million, or \$0.12 per share, compared with a net loss of \$8.4 million, or \$0.55 per share, in 2005. The results for year 2006 included the one-time charge of \$0.3 million as described above, and \$0.8 million share based compensation expense and amortization of intangible assets.



Cash and equivalents at 2006 year end were \$15.2 million, a decrease of \$0.9 million compared to the end of the third quarter of 2006.

“2006 was a year of major achievement for Nova,” said Gabi Seligsohn, President and CEO. “In addition to very strong revenue growth in our core business as well as significant market share gains, we accomplished some important objectives. We added important new products and made a strategic acquisition in order to expand our available market. We also realigned the management team and implemented a cost reduction initiative. Reflecting our successful initial penetration into a new market, revenues from Stand Alone Optical CD products accounted for approximately 10% of our overall yearly systems revenues.”

“Looking ahead,” continued Seligsohn, “we expect further growth from our new products, mainly in the second half of the year. Together with our focus on cost controls, we expect this growth to enable us to generate improved profitability in 2007.”

The Company will host a conference call today, February 20, 2007 at 10:00am EST. To participate please dial in the U.S: 1-888-407-2553, UK: 0-800-051-8913 or internationally: +972-3-918-0609 at least 5 minutes before the start of the call. A recording of the call will be available on Nova’s website, within 24 hours following the end of the call.

About Nova

Nova Measuring Instruments Ltd. develops, produces and markets advanced integrated and stand alone metrology solutions for the semiconductor manufacturing industry. Nova is traded on the NASDAQ & TASE under the symbol NVMI. The Company's website is www.nova.co.il.

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding trends, demand for our products, expected deliveries, transaction, expected revenues, operating results, and earnings. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied in those forward-looking statements. These risks and other factors include but are not limited to: our dependency on a single integrated process control product line; the highly cyclical nature of the markets we target; our inability to reduce spending during a slowdown in the semiconductor industry; our ability to respond effectively on a timely basis to rapid technological changes; risks associated with our dependence on a single manufacturing facility; our ability to expand our manufacturing capacity or marketing efforts to support our future growth; our dependency on a small number of large customers and small number of suppliers; risks related to our intellectual property; changes in customer demands for our products; new product offerings from our competitors; changes in or an inability to execute our business strategy; unanticipated manufacturing or supply problems; changes in tax requirements; changes in customer demand for our products and risks related to our operations in Israel. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading “Risk Factors” in Nova’s Annual Report on Form 20-F for the year ended December 31, 2005 filed with the Securities and Exchange Commission on June 29, 2006. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Measuring Instruments Ltd. does not assume any obligation to update the forward-looking information contained in this press release.

(Tables to Follow)

NOVA MEASURING INSTRUMENTS LTD.
QUARTERLY CONSOLIDATED STATEMENT OF OPERATIONS
(U.S. dollars in thousands, except per share data)

	<u>Q4-2006</u>	<u>Q4-2005</u>	<u>Q3-2006</u>
REVENUES			
Product sales	11,463	6,601	9,857
Services	<u>2,603</u>	<u>2,236</u>	<u>2,644</u>
	<u>14,066</u>	<u>8,837</u>	<u>12,501</u>
COST OF REVENUES			
Product sales	5,562	2,939	5,175
Services	<u>2,751</u>	<u>2,152</u>	<u>2,247</u>
	<u>8,313</u>	<u>5,091</u>	<u>7,422</u>
GROSS PROFIT	<u>5,753</u>	<u>3,746</u>	<u>5,079</u>
OPERATING EXPENSES			
Research & Development expenses, net	2,587	2,280	2,272
Sales & Marketing expenses	2,747	2,007	2,292
General & Administration expenses	<u>1,283</u>	<u>1,089</u>	<u>1,423</u>
	<u>6,617</u>	<u>5,376</u>	<u>5,987</u>
OPERATING LOSS	864	1,630	908
INTEREST INCOME, NET	<u>104</u>	<u>105</u>	<u>130</u>
NET LOSS	<u>760</u>	<u>1,525</u>	<u>778</u>
Loss per share	<u>0.05</u>	<u>0.10</u>	<u>0.05</u>
Shares used for calculation of loss per share	<u>16,771</u>	<u>15,453</u>	<u>16,178</u>

NOVA MEASURING INSTRUMENTS LTD.
YEARLY CONSOLIDATED STATEMENT OF OPERATIONS
(U.S. dollars in thousands, except per share data)

	Year ended December 31,		
	2006	2005	2004
			(As Restated)
REVENUES			
Product sales	38,258	21,985	29,274
Services	10,034	8,157	7,532
	<u>48,292</u>	<u>30,142</u>	<u>36,806</u>
COST OF REVENUES			
Product sales	18,728	11,413	14,396
Services	9,015	7,893	6,715
	<u>27,743</u>	<u>19,306</u>	<u>21,111</u>
GROSS PROFIT	<u>20,549</u>	<u>10,836</u>	<u>15,695</u>
OPERATING EXPENSES			
Research & Development expenses, net	9,166	9,301	8,665
Sales & Marketing expenses	8,754	6,950	6,647
General & Administration expenses	5,136	3,626	2,331
	<u>23,056</u>	<u>19,877</u>	<u>17,643</u>
OPERATING LOSS	2,507	9,041	1,948
INTEREST INCOME, NET	<u>573</u>	<u>627</u>	<u>528</u>
NET LOSS	<u>1,934</u>	<u>8,414</u>	<u>1,420</u>
Loss per share	<u>0.12</u>	<u>0.55</u>	<u>0.09</u>
Shares used for calculation of loss per share	<u>15,976</u>	<u>15,394</u>	<u>15,259</u>

NOVA MEASURING INSTRUMENTS LTD.
CONSOLIDATED BALANCE SHEET
(U.S. dollars in thousands)

	As of December 31,	
	2006	2005
CURRENT ASSETS		
Cash and cash equivalents	4,176	5,776
Short-term interest-bearing bank deposits	466	1,206
Short-term investments	2,400	3,500
Held to maturity securities	3,265	4,388
Trade accounts receivable	10,252	6,841
Inventories	8,968	6,606
Other current assets	1,917	1,141
	<u>31,444</u>	<u>29,458</u>
LONG-TERM ASSETS		
Long-term interest-bearing bank deposits	3,172	2,974
Held to maturity securities	1,704	4,952
Other Long-term assets	222	262
Severance pay funds	2,249	2,186
	<u>7,347</u>	<u>10,374</u>
FIXED ASSETS, NET	<u>2,601</u>	<u>2,507</u>
INTANGIBLE ASSETS, NET	<u>3,027</u>	<u>-</u>
Total assets	<u>44,419</u>	<u>42,339</u>
CURRENT LIABILITIES		
Trade accounts payable	5,884	5,744
Deferred income	3,048	3,852
Other current liabilities	6,639	5,028
	<u>15,571</u>	<u>14,624</u>
LONG-TERM LIABILITIES		
Liability for employee termination benefits	3,224	2,907
Deferred income	979	1,264
Other long-term liability	70	100
	<u>4,273</u>	<u>4,271</u>
SHAREHOLDERS' EQUITY	<u>24,575</u>	<u>23,444</u>
Total liabilities and shareholders' equity	<u>44,419</u>	<u>42,339</u>