

A. The Research Foundation of SUNY – TEL Capital (R852)

September 17, 2009

Authorization to Make an Additional Grant

Grantee: The Research Foundation of State University of New York
(the “Research Foundation”)

**Beneficiary
Company:** Tokyo Electron Limited d/b/a TEL (the “Company”)

**New ESD*
Investment:** A grant of up to Nine Million Dollars (\$9,000,000) to be used for a portion of the cost of equipment development, acquisition and related expenses in accordance with applicable law associated with the TEL program (the “Program”), as described below.

* The New York State Urban Development Corporation doing business as the Empire State Development Corporation (“ESD” or the “Corporation”)

**Prior ESD
Investments:** \$33,880,000 - Approved on February 19, 2004;
\$14,280,000 - Approved on March 24, 2005;
\$14,280,000 - Approved on March 23, 2006;
\$14,280,000 - Approved on July 19, 2007; and
\$14,280,000 - Approved on September 18, 2008

Project Location: 251 - 255 Fuller Road, Guilderland, Albany County

**NYS Empire Zone
(or equivalent):** N/A

Project Completion: November 2012

Background/Project Status:

These materials refer to and include, in their entirety, the attached materials (the “Materials”) presented to and approved by the ESD Directors on the dates as shown above.

Acting on behalf of the University at Albany-State University of New York, including the College of Nanoscale Science and Engineering (“CNSE”) and Fuller Road Management Company (“FRMC”), the Research Foundation has formed a strategic alliance agreement (the “Agreement”) with Tokyo Electron Limited, a Japanese corporation located in more than 14 countries, with approximately 10,000 employees, and approximately \$5 billion in sales through the fiscal year ending in March 2009.

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The project was initially set up as a seven-year joint Program to create the TEL Technology Center America (“TTCA” or the “Center”), the first such center created by TEL outside Japan; however, Amendment 2 to the Framework Agreement extends both the Back-End-of-the-Line (“BEOL”) and Front-End-of-the-Line (“FEOL”) programs to Nov 15, 2012. The Program establishes a strategic partnership between TEL, CNSE and TEL’s industry partners, including IBM, which has committed to invest over \$100 million in the Center through November 15, 2012. The Center is headquartered at the College of Nanoscale Science and Engineering complex at the University at Albany, and will have 300 researchers and staff working between Albany and the IBM East Fishkill.

Since 2004, the ESD Directors have approved \$91 million in funds for the project. In addition to the subject TEL Program grant, the Directors have authorized a number of significant projects under the umbrella of the University at Albany Center of Excellence in Nanoelectronics (“Albany COE”). TEL is housed in a portion of the facilities within the NanoFab complex, including NanoFab South, a 15,850-square-foot cleanroom; the NanoFab 300 South Annex (“NanoFab 300 South”), a 13,000-square-foot cleanroom; and NanoFab 300 North, a 37,000-square-foot cleanroom. Together, NanoFab 300 South, the South Annex and NanoFab 300 North create the Albany COE. NanoFab 300 South was constructed utilizing a portion of a \$15 million grant authorized by the ESD Directors at its July 19, 2001 meeting, as modified on May 23, 2002. Construction on NanoFab 300 North is complete, and was made possible through a \$50 million grant that the ESD Directors approved at its October 17, 2002 meeting. The ESD Directors subsequently approved an additional \$10 million grant on March 24, 2005 to purchase and install machinery and equipment at the Albany COE. And on May 4, 2005, the ESD Directors approved a \$20 million grant to purchase and install equipment at the Center for Semiconductor Research. In 2003, the ESD Directors approved \$160 million in grant funding for the International SEMATECH North (Fuller Road) Program, which is also located at the Albany COE, and in 2008, an additional \$300 million was approved for the project.

In July 2009, two additional grants were approved to further benefit the CNSE. A \$25 million grant for the Center for Semiconductor Research will support the expansion of the IBM-CNSE partnership, including fitting out 5,000 square feet of new clean room space in the already constructed NanoFab Central (“NFC”) building and acquiring and installing advanced processing equipment. A \$50 million grant will be used for a portion of the cost of clean room and infrastructure upgrades, fit-out, tool and equipment acquisition, and installation for the CNSE-IBM Computer Chip R&D Packaging Center.

As part of its annual reporting, the Grantee has provided detailed narratives of its program objectives and achievements.

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The proposed grant is part of an overall New York State commitment to provide up to \$100 million over a seven-year period, through bonded capital funds, to support the joint TEL-CNSE research and development activities. TTCA pursues four principal objectives, including:

1. Maximizing leverage of combined investments from TEL, its computer chip manufacturer customers (such as IBM), and New York State to pursue cooperative programs, which significantly benefit the global semiconductor industry by contributing to the realization of the International Technology Roadmap for Semiconductors;
2. Engaging in semiconductor research, development and manufacturing infrastructure programs that build on each organization's strengths and enhance efficiency through a joint cooperative program and through alignment of separate, individual efforts of both parties to the strategic alliance;
3. Bringing leading edge semiconductor equipment research and development activities to the College of Nanoscale Science and Engineering and the State of New York, where essential resources and cutting-edge facilities are readily available, with the goal of drawing critical semiconductor and high technology industry to the state; and,
4. Working in technical areas of this strategic alliance jointly and individually with other entities in the United States, Europe and Asia, which may include computer chip producers, equipment and material suppliers, national laboratories, research institutes, government agencies, associations and other consortia, with the specific objective to maximize the utilization of CNSE and New York State third party contractors where technically feasible.

During the year, TEL completed its commitment to donate \$75 million of equipment to support the FEOL and BEOL Statement of Work ("SOW"). In addition, over \$25 million of additional equipment was donated as part of the Advanced Process Technology ("APT") SOW, that included the Lithius Pro Track, an enabler for the Advanced Lithography Cluster, now located in NFC.

Also in the last year, TEL submitted another 53 US Patent applications for technologies developed at the College of Nanoscale Science and Engineering. Since 2004, TEL has submitted 191 patent applications and has been granted and allowed 18 patents. Additionally, there have been over 21 publications submitted to journals and conferences since the inception of the project at CNSE.

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Funding for the Program is expected from multiple public and private sources, including but not limited to TEL, IBM and ESD. The Research Foundation will administer the ESD grant and other New York State funding, and will administer the terms of the contract with TEL to ensure that the Program requirements are met. The Program will be managed in accordance with a private consortium business model that has been established by TEL. TEL will provide executives, project managers and administrative managers to manage and support Program activities.

The project will develop a critical high-technology research and development program designed to leverage industry and government investments to pursue joint cooperative programs that significantly benefit the semiconductor industry and act as a job-creating catalyst. The project will contribute to the realization of the International Technology Roadmap for Semiconductors (prepared by the Semiconductor Industry Association). Together with other research and development and manufacturing prototype activities at the Albany COE, including International SEMATECH, the project is expected to generate a high level of interest in building or locating businesses to New York, thus providing the Capital Region, Upstate, and New York State as a whole with a unique position in the emerging dynamics of global economic competition.

The revised budget is as follows:

Financing Uses	Amount	Financing Sources	Amount	Percent
Back-End-of-Line Program	\$194,530,000	ESD Grant	\$9,000,000	3.0%
Front-End-of-Line Program	71,300,000	ESD - Prior Grants	91,000,000	30.4%
Other Equipment Development	34,170,000	TEL Cash/Cash equivalent	100,000,000	33.3%
		IBM Cash/Cash equivalent	100,000,000	33.3%
Total Project Costs	\$300,000,000	Total Project Financing	\$300,000,000	100.0%

Attachments:

- ESD General Project Plan - Approved February 19, 2004
- ESD Additional Grant Authorization - Approved March 24, 2005
- ESD Additional Grant Authorization - Approved March 23, 2006
- ESD Additional Grant Authorization - Approved July 19, 2007
- ESD Additional Grant Authorization - Approved September 18, 2008