

**CALIFORNIA EDUCATIONAL FACILITIES AUTHORITY  
BOND FINANCING PROGRAM  
EXECUTIVE SUMMARY**

<p><b>Applicant:</b> California Institute of Technology ("Caltech") Pasadena, CA Los Angeles County</p> <p><b>Facility Type:</b> Private University</p> <p><b>Project Location:</b> Pasadena, CA</p> <p><b>Accreditation:</b> Western Association of Schools and Colleges Accreditation Board of Engineering and Technology, Inc.</p>	<p><b>Amount Requested:</b> \$195,000,000</p> <p><b>Date Requested:</b> June 25, 2009</p> <p><b>Resolution Number:</b> 268</p>
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**Use of Proceeds:** Bond proceeds will be used to refund all or a portion of the CEFA Series 1994 and 1998 bonds and/or to fund various capital projects.

**Type of Issue:** Negotiated Public Offering  
**Credit Enhancement:** None  
**Underlying Credit Rating:** AAA (Moody's) / AAA (S&P)  
**Financial Advisor:** Prager, Sealy & Co., LLC  
**Bond Counsel:** Orrick, Herrington & Sutcliffe, LLP

**Environmental Benefits:** It is Caltech's intention to design, build, and pursue certification of all new project buildings at a LEED Silver level or higher. Significant building renovation projects will also apply LEED standards throughout the course of the project. Similarly, Caltech will apply principles of sustainability and related best practices in the daily maintenance and operation of these projects.

**Financial Overview:** Caltech appears to have experienced fluctuating revenues over the three-year review period primarily due to market conditions. The investment return losses experienced in FY 2008 do not appear to affect Caltech's operations in a significant manner. Caltech's financial strength appears to be sound with approximately \$2.3 billion in total net assets at the end of the review period.

**Sources and Uses:**

Par Amount of Bonds	<u>\$195,000,000</u>	Project Fund	\$75,000,000
		Deposit for 1994 Refunding	30,000,000
		Deposit for 1998 Refunding	88,465,000
		Financing Costs	<u>1,535,000</u>
Total Sources	<u>\$195,000,000</u>	Total Uses	<u>\$195,000,000</u>

**Legal Review:** Although disclosures were made by the applicant, the information disclosed does not appear to detrimentally affect the financial viability or legal integrity of the applicant.

**Staff Recommendation:** Staff recommends the Authority approve a Resolution in an amount not to exceed \$195,000,000 for the California Institute of Technology subject a bond rating of at least an "A" category by a nationally recognized rating agency and meeting the Authority's standard bond covenants for "A" category rated debt.

## STAFF SUMMARY AND RECOMMENDATION

### California Institute of Technology (“Caltech”)

June 25, 2009

Resolution Number: 268

- I. PURPOSE OF FINANCING:** Caltech is in the midst of a significant multi-year capital improvement plan and intends to use both bond proceeds and their commercial paper program for projects to be completed under the capital plan. The Authority has previously approved Resolution No. 262 at the September 25, 2008 meeting, permitting the issuance of tax-exempt and taxable commercial paper notes in an aggregate principal amount not to exceed, at any one time, \$100 million to fund the financing needs of eligible projects.

**Projects ..... \$75,000,000**

Astrophysics Laboratory – Caltech plans to construct a new laboratory for the Cahill Center for Astronomy and Astrophysics. The 100,000 square foot facility will create an environment for productive interaction among observers, instrument builders, and theorists.

Information Science and Technology (IST) Building – The Annenberg/IST Center will be an approximately 60,000 square foot building consisting of formal and informal assembly areas, classrooms, conference rooms, a library, and faculty and student offices.

Undergraduate Housing Renovation, Construction, and Temporary Housing – The Institute Undergraduate Housing project includes improvements to interior living spaces, work to exterior, repairs to historic fabric and details, structural and seismic improvements, electrical, HVAC, and plumbing improvements.

Chemistry Building – The new 60,000 square foot Chemistry and Chemical Engineering Laboratory will integrate chemistry and chemical engineering with other forefront areas of science and engineering research.

Infrastructure Costs Related to Research Buildings – Caltech plans to perform several infrastructure upgrades to support the capital construction of new research buildings. Renovations will include a new substation, chiller plant and distribution piping upgrades and tunnel extension, sewer, water, steam storm drains and utility connections.

Miscellaneous Deferred Maintenance and Renovation – Renovations consist of high priority maintenance and renovation projects identified as fire protection upgrades, campus-wide steam and compressed air distribution system upgrades and electrical distribution system upgrades.

Laboratory Renewal Projects – Renewal projects will include the rehabilitation or modernization of laboratory space for new and continuing faculty.

Campus Center – The new Campus Center will provide needed facilities for musical performances and theatre arts, as well as service centers for students, faculty, and staff.

Robinson Laboratory Renovation – Major renovations are planned to reshape the Robinson Laboratory as a major facility for research and instruction in global environmental science.

Biology Laboratory Renovations – Caltech plans to modernize space to accommodate the sharing of common research equipment and facilities for existing faculty

Humanities and Social Sciences Building – The intent of this new facility is to locate the facility nearby other Humanities and Social Sciences buildings to allow collaboration with colleagues.

Sculpture Gardens – A sculpture garden is planned and will adapt space for new artwork as well as updating the landscaping.

Voice & Data Networking Update – Project will improve and sustain Caltech's voice and data networks. Proposed projects include targeted replacement or upgrade of telephone components, remediation of voice and data facilities and disaster preparedness of critical communications facilities.

Jorgensen Computing Facility – Renovation of the Jorgensen Computing Facility will house both the Applied Computational Mathematics and Control and Dynamical Systems departments.

Firestone Renovation – Caltech plans to renovate the Firestone building to provide an on-campus space for the Keck Institute of Space Studies.

Thomas Renovation – The complete building rehabilitation of the Franklin Thomas laboratory of Engineering is needed to meet the current and future research needs of the Mechanical and Civil Engineering groups.

Solar Energy Facility – In order to install photovoltaic power to several Caltech buildings, work such as tree trimming, removal and replacement, purchasing metering and metering equipment must be done.

Thermal Energy Storage – Caltech proposes to construct a three million gallon chilled water storage tank to take advantage of off-peak, reduced electrical rates.

Center for Advanced Computing Research – The planned expansion will add 4,300 square feet and potential IT load of 800 KW which will maximize efficiency.

Energy Conservation Projects – These proposed projects are intended to reduce energy consumption, green house gas emissions and other global warming potential emissions. Projects will include lighting retrofits and upgrades, purchase of energy star equipment, LEED EB projects, and upgrading utility equipment to high efficiency equipment.

Major Utility and Distribution System Upgrades – Upgrades include the replacement and improvement to major utility systems that support entire campus or multi-building portions of the campus. This includes chillers, boilers, high voltage distribution and cogeneration equipment with associated distribution conductors, piping, controls and pumps.

**Environmental Benefits:**

It is Caltech’s policy to design, build, and pursue certification of all new project buildings at a LEED Silver level or higher. Significant building renovation projects will also apply LEED standards throughout the course of the project. Similarly, Caltech will apply principles of sustainability and related best practices in its daily maintenance and operation.

**Refunding ..... \$118,465,000**

Caltech may refund all or a portion of the outstanding balances of the CEFA Series 1994 and 1998 bonds, which is approximately \$129,169,000. It is Caltech’s intent to current refund the CEFA Series 1994 bonds for liquidity purposes. The current refunding of the CEFA Series 1998 bonds will lower Caltech’s borrowing costs.

The CEFA Series 1994 bonds were originally issued to finance the acquisition, construction, renovation and expansion of various campus facilities, such as a satellite utilities plant, parking facilities, a telescope, student residence, sewer installation and an engineering library. The CEFA Series 1998 bonds were originally issued to finance the construction of various campus facilities as well as to refund the CEFA Series 1991 bonds.

**Financing costs..... \$1,535,000**

Underwriter Fee and Expenses ..... \$1,014,000  
Costs of Issuance..... 521,000

***TOTAL USES OF FUNDS* ..... \$195,000,000**

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## II. FINANCIAL ANALYSIS:

### California Institute of Technology Statement of Activities (\$000's)

	Fiscal Year Ended September 30,		
	2008	2007	2006
<b>Changes in unrestricted net assets:</b>			
<b>Revenues:</b>			
Tuition and fees, net	\$ 26,648	\$ 24,701	\$ 20,865
Investment return	(310,257)	343,568	158,652
Gifts	47,717	30,540	28,677
Grants & contracts:			
Jet Propulsion Laboratory - direct	1,771,574	1,745,765	1,579,703
Other United States government - direct	166,422	172,764	155,425
Non-United States government - direct	18,077	16,918	13,783
Indirect cost recovery & management allowance	101,771	103,211	97,852
Auxiliary enterprises	37,980	35,493	34,124
Other	61,794	19,181	22,212
Net assets released from restrictions	41,464	91,082	30,821
Total revenues	<u>1,963,190</u>	<u>2,583,223</u>	<u>2,142,114</u>
<b>Expenses:</b>			
Instruction & academic support	235,272	218,341	211,688
Organized research:			
Jet Propulsion Laboratory	1,771,574	1,745,765	1,579,703
Other Institute research	230,896	224,579	200,908
Institutional support	72,220	60,383	66,121
Auxiliary enterprises	39,402	38,223	36,160
Total expenses	<u>2,349,364</u>	<u>2,287,291</u>	<u>2,094,580</u>
Increase in net assets from operating activities	(386,174)	295,932	47,534
<b>Other changes in unrestricted net assets:</b>			
Decrease in minimum pension liability	-	-	71
Changes in postemployment benefit obligations	10,559	-	-
Resignations & reclassifications of net assets	664	(13,625)	8,667
Loss on retirement of indebtedness	-	-	(5,201)
Cumulative effect of change in accounting principle	-	(1,573)	(9,604)
Increase in unrestricted net assets	<u>(374,951)</u>	<u>280,734</u>	<u>41,467</u>
<b>Changes in temporarily restricted net assets:</b>			
Gifts	3,895	45,306	207,758
Investment return	2,302	5,276	3,132
Net assets released from restrictions	(41,464)	(91,082)	(30,821)
Resignations & reclassifications of net assets	(32,122)	24,067	(8,146)
Increase (decrease) in temporarily restricted net assets	<u>(67,389)</u>	<u>(16,433)</u>	<u>171,923</u>
<b>Changes in permanently restricted net assets:</b>			
Gifts	11,231	32,532	17,065
Investment return	(205)	1,194	786
Other income	91	41	43
Resignations & reclassifications of net assets	31,458	(10,442)	(521)
Increase in permanently restricted net assets	<u>42,575</u>	<u>23,325</u>	<u>17,373</u>
Increase in total net assets	(399,765)	287,626	230,763
TOTAL NET ASSETS, BEGINNING OF YEAR	<u>2,749,150</u>	<u>2,461,524</u>	<u>2,230,761</u>
TOTAL NET ASSETS, END OF YEAR	<u>\$ 2,349,385</u>	<u>\$ 2,749,150</u>	<u>\$ 2,461,524</u>

**California Institute of Technology**  
**Statement of Financial Position (\$000's)**

	As of September 30,		
	<u>2008</u>	<u>2007</u>	<u>2006</u>
<b>ASSETS:</b>			
Cash and cash equivalents	\$ 9,042	\$ 7,979	\$ 13,251
Advances and deposits	5,623	5,180	4,531
Securities lending deposits	19,097	89,100	138,820
Accounts and notes receivable			
US government	197,099	175,500	158,332
Other	21,667	36,028	26,643
Contributions receivable, net	212,964	248,928	328,765
Investments, incl. securities pledged or on loan	1,894,224	2,327,838	1,971,561
Prepaid expenses and other assets	53,203	57,242	57,515
Deferred United States government billings	328,204	332,468	296,630
Property, plant and equipment, net	800,291	748,933	716,159
Total assets	\$ 3,541,414	\$ 3,712,207	\$ 3,712,207
<b>LIABILITIES AND NET ASSETS:</b>			
Accounts payable and accrued expenses	\$ 361,175	\$ 346,002	\$ 314,548
Securities lending deposits	24,000	89,100	138,820
Deferred revenue and refundable advances	30,968	31,465	28,526
Annuities, trust agreements and agency funds	90,869	106,697	97,735
Bonds and notes payable	344,169	347,935	347,700
Accumulated postretirement benefit obligation	340,848	358,847	323,354
Total liabilities	1,192,029	1,280,046	1,250,683
<b>Net assets:</b>			
Unrestricted	1,297,608	1,672,559	1,391,825
Temporarily restricted	389,731	457,120	473,553
Permanently restricted	662,046	619,471	596,146
<b>TOTAL NET ASSETS</b>	<b>2,349,385</b>	<b>2,749,150</b>	<b>2,461,524</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$ 3,541,414</b>	<b>\$ 4,029,196</b>	<b>\$ 3,712,207</b>

Financial Ratios

	<b>Proforma (a)</b>			
	<b>FYE 9/30/08</b>	<u>2008</u>	<u>2007</u>	<u>2006</u>
Debt service coverage (x)	(1.15)	(1.21)	1.30	1.14
Debt to expendable net assets (x)	0.25	0.20	0.16	0.19
Expendable net assets to operations (x)		0.72	0.93	0.89
Margin (%)		(20)	11	2

(a) Recalculates 2008 results to include the impact of this proposed financing

## **Financial Discussion:**

**Caltech appears to have experienced fluctuating revenues over the three-year review period primarily due to market conditions. The investment return losses experienced in FY 2008 do not appear to affect Caltech's operations in a significant manner.**

Over the review period, Caltech's total revenues appear to have fluctuated from \$2.1 billion in FY 2006 to \$2.5 billion in FY 2007, down to \$1.9 billion in FY 2008. This fluctuation is directly attributed to losses in Caltech's investment returns in FY 2008. FY 2007 reflects \$343 million in investment return gains and FY 2008 reflects losses of \$310 million.

Although these investment losses are accounted for in Caltech's total revenue calculations, management at Caltech has assured the Authority that the loss does not affect operations. Sponsored research dollars continue to fuel the operations budget, which has increased approximately 11% over the review period. Net tuition and Gifts also make up a large portion of the revenue stream, both of which have increased approximately 28% and 66% over the review period, respectively.

In addition, Caltech has taken actions to reduce operating expenses. These actions include a combination of budget reductions, structural reorganizations within administrative units, and workforce reduction. Caltech will continue to monitor the impact of the economic situation and will consider additional cost cutting measures as appropriate.

**Caltech's financial strength appears to be sound with approximately \$2.3 billion in total net assets at the end of the review period.**

Caltech's balance sheet appears to be sound. Despite investment losses, Caltech has generally been able to maintain its total net asset levels from FY 2006 to FY 2008. In FY 2006, total net assets equaled \$2.4 billion and increased 12% to \$2.7 billion in FY 2007. Total net assets in FY 2008 dipped to \$2.3 billion, due to the investment losses indicated above.

Debt to expendable net assets has remained historically low. With unrestricted and temporarily restricted net assets exceeding \$1.6 billion in FY 2008, the proforma debt to expendable net assets is a low 0.25x. Although the proforma debt service coverage ratio in FY 2008 is a negative 1.15x, this is directly related to the unrealized investment losses.

### **III. BACKGROUND:**

#### **General:**

California Institute of Technology (“Caltech”) is a privately supported university and research institution located on a 124-acre campus in Pasadena. Founded in 1891, Caltech provides education and training services, primarily for students at the undergraduate, graduate and postdoctoral levels, and performs research, training and other services under grants, contracts and similar agreements with sponsoring organizations that are primarily departments and agencies of the government of the United States. Caltech is known worldwide as one of the outstanding schools of science and engineering.

#### **Administration:**

Caltech has a self-perpetuating Board of Trustees with up to 46 elected Trustees, including the President of the Institution as an ex-officio member, as well as a number of Senior Trustees who govern Caltech. Currently, there are 42 elected Trustees, 14 Senior Trustees (both groups are voting members of the Board) and 22 Life Trustees (non-voting members).

#### **Academic Programs:**

Caltech is organized into six academic divisions: Biology; Chemistry and Chemical Engineering; Humanities and Social Sciences; Engineering and Applied Science; Geological and Planetary Sciences; and Physics, Mathematics and Astronomy.

Research is conducted at Caltech in the areas of developmental biology, neurobiology, molecular chemistry, material sciences, and aeronautics, among other disciplines. The majority of the research conducted at Caltech focuses on obtaining an understanding of the fundamentals of science and engineering, rather than focusing on the applications.

Caltech also operates a number of special research facilities, including several off-campus facilities. The largest off-campus facility operated by Caltech is the Jet Propulsion Laboratory (JPL), a world leader in planetary exploration. Caltech operates JPL for NASA under a cost reimbursement contract. In FY 2008, the JPL budget was approximately \$1.77 billion. The United States government owns JPL’s land, buildings, and equipment.

#### **Accreditation and Affiliations:**

Caltech is fully accredited by the Senior Accrediting Commission of the Western Association of Schools and Colleges (WASC). In March 2009, WASC reaffirmed accreditation of Caltech following a comprehensive review. The Accreditation Board of Engineering and Technology, Inc. (ABET) accredits Caltech’s Chemical Engineering and Engineering and Applied Science programs. ABET last affirmed Caltech’s accreditation in August 2008.



**IV. OUTSTANDING DEBT (\$000's) :**

<b>Issue:</b>	<b>Original Issue Amount</b>	<b>Amount Outstanding as of 09/30/08</b>	<b>Estimated Amount Outstanding After Proposed Financing</b>
<b>Existing Debt:</b>			
CEFA, Series 1994	\$ 30,000	\$ 30,000	\$ -
CEFA, Series 1998	103,865	103,865	15,400
CEFA, Series 2006A	82,500	82,500	82,500
CEFA, Series 2006B	82,500	82,500	82,500
Bank of America revolving bank credit	50,000	50,000	50,000
<b>Proposed:</b>			
<b>CEFA, Series 2009</b>			<b>195,000</b>
Total		\$ 348,865	\$ 425,400

**V. DUE DILIGENCE:**

Due diligence has been completed with regard to the following items:

- Religious Due Diligence
- Legal Review
- Compliance with Section 94212(b) of the Education Code – California Environmental Quality Act

**VI. STAFF RECOMMENDATION:**

Staff recommends the Authority approve a in an amount not to exceed \$195,000,000 subject to a bond rating of at least an “A” category by a nationally recognized rating agency and meeting the Authority’s standard bond covenants for “A” category rated debt.