

**CALIFORNIA EDUCATIONAL FACILITIES AUTHORITY**

**EXECUTIVE SUMMARY**

<p><b>Applicant:</b> California Institute of Technology ("Caltech") 1200 E. California Blvd. Pasadena, California Los Angeles County</p> <p><b>Facility Type:</b> Private University</p> <p><b>Project Locations:</b> Pasadena, CA (Caltech campus) and 2632 East Washington Blvd., Pasadena, CA</p> <p><b>Accreditation:</b> Western Association of Schools and Colleges</p>	<p><b>Amount Requested:</b> \$72,320,000</p> <p><b>Loan Term:</b> 30 Years</p> <p><b>Date Requested:</b> December 5, 2002</p> <p><b>Resolution Number:</b> 205</p>																				
<p><b>Use of Bond Proceeds:</b> Bond proceeds will be used to complete a number of construction, renovation and system development projects to enhance its facilities.</p>																					
<p><b>Type of Issue:</b> Negotiated Public Offering (Variable/Fixed rates depending on market conditions)</p> <p><b>Credit Enhancement:</b> None</p> <p><b>Expected Rating:</b> AAA (Standard &amp; Poor's) / Aaa (Moody's) based on University's credit</p> <p><b>Underwriter:</b> Prager, McCarthy, and Sealy, LLC</p> <p><b>Bond Counsel:</b> Orrick, Herrington and Sutcliffe, LLP</p>																					
<p><b>Financial Status:</b> Despite unrealized investment losses in fiscal year 2001, Caltech's balance sheet remains strong. Caltech is a world renowned research university, which maintains a strong financial position.</p>																					
<p><b>Sources of Revenue – FY 9/30/01 (000's):</b></p> <table border="0"> <thead> <tr> <th></th> <th align="right"><u>Amount</u></th> </tr> </thead> <tbody> <tr> <td>Grants and contracts</td> <td align="right">\$1,617,756</td> </tr> <tr> <td>Net assets released from restrictions</td> <td align="right">41,042</td> </tr> <tr> <td>Auxiliary enterprises</td> <td align="right">24,261</td> </tr> <tr> <td>Gifts</td> <td align="right">24,302</td> </tr> <tr> <td>Tuition &amp; Fees, net</td> <td align="right">15,032</td> </tr> <tr> <td>Other</td> <td align="right">18,631</td> </tr> <tr> <td>Investment (loss) return</td> <td align="right"><u>(296,203)</u></td> </tr> <tr> <td>Total unrestricted revenue</td> <td align="right"><u>\$1,444,821</u></td> </tr> </tbody> </table>			<u>Amount</u>	Grants and contracts	\$1,617,756	Net assets released from restrictions	41,042	Auxiliary enterprises	24,261	Gifts	24,302	Tuition & Fees, net	15,032	Other	18,631	Investment (loss) return	<u>(296,203)</u>	Total unrestricted revenue	<u>\$1,444,821</u>		
	<u>Amount</u>																				
Grants and contracts	\$1,617,756																				
Net assets released from restrictions	41,042																				
Auxiliary enterprises	24,261																				
Gifts	24,302																				
Tuition & Fees, net	15,032																				
Other	18,631																				
Investment (loss) return	<u>(296,203)</u>																				
Total unrestricted revenue	<u>\$1,444,821</u>																				
<table border="0"> <thead> <tr> <th colspan="2"><b>Sources of funds:</b></th> <th colspan="2"><b>Uses of funds:</b></th> </tr> </thead> <tbody> <tr> <td>Par amount of bonds</td> <td align="right">\$72,320,000</td> <td>Capital expenditures</td> <td align="right">\$80,000,000</td> </tr> <tr> <td>Borrowers funds</td> <td align="right"><u>38,998,900</u></td> <td>Acquire/renovate building</td> <td align="right">19,000,000</td> </tr> <tr> <td>Total Sources</td> <td align="right"><u>\$111,318,900</u></td> <td>Financing Costs</td> <td align="right"><u>12,318,900</u></td> </tr> <tr> <td></td> <td></td> <td>Total Uses</td> <td align="right"><u>\$111,318,900</u></td> </tr> </tbody> </table>		<b>Sources of funds:</b>		<b>Uses of funds:</b>		Par amount of bonds	\$72,320,000	Capital expenditures	\$80,000,000	Borrowers funds	<u>38,998,900</u>	Acquire/renovate building	19,000,000	Total Sources	<u>\$111,318,900</u>	Financing Costs	<u>12,318,900</u>			Total Uses	<u>\$111,318,900</u>
<b>Sources of funds:</b>		<b>Uses of funds:</b>																			
Par amount of bonds	\$72,320,000	Capital expenditures	\$80,000,000																		
Borrowers funds	<u>38,998,900</u>	Acquire/renovate building	19,000,000																		
Total Sources	<u>\$111,318,900</u>	Financing Costs	<u>12,318,900</u>																		
		Total Uses	<u>\$111,318,900</u>																		
<p><b>Legal Review:</b> No information was disclosed to question the financial viability or legal integrity of the Applicant.</p>																					
<p><b>Staff Recommendation:</b> Staff recommends the Authority approve a resolution in an amount not to exceed \$72,320,000 for California Institute of Technology, subject to a bond rating of at least "A" by a nationally recognized rating agency and subject to the security and reporting requirements of the CEFA issuance guidelines for "A" or higher rated bond issues.</p>																					

**STAFF SUMMARY AND RECOMMENDATION**

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

December 5, 2002  
Resolution Number: 205

**I. PURPOSE OF FINANCING:**

Caltech plans to complete a number of construction, renovation, and system development projects to enhance its facilities. Equity, donations, and bond proceeds will be used to fund these projects, which are described below:

**Capital Expenditures .....\$80,000,000**

*Expansion of cogeneration system ..... \$10,000,000*  
Caltech will expand its cogeneration capacity through the replacement of the existing turbine and heat recovery boiler system.

*Construction of two parking structures ..... 18,600,000*  
Caltech will construct an approximate 458-space underground parking structure, south of California Boulevard. Caltech will also construct an approximate 400-space surface parking structure on Holliston Avenue.

*Construction dormitory space..... 12,000,000*  
Caltech will create dormitory space to accommodate undergraduate students displaced during the major renovation of the South Undergraduate Houses. The dormitory space may subsequently be converted to apartments to accommodate graduate and post-doctoral students.

*Energy Conservation Projects ..... 6,200,000*  
Caltech will implement several energy conservation projects to reduce campus consumption of energy and provide for more efficient operation.

*Noyer Lab Renovation ..... 3,200,000*  
Caltech will renovate 9,000 square feet in the basement of Noyes Laboratory. The renovations will accommodate new wet labs, offices, a class 600 cleanroom and a class 100 cleanroom.

*Geology & Planetary Science Renovations for new appointments ..... 1,200,000*  
Caltech will undertake three laboratory renovations. The renovations will include computing rooms, laboratory and office space, and post doctorate and student work areas.

*Energy Conservation Related Deferred Maintenance  
and Capital Renewal projects ..... 5,200,000*  
Caltech has approximately \$220 million in deferred maintenance and capital renewal deficiencies.

*Thermal Energy Storage* ..... 6,300,000  
 Caltech will construct a six million gallon thermal energy storage chilled water system to take advantage of off-peak, reduced electrical rates.

*Parking Structure and Astrophysics Laboratory Site Work* ..... 3,600,000  
 Caltech intends to perform extensive site work south of California Boulevard to prepare for a parking structure and related Master Plan requirements, and to clear the combined site in preparation for the construction of the Astrophysics Laboratory and the proposed underground parking structure.

*Other projects* ..... 3,000,000  
 Campus Elevator Renovations ..... 1,000,000  
 Athletic Track and Field Refurbishment..... 700,000  
 Internet 2 Cabling Project ..... 600,000  
 Classroom Upgrades ..... 400,000  
 Americans with Disabilities Act Compliance Projects ..... 300,000

*Miscellaneous Deferred Maintenance and Renovation Projects*..... 10,700,000

**Acquire and renovate building** ..... **19,000,000**

Caltech is proposing to purchase a former medical building. Caltech plans to renovate the building and use it as dormitory, and/or research facilities and/or administrative offices. Caltech is currently in the exploration process.

**Financing Costs** ..... **12,318,900**

Capitalized interest..... 9,545,000  
 Original issuance discount ..... 1,670,000  
 Underwriter’s discount..... 602,000  
 Cost of issuance ..... 501,900

***TOTAL USES OF FUNDS*** ..... **\$111,318,900**

Financing Structure:

- Public offering, fixed rate and/or variable rate
- 30 year term
- No credit enhancement
- Expected credit rating: AAA (S & P) and Aaa (Moody’s)

## II. FINANCIAL ANALYSIS:

**California Institute of Technology**  
**Statement of Activities**  
(Unrestricted)  
(000s)

	Fiscal Year Ended September 30,		
	2001	2000	1999
<b>REVENUES</b>			
Tuition and Fees, net	\$ 15,032	\$ 15,723	\$ 15,597
Investment (loss) return	(296,203)	346,382	227,489
Gifts	24,302	42,440	20,284
Grants and contracts	1,617,756	1,479,896	1,529,993
Auxiliary enterprises	24,261	21,454	22,169
Other	18,631	39,673	18,966
Net assets released from restrictions	41,042	11,659	15,660
<b>Total revenues</b>	<b>1,444,821</b>	<b>1,957,227</b>	<b>1,850,158</b>
<b>EXPENSES</b>			
Instruction and academic support	164,088	134,185	116,980
Organized research	1,549,737	1,415,834	1,473,243
Institutional support	73,977	69,423	70,683
Auxiliary enterprises	30,105	25,831	24,957
Plant operation and maintenance	-	26,191	35,114
Other	-	51,434	2,488
<b>Total unrestricted expenses</b>	<b>1,817,907</b>	<b>1,722,898</b>	<b>1,723,465</b>
(Decrease) increase in unrestricted net assets before a cumulative effect of an accounting change and redesignations of net assets	(373,086)	-	-
Cumulative effect of an accounting change	(40,317) <sup>(1)</sup>	-	-
Redesignations and reclassifications of net assets	7,565	-	-
<b>(Decrease) Increase in Unrestricted Net Assets</b>	<b>(405,838)</b>	<b>234,329</b>	<b>126,693</b>
Unrestricted net assets, beginning of year	1,596,653	1,362,324	1,235,631
<b>Unrestricted net assets, end of year</b>	<b>\$ 1,190,815</b>	<b>\$ 1,596,653</b>	<b>\$ 1,362,324</b>

(1) During fiscal 2001, Caltech changed its depreciation lives assigned to its building from an overall life of 40 years to specific lives for each building ranging from 10 to 50 years which resulted in this cumulative effect.

California Institute of Technology  
Statement of Financial Position  
(000s)

	As of September 30,		
	2001	2000	1999
<b>Assets</b>			
Cash and cash equivalents	\$ 602	\$ 867	\$ 645
Advances on grants and contracts	5,102	-	-
Accounts and notes receivable, net	217,061	218,843	221,615
Contribution receivable, net	76,170	52,813	43,869
Investments	1,411,082	1,780,695	1,396,103
Deferred United States government billing	180,746	165,810	150,522
Prepaid expenses and other assets	102,135	103,734	101,661
Property, plant and equipment, net	547,991	571,440	623,138
<b>TOTAL ASSETS</b>	<b>\$ 2,540,889</b>	<b>\$ 2,894,202</b>	<b>\$ 2,537,553</b>
<b>Liabilities</b>			
Accounts payable and accrued expenses	\$ 288,508	\$ 281,829	\$ 262,873
Deferred revenue and refundable advances	28,452	22,954	21,528
Annuities, trust agreements and agency funds	77,333	87,574	73,137
Long-term debt	159,526	143,291	148,821
Accumulated postretirement benefit obligations	190,368	168,022	148,942
<b>Total Liabilities</b>	<b>744,187</b>	<b>703,670</b>	<b>655,301</b>
<b>Net Assets</b>			
Unrestricted	1,190,815	1,596,653	1,362,324
Temporarily Restricted	125,109	157,883	123,405
Permanently Restricted	480,778	435,996	396,523
<b>Total Net Assets</b>	<b>1,796,702</b>	<b>2,190,532</b>	<b>1,882,252</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$ 2,540,889</b>	<b>\$ 2,894,202</b>	<b>\$ 2,537,553</b>

Financial Ratios:

	Proforma (a) FYE September 30, 2001			
Debt service coverage (x)	(8.39)	(9.17)	38.06	24.70
Debt/Unrestricted net assets (x)	.19	.12	.11	.11
Margin (%)		(25.82%)	11.97%	6.85%
Current Ratio (x)		5.05	5.50	5.35

(a) Recalculates 2001 audited results to include the payment of this proposed financing.

## **Financial Discussion:**

### **Despite unrealized investment losses in fiscal year 2001, Caltech's balance sheet remains strong.**

During fiscal year 2000, net assets increased by \$308 million to \$2.2 billion. During fiscal year 2001, net assets decreased \$353 million primarily due to investment losses. Despite this loss, Caltech's balance sheet remains strong with net assets of \$1.8 billion. Unaudited preliminary results for the year ended September 30, 2002 indicate a slight improvement for the debt service coverage ratio of negative 2.36. In order to minimize investment losses, Caltech shifted some of the investments from domestic equities to alternative investments.

Sponsored research dollars continue to fuel the operating budget and comprise approximately 58% of operating revenues. In total, unrestricted revenue in fiscal year 2001 increased by \$130 million over fiscal 2000. Consistent with revenue, organized research remains the most significant expense category of approximately 41% of operating expenses. In total, unrestricted expenses increased by \$95 million with most expense categories increasing by an average rate of a modest 3.5% with the exception of utility expense in fiscal year 2001. Utility costs increased 71% as a result of the energy situation that was experienced throughout California.

### **Caltech is a world renowned research university, which maintains a strong financial position.**

Caltech has a diverse revenue base, which helps assure operating stability, and its balance sheet exhibits substantial strength, highlighted by a sizable \$1.8 billion net asset base and minimal debt. The most significant portion of revenues is derived from federal grants and contracts. Caltech's largest contract (over \$1 billion per year) is with the National Aeronautics and Space Administration (NASA) to operate the prestigious Jet Propulsion Laboratory, a world leader in planetary exploration.

Management anticipates an improving financial performance over the next three years. A \$1.4 billion capital campaign entered the public phase in October 2002. Last fall, Caltech received the largest gift ever made to an educational institution of \$600 million from Intel co-founder Gordon Moore and his wife Betty. Caltech also generates significant support from other sources including endowment income, tuition and fees, and private gifts.

### III. STUDENT, COLLEGE COSTS, AND FACULTY STATISTICS:

The following tables provide a summary of freshman and graduate applications, admissions, matriculations, enrollments, and degrees awarded for each of the five academic years shown:

#### APPLICATION POOL

Academic Year	Freshmen			Graduate		
	<u>Applications</u>	<u>Admission</u>	<u>Matriculation</u>	<u>Applications</u>	<u>Admission</u>	<u>Matriculation</u>
2002-03	2,615	560	252	4,579	509	254
2001-02	3,365	515	214	3,747	654	269
2000-01	3,515	473	205	3,886	622	245
1999-00	2,894	520	234	3,669	591	241
1998-99	2,944	542	254	3,879	558	190

#### ENROLLMENT AND DEGREES

Academic Year	Enrollment			Degrees Awarded		
	<u>Undergraduate</u>	<u>Graduate</u>	<u>Total</u>	<u>Bachelor</u>	<u>Advanced</u>	<u>Total</u>
2002-03	939	1,181	2,120	N/A	N/A	N/A
2001-02	842	1,116	2,058	249	265	514
2000-01	929	1,039	1,968	204	279	483
1999-00	907	982	1,889	202	241	443
1998-99	901	957	1,858	198	270	468

## Tuition and Fees

Students at Caltech must attend on a full-time basis. Tuition for graduate and undergraduate students is the same. Following is a five-year summary of full-time annual tuition, room and board is provided below.

### **TUITION, ROOM AND BOARD**

Academic Year	Tuition	Room & Board	Annual <u>Percent Increase</u>	
			Tuition	Room & Board
2002-03	\$22,119	\$6,999	4.7%	7.0%
2001-02	\$21,120	\$6,543	5.8%	5.9%
2000-01	\$19,959	\$6,180	2.5%	3.0%
1999-00	\$19,476	\$5,881	1.6%	2.0%
1998-99	\$19,166	\$5,700	1.9%	3.2%

### ***Faculty***

In 2000-01 academic year, there were over 1,162 faculty members including postdoctoral fellows at Caltech. The undergraduate student to professorial faculty ratio is 3.1:1 and the full-time equivalent staff to professorial faculty are either tenured or on a tenure track.

### **FACULTY SUMMARY**

Academic Year	Tenured Full-time	Other Full-time	Part Time FTE	Total FTE*
2002-03	229	45	0	274
2001-02	236	43	0	279
2000-01	245	42	1	287
1999-00	243	32	1	276
1998-99	242	33	1	276

\*Excludes postdoctoral fellows.



#### **IV. BACKGROUND:**

##### **General:**

California Institute of Technology (“Caltech”) is a privately supported university and research institution located in Pasadena on a campus of approximately 124 acres. With over 1,000 faculty (including postdoctoral fellows), an enrollment of approximately 900 undergraduate students, and approximately 1,200 graduate students, Caltech is known worldwide as one of the outstanding schools of science and engineering. Caltech also has a major science and engineering research center.

##### **Administration:**

A self-perpetuating Board of Trustees with 45 elected Trustees, plus the President of the Institution as an ex-officio member, as well as a number of Senior Trustees govern Caltech. Currently, there are 14 Senior Trustees (voting members of the Board) and 19 Life Trustees (non-voting members).

##### **Accreditations:**

The Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges (WASC) accredits Caltech. WASC last affirmed Caltech’s accreditation in 1999 with a scheduled reaffirmation visit in Fall of 2008. 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 2002 with a scheduled reaffirmation visit for September 2006.

##### **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 currently being conducted at Caltech in the areas of developmental biology, neurobiology, molecular chemistry, material sciences, and aeronautics. 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 JPL, a world leader in planetary exploration. Caltech operates JPL for NASA under a cost reimbursement contract. JPL has a budget of approximately \$1.4 billion. The United States Government owns JPL’s land, buildings, and equipment. The vice president of Caltech is also the Director of JPL.

##### **Competition:**

Caltech is known as one of the outstanding schools of science and engineering in the country. The University is also a major science and engineering research center. As a result, the University can be highly selective in its admission process and does not face any significant competitive pressure from other Universities. In fact, the SAT score of incoming freshmen has consistently been around 1,500 for the last ten years, an average that is one of the highest in the nation. The 2002-03 freshman average SAT was 1,510.

**V. OUTSTANDING DEBT:**

<b>Issue Name:</b>	<b>Original Amount</b>	<b>Amount Outstanding As of 9/30/01</b>	<b>Estimated Amount Outstanding after Proposed Financing</b>
<b>Existing</b>			
CEFA, California Institute of Technology, Series 1994	\$30,000,000	\$30,000,000	\$30,000,000
CEFA, California Institute of Technology, Series 1998	103,865,000	97,526,000	97,526,000
Notes payable – Bank of America	32,000,000	32,000,000	32,000,000
<b>Proposed</b>			
CEFA, California Institute of Technology, Series 2003			72,320,000
Totals		\$159,526,000	\$231,846,000

**V. LEGAL REVIEW:**

Staff has reviewed the Applicant’s responses to the questions contained in the Legal Status portion of the Application. No information was disclosed to question the financial viability or legal integrity of this applicant.

**VII. STAFF RECOMMENDATION:**

Staff recommends the Authority approve a resolution in an amount not to exceed \$72,320,000 for California Institute of Technology, subject to a bond rating of at least “A” by a nationally recognized rating agency and subject to the security and reporting requirements of the CEFA issuance guidelines for “A” or higher rated bond issues.