

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

<p><b>Applicant:</b> Carnegie Institution of Washington ("Carnegie") 1530 P Street, N.W. Washington, D.C. 20005-1910</p> <p><b>Facility Type:</b> Research Institution</p> <p><b>Project Locations:</b> The Observatories, 813 Santa Barbara Street, Pasadena, CA 91101 Los Angeles County Las Campanas, Chile</p>	<p><b>Amount Requested:</b> \$38,300,000</p> <p><b>Date Requested:</b> February 25, 2010</p> <p><b>Resolution Number:</b> 271</p>																
<p><b>Use of Proceeds:</b> Proceeds will be used to refund all or a portion of outstanding CEFA Series 1993B and 2006A bonds.</p>																	
<p><b>Type of Issue:</b> Negotiated public offering, 30-year maturity, fixed interest rate</p> <p><b>Security Loan Provision:</b> General Obligation Pledge</p> <p><b>Credit Enhancement:</b> None</p> <p><b>Underlying Credit Rating:</b> Aaa (Moody's) / AA+ (S&amp;P)</p> <p><b>Senior Manager:</b> Barclays Capital</p> <p><b>Bond Counsel:</b> Orrick, Herrington &amp; Sutcliffe LLP</p>																	
<p><b>Environmental Benefits:</b> Because this is a refinancing of existing debt, environmental benefits are not applicable to this financing.</p>																	
<p><b>Financial Overview:</b> Carnegie has experienced fluctuating revenues over the review period primarily due to market conditions. Carnegie's financial strength appears to be sound with approximately \$687 million in total net assets.</p>																	
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;"><u>Sources of funds:</u></th> <th colspan="2" style="text-align: left;"><u>Uses of funds:</u></th> </tr> </thead> <tbody> <tr> <td style="width: 25%;">Par Amount of Bonds</td> <td style="width: 25%; text-align: right;">\$38,300,000</td> <td style="width: 25%;">Refunding</td> <td style="width: 25%; text-align: right;">\$35,800,000</td> </tr> <tr> <td>Original Issue Discount</td> <td style="text-align: right;"><u>(1,888,275)</u></td> <td>Financing Cost</td> <td style="text-align: right;"><u>613,725</u></td> </tr> <tr> <td>Total Sources</td> <td style="text-align: right;"><u>\$36,413,725</u></td> <td>Total Uses</td> <td style="text-align: right;"><u>\$36,413,725</u></td> </tr> </tbody> </table>		<u>Sources of funds:</u>		<u>Uses of funds:</u>		Par Amount of Bonds	\$38,300,000	Refunding	\$35,800,000	Original Issue Discount	<u>(1,888,275)</u>	Financing Cost	<u>613,725</u>	Total Sources	<u>\$36,413,725</u>	Total Uses	<u>\$36,413,725</u>
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<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 \$38,300,000 for the Carnegie Institution of Washington subject to a bond rating of at least an "A" category by a nationally recognized rating agency and meeting the standard bond issuance guidelines for "A" category rated debt. Macias Gini &amp; O'Connell, LLP, the Authority's financial analyst, has reviewed all relevant financial documentation submitted by Carnegie Institution of Washington to the Authority and has advised of its concurrence with the Authority's staff recommendation.</p>																	

**STAFF SUMMARY AND RECOMMENDATION**

**Carnegie Institution of Washington (“Carnegie”)**

February 25, 2010  
Resolution No. 271

**I. PURPOSE OF FINANCING:** Carnegie is embarking on a plan to restructure its debt in order to position itself with a more affordable and stable fixed interest rate structure. Accordingly, this refunding will allow for the termination of the standby bond purchase agreement with SunTrust Bank.

**Refunding ..... \$35,800,000**

Carnegie plans to refund all or a portion of the CEFA Series 1993B and CEFA Series 2006A bonds.

The CEFA Series 1993B bonds bear interest at variable money market rates and were originally issued to finance the Magellan telescope project in Las Campanas, Chile and the renovation and construction of the educational and research facilities of the Observatories in Pasadena, CA..

The CEFA Series 2006A bonds are weekly variable rate demand bonds. The bonds were originally issued to refinance the CEFA Series 1993A bonds. The CEFA Series 1993A bonds also funded the Magellan telescope project and the facilities of the Observatories.

Liquidity for both series of bonds is currently provided by a standby bond purchase agreement with SunTrust Bank. Upon refunding of the bonds, the liquidity facilities with SunTrust Bank may be terminated.

**Financing Costs ..... \$613,725**

Cost of Issuance ..... \$345,625  
Underwriter’s Fee ..... 268,100

***TOTAL USES OF FUNDS ..... \$36,413,725***

## II. FINANCIAL ANALYSIS:

### Carnegie Institution of Washington Statement of Financial Position

	As of June 30,		
	<u>2009</u>	<u>2008</u>	<u>2007</u>
<b>ASSETS:</b>			
Cash and cash equivalents	\$ 3,587,777	\$ 957,861	\$ 1,896,601
Accrued investment income	46,430	138,050	265,104
Contributions receivable	5,519,038	6,885,460	4,928,969
Accounts receivable and other assets	16,750,719	6,474,614	12,685,334
Bond proceeds held by trustee	39	121,904	122,106
Investments	633,525,474	895,939,989	838,384,075
Property and equipment	157,980,529	162,108,756	164,296,421
Total assets	<u>\$ 817,410,006</u>	<u>\$ 1,072,626,634</u>	<u>\$ 1,022,578,610</u>
<b>LIABILITIES AND NET ASSETS:</b>			
Accounts payable and accrued expenses	\$ 9,759,780	\$ 27,217,376	\$ 10,308,534
Deferred revenue	40,746,194	36,539,753	34,987,592
Bonds payable	65,358,062	65,303,339	65,248,695
Accrued postretirement benefits	14,560,478	14,486,199	14,327,973
Total liabilities	<u>130,424,514</u>	<u>143,546,667</u>	<u>124,872,794</u>
<b>Net assets:</b>			
Unrestricted	206,347,417	264,490,808	814,958,725
Temporarily restricted	425,774,379	609,844,386	27,990,125
Permanently restricted	54,863,696	54,744,773	54,756,966
<b>TOTAL NET ASSETS</b>	<u>686,985,492</u>	<u>929,079,967</u>	<u>897,705,816</u>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<u>\$ 817,410,006</u>	<u>\$ 1,072,626,634</u>	<u>\$ 1,022,578,610</u>

#### Financial Ratios

	<b>Proforma</b>			
	<b><u>FYE 6/30/09</u></b>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Debt service coverage (x)	4.97 (a)	12.97	(26.40)	15.85
Debt to expendable net assets (x)	0.11	0.10	0.07	0.08
Expendable net assets to operations (x)		7.64	11.64	11.54
Margin		(248%)	1%	61%

(a) Recalculates FY 2009 results to include the impact of this proposed financing

**Carnegie Institution of Washington**  
**Statement of Activities**  
**Unrestricted**

	Year Ended June 30,		
	2009	2008	2007
<b><i>Revenues and Support:</i></b>			
External Revenue:			
Grants and contracts	\$ 34,257,350	\$ 33,051,740	\$ 31,280,089
Contributions and gifts	454,649	713,216	1,967,795
Net losses on disposals of property	-	(49,772)	(22,822)
Other income	11,514,006	(18,624,082)	7,075,827
Net external revenue	46,226,005	15,091,102	40,300,889
Investment (loss) income	(56,947,004)	25,747,268	135,374,238
Net assets released from restriction	34,463,209	35,078,878	10,499,954
Total revenues and other support	23,742,210	75,917,248	186,175,081
<b><i>Expenses:</i></b>			
Program expenses:			
Terrestrial magnetism	11,584,642	11,635,917	11,083,178
Observatories	19,460,830	18,455,315	17,816,485
Geophysical laboratory	14,202,009	14,125,190	13,096,369
Embryology	8,925,327	8,593,858	8,635,996
Plant biology	10,506,356	10,518,171	9,928,992
Global ecology	8,087,259	4,263,800	3,936,862
Other programs	1,273,575	661,776	609,667
Total program expenses	74,039,998	68,254,027	65,107,549
Administrative and general expenses	8,654,348	6,853,537	7,967,307
Total expenses	82,694,346	75,107,564	73,074,856
Change in net assets before adoption of FASB Statement No. 158 and net assets reclassification based on endowment legislation	(58,952,136)	809,684	113,100,225
Effect of adoption of recognition provisions of FASB Statement No. 158	-	-	(771,001)
Pension related changes other than net periodic postretirement benefit cost	808,745	631,205	-
Net asset reclassification based on recently enacted endowment legislation	-	(551,908,806)	-
Change in net assets	(58,143,391)	(550,467,917)	112,329,224
UNRESTRICTED NET ASSETS, BEGINNING OF YEAR	264,490,808	814,958,725	702,629,501
UNRESTRICTED NET ASSETS, END OF YEAR	\$ 206,347,417	\$ 264,490,808	\$ 814,958,725

## **Financial Discussion:**

**Carnegie has experienced fluctuating revenues over the review period primarily due to market conditions.**

Carnegie reports that it relies upon the return on its endowment investments, grants and contracts from federal agencies and private foundations, and donations and gifts as its primary source of revenue. Over the three-year review period, grants and contracts have increased nearly 10%, from \$31.3 million in FY 2007 to \$34.3 million in FY 2009. Some of the recent significant grants awarded to Carnegie include a \$15 million grant from the Department of Energy for a new Energy Frontier Research in Extreme Environment Center and a \$6.8 million grant from the Moore Foundation for the Carnegie Airborne Observatory. The increase in grants and contracts has helped offset Carnegie's endowment decline in FY 2009.

At the end of FY 2009, Carnegie experienced a steep decline in its endowment. The decline was consistent with the general trend in the financial markets and investment performance during this period and was also consistent with the experience of other similar endowments at institutions of higher education and nonprofit organizations. To remedy this loss, Carnegie has restricted future budgets as well as reducing endowment spending.

In 2008, the District of Columbia enacted the Uniform Prudent Management of Institutional Funds Act, which requires Carnegie to classify the portion of donor-restricted endowment fund that is not classified as permanently restricted net assets as temporarily restricted net assets until appropriated for expenditure. As a result of this legislation, the Institute reclassified approximately \$552 million from unrestricted net assets to temporarily net assets in FY 2008. This reclassification coupled with an increase in unrealized gains on investments negatively affected the debt service coverage ratio for FY 2008. However, it should be noted that these are non-operational charges and in fact, total net assets increased in FY 2008 from FY 2007.

**Carnegie's financial strength appears to be sound with approximately \$687 million in total net assets.**

Carnegie's balance sheet appears to be sound. Despite investment losses, Carnegie has generally been able to maintain its total net asset levels from FY 2007 to FY 2009. In FY 2007, total net assets equaled \$897.7 million and increased 3% to \$929.1 million in FY 2008. Total net assets in FY 2009 dipped to \$687.0 million, primarily due to the investment losses indicated above.

Carnegie has effectively managed its long-term debt as reflected in their impressive debt service coverage levels. Carnegie has approximately \$65.3 million in long term debt as compared to nearly \$687.0 million in total net assets. For FY 2009, Carnegie's debt service coverage ratio is a solid 12.97x . With this financing, the proforma debt service coverage ratio is still acceptable at 4.97x, indicating Carnegie's likely ability to support the additional debt.

### **III. BACKGROUND:**

#### **General:**

Carnegie Institution of Washington (the “Institution”) is a federally chartered private, nonprofit corporation engaged in basic research and advanced education in astronomy, biology, and the earth sciences. Carnegie is currently organized into six departments: (i) The Carnegie Observatories (the “Observatories”) headquartered in Pasadena, California, (ii) the Department of Plant Biology, (iii) the Department of Global Ecology both located in Palo Alto, California (at Stanford University), (iv) the Department of Terrestrial Magnetism, (v) the Geophysical Laboratory, both located in Washington, D.C., and (vi) the Department of Embryology in Baltimore, Maryland.

Andrew Carnegie founded Carnegie Institution of Washington in 1902 to provide scholars with the facilities and freedom to pursue their investigations and to encourage the application of their discoveries for the benefit of humankind. Since Carnegie’s initial incorporation in the District of Columbia in 1902 and its reincorporation by Act of Congress in 1904, it has provided its scholars with the facilities, equipment, and learning environment needed to make discoveries that have served as critical building blocks of scientific advancement.

Carnegie Observatories, headquartered in Pasadena, was founded in 1904. For many years, the telescopes at the Mount Wilson observatory, and the Mount Palomar telescope used to be the world’s largest telescopes. The Magellan Project, a consortium made up of the Harvard-Smithsonian Center for Astrophysics, the Massachusetts Institute of Technology, the University of Michigan, the University of Arizona and Carnegie, operates two 6.5-meter telescopes at Las Campanas, Chile. Carnegie uses data obtained in Chile to conduct research and analysis at its Observatories in Pasadena. The consortium shared the total capital costs of the project. The contributions from other members of the consortium, totaling approximately \$32 million, are recognized by Carnegie as deferred revenue.

#### **Administration:**

Carnegie is governed by the Board of Trustees (the “Board”), which may include up to 27 members. The Board is responsible for the direction and management of Carnegie’s affairs and the control and disposal of its property, endowment, and other funds. The Board operates under Carnegie’s Articles of Incorporation and Bylaws. The Board meets at least once a year. At the annual meeting each May the Board makes the appropriations for the next fiscal year. There are seven Standing Committees of the Board of Trustees. These Committees are concerned with the entire spectrum of the activities of Carnegie.

#### **Accreditation:**

Although Carnegie is not accredited by any association of schools and colleges, the expertise of the faculty and fellows and the quality of facilities and equipment offer unique research and educational opportunities. Carnegie’s many notable scientists have included two Nobel Prize recipients in the field of genetics, as well as George Ellery Hale and Edwin Hubble in the field of astronomy.

### **Academic Programs:**

Carnegie's six departments are composed of:

- The Carnegie Observatories headquartered in Pasadena, California;
- The Departments of Plant Biology and Global Ecology in Stanford, California;
- The Department of Terrestrial Magnetism and the Geophysical Laboratory in Washington, D.C.; and
- The Department of Embryology in Baltimore, Maryland.

### **The Observatories:**

The Las Campanas facility enables Carnegie's astronomers and scientists in Pasadena to analyze and interpret data acquired in Chile, plan future observations, and propose improvements to the telescopes' instrumentation.

The Carnegie Observatories' scientists conduct all of their research at the Pasadena observatory, and the staff, located in Chile, is primarily technicians. Scientists occasionally travel to Chile to learn about the telescope but stay for only a short time. Virtually all of the astronomy research and analysis occurs in Pasadena from the data received in Chile. Chile continues to be an optimal location for a telescope of this magnitude. California residents benefit from Carnegie's data and research because the Pasadena observatory continues to hold regular seminars in astronomy and astrophysics. Despite the Hubble telescope in space, the Chilean telescope is still important to the study of astronomy and is in high demand from researchers all over the world. Today, Carnegie has more of a financial and educational presence in California.

The telescope and facilities in Las Campanas, Chile are not accessible to the residents of Chile; use is restricted to members of Carnegie, partnering institutions and the scientific community.

The Observatories also offer opportunities for undergraduate students to participate in the research activities of the scientific staff, and have a long-standing program at the Claremont Colleges. Carnegie's scientists participate at the weekly astrophysics conference at the nearby California Institute of Technology (Caltech) campus and occasionally supervise the dissertation research of Ph.D. students from Caltech and other institutions.

#### IV. OUTSTANDING DEBT :

<u>Issue:</u>	<u>Original Issue Amount</u>	<u>Amount Outstanding as of 06/30/09</u>	<u>Estimated Amount Outstanding After Proposed Financing</u>
<b>Existing Debt:</b>			
CEFA, Series 1993B	17,500,000	17,500,000	-
CEFA, Series 2006A	18,300,000	18,000,000	-
Maryland Heath and Higher Education Facilities Authority, Series 2002	30,000,000	29,900,000	30,580,000 *
<b>Proposed:</b>			
CEFA, Series 2010			<u>38,300,000</u>
Total		<u>\$ 65,400,000</u>	<u>\$ 68,880,000</u>

\* Fixed rate refinancing bonds were issued in February 2010

#### 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 Resolution in an amount not to exceed \$38,300,000 for the Carnegie Institution of Washington subject to a bond rating of at least an “A” category by a nationally recognized rating agency and meeting the standard bond issuance guidelines for “A” category rated debt.