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Office of the President

TO MEMBERS OF THE COMMITTEE ON FINANCE:

DISCUSSION ITEM

For Meeting of November 16, 2011

ANNUAL ACTUARIAL VALUATIONS FOR THE UNIVERSITY OF CALIFORNIA RETIREMENT PLAN AND ITS SEGMENTS AND FOR THE 1991 UNIVERSITY OF CALIFORNIA-PUBLIC EMPLOYEES' RETIREMENT SYSTEM VOLUNTARY EARLY RETIREMENT INCENTIVE PROGRAM

EXECUTIVE SUMMARY

Each year, the Regents' Consulting Actuary, the Segal Company, performs an actuarial valuation of the University of California Retirement Plan (UCRP). Consistent with the funding policy approved by the Regents for the campus and medical center portion of UCRP, and separate agreements with the Department of Energy (DOE) for the funding of each Laboratory segment of UCRP, the annual valuation includes highlights of results for each of these segments as noted below. All UCRP assets are maintained in one trust account and are available to pay benefits of all members, regardless of the segment to which their benefits are allocated. Highlights of the separate annual valuation of the 1991 University of California-Public Employees' Retirement System Voluntary Early Retirement Incentive Program (UC-PERS Plus 5 Plan) are also provided.

Issues: ***UCRP Valuation Results***

- The June 30, 2011 overall market value of assets of UCRP was $41.9 billion, up from $34.6 billion for the prior Plan Year. The assets include a transfer of approximately $1.1 billion from the University Short-Term Investment Pool (STIP) and reflect approximately a 22 percent net investment return after adjusting for contributions, benefit disbursements and plan expenses. The June 30, 2011 overall actuarial value of assets was $42.8 billion.
- The July 1, 2011 overall Actuarial Accrued Liability for UCRP grew to $51.8 billion from $47.5 billion for the prior Plan Year.
- UCRP's overall funded ratio on an actuarial value of assets basis decreased from 87 percent as of July 1, 2010 to 82 percent as of July 1, 2011. On a market value of assets basis the funded ratio increased from 73 percent to 81 percent.

- The UCRP Normal Cost calculated as of the beginning of Plan Year 2011-2012 is $1.40 billion or 17.2 percent of the $8.16 billion covered payroll at July 1, 2011. After adjusting for contributions being made throughout the year, the UCRP Normal Cost is 17.83 percent of covered payroll.
- Based on the funding policy approved by the Regents in September 2010, the total funding policy contribution rate for the campus and medical center segment is 26.35 percent of projected covered payroll, or $2.16 billion effective for Plan Year 2012-2013.

Previous Action: **September 2010**: The Regents approved increases in the contribution rates for the Plan Years beginning July 1, 2011 and July 1, 2012. The University rate will increase to seven percent of covered payroll and ten percent of covered payroll for those Plan Years while the pre-tax rate for most members will increase to 3.5 percent of covered payroll and five percent of covered payroll (less $19 per month for all members). Member rates are subject to collective bargaining for represented employees.

December 2010: The Regents approved changes to University-sponsored post-employment benefits including a UCRP new hire tier effective July 1, 2013. The Board also delegated to the President the discretion and authority to fully fund the UCRP annual required contribution (ARC) as quickly as practical.

March 2011: The Regents delegated to the President the authority and discretion to make additional contributions toward the UCRP ARC using one or more of the following options: borrowing from the Short Term Investment Pool (STIP), restructuring of University debt, or funding from other internal or external sources.

July 2011: Following the recommendation of the UCRP Consulting Actuary, the Regents adopted changes to several of UCRP's actuarial assumptions as a result of the experience study covering the period July 1, 2006 through June 30, 2010, effective for the July 1, 2011 valuation.

Concurrent Action: Proposal to increase the level of University and member contribution rates starting July 1, 2013 for current members

BACKGROUND

Each year, the Regents' Consulting Actuary, the Segal Company, performs an actuarial valuation of UCRP and of the UC-PERS Plus 5 Plan.

The purpose of the annual actuarial valuation for UCRP is to disclose UCRP's funded position as of the beginning of the current Plan Year, analyze the preceding year's experience, and determine total funding policy contribution rates for the coming Plan Year. The results of the actuarial valuation as of July 1, 2011 are summarized and presented in the Executive Summary section of the UCRP actuarial valuation report.

The purpose of the annual actuarial valuation for the UC-PERS Plus 5 Plan is to review the fiscal position of its trust account and funding status to assure that the UC-PERS Plus 5 Plan remains adequately funded. The results of the actuarial valuation as of July 1, 2011 are summarized and presented in the Executive Summary section of the UC-PERS Plus 5 actuarial valuation report.

Appendix I contains a History of Overall Actuarial Valuation Highlights for UCRP. A summary of the annual actuarial valuation results for July 1, 2011 by UCRP segment and for the UC-PERS Plus 5 Plan is provided in Appendix II. A glossary of actuarial terms is provided in Appendix III.

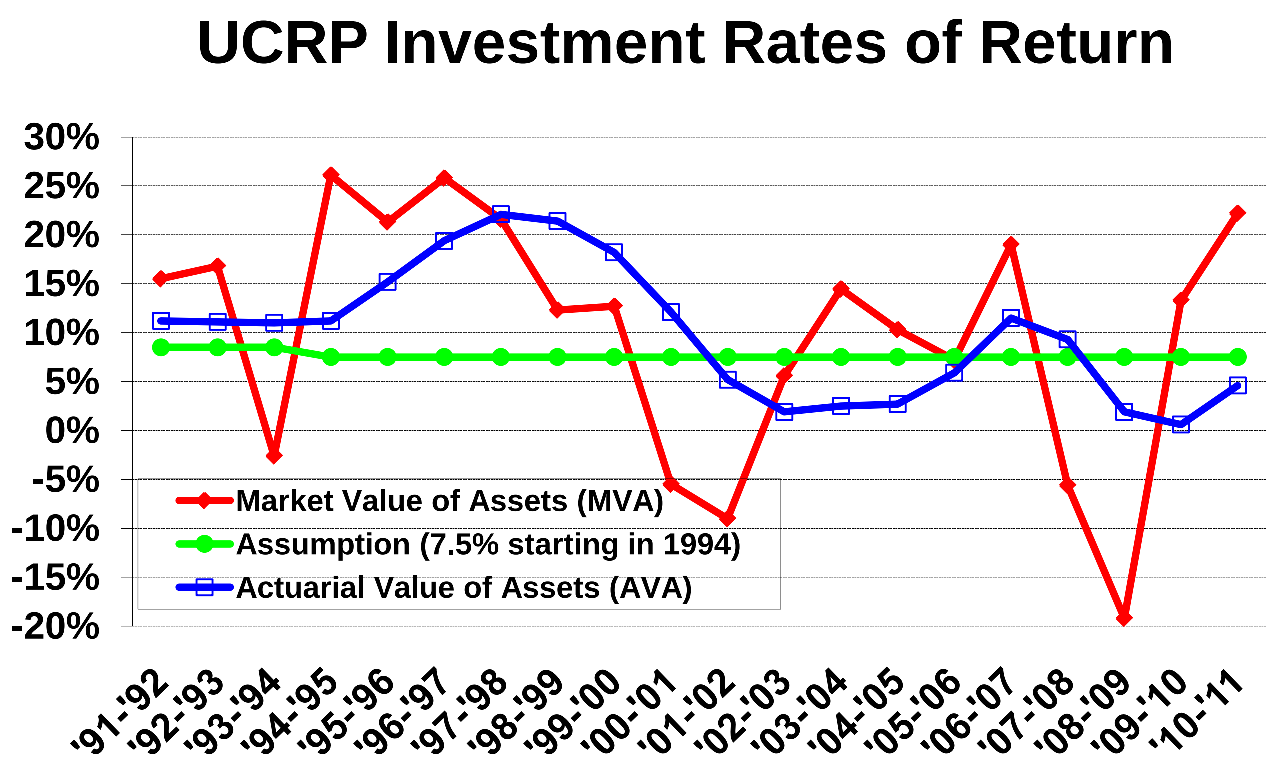
UCRP Valuation Results

As of July 1, 2011, there were 56,296 retired members and beneficiaries, 32,159 vested terminated members, 28,744 terminated non-vested members and 115,568 active members in UCRP for a total of 232,767 members included in this valuation. This compares to a total of 223,867 members included in the July 1, 2010 valuation.

As of June 30, 2011, the UCRP market value of assets, after subtracting benefit claims currently payable and other current payables of UCRP, was $41.9 billion as compared to $34.6 billion as of the end of the prior Plan Year. During Plan Year 2010-2011 UCRP experienced approximately a 22 percent investment return on the market value of its assets.

When determining UCRP’s funded status ratio, UCRP’s Actuarial Accrued Liability (AAL) is compared to the actuarial (smoothed) value of assets. The “smoothing” method reduces the impact of market volatility by recognizing in each year only 20 percent of the investment gains and losses in each of the preceding five years. As of June 30, 2011, this five-year period includes two years of investment returns which were less favorable than UCRP’s assumed 7.5 percent earnings rate and three which were more favorable. The net result is a 4.6 percent investment return for Plan Year 2010-2011 on an actuarial value of assets basis.

The following chart shows, for the most recent twenty-year period, the investment rates of return on the market value of assets (MVA) (red line), and on the smoothed actuarial value of assets (AVA) (blue line) as compared to UCRP’s assumed earnings rate of 7.5 percent (green line).



Comparing the market value of assets of $41.9 billion to the actuarial (smoothed) value of assets of $42.8 billion shows that the total unrecognized investment loss as of July 1, 2011 is $885 million. This investment loss will be recognized in the determination of the actuarial value of assets for valuation purposes over the next few years. This means that, if the Plan earns the assumed rate of investment return of 7.5 percent per year (net of investment expenses) on a **market value** basis, there will be investment losses on the actuarial value of assets in the next few years. More information concerning the impact of these unrecognized investment losses is presented later in this discussion.

UCRP's overall AAL increased from $47.5 billion as of July 1, 2010 to $51.8 billion as of July 1, 2011. UCRP's funded status ratio decreased from 87 percent as of July 1, 2010 to 82 percent as of July 1, 2011 as a result of several factors, including:

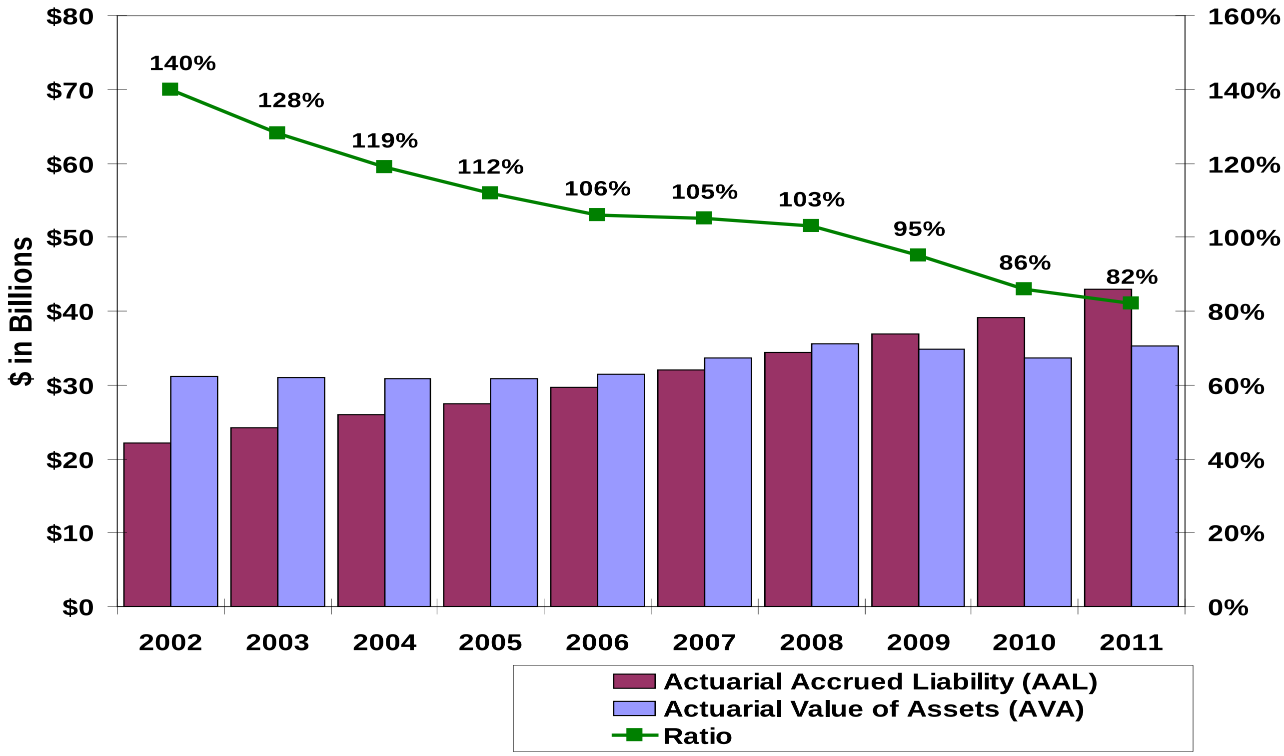
- the changes in actuarial assumptions from the Actuarial Experience Study,
- an investment loss on the smoothed (actuarial) value of assets, and
- the impact of the approved contributions being less than the funding policy contributions during Plan Year 2010-2011.

Note that on a market value of assets basis the funded status ratio increased from 73 percent to 81 percent.

The “normal cost” of UCRP is the annual amount, expressed as a percent of payroll (the “Normal Cost rate”) that must be accrued over the total career of each active member to fully provide for future UCRP benefits, measured as of the valuation date. Under the entry age normal method, the UCRP Normal Cost calculated as of the beginning of the 2011-2012 Plan Year is 17.20 percent of covered payroll.

Overview of Funded Status of Campus and Medical Center Segment of UCRP

The following chart shows the recent history of the campus and medical center segment of UCRP’s overall AAL growth along with the decrease in the funded status ratio on an actuarial value of assets (AVA) basis.



VALUATION HIGHLIGHTS

Total Funding Policy Contribution Rates for Plan Year 2012-2013

After applying the UCRP funding policy to the results of this year’s UCRP campus and medical center segment, the total funding policy contribution rate for Plan Year 2012-2013 is 26.3 percent of projected covered payroll. The components of the total funding policy contribution rate are shown below:

Normal Cost	17.19%
Amortization of Unfunded Actuarial Accrued Liability (or Surplus)	8.22%
	======
Total funding policy contribution rate, before timing adjustment	25.41%

Total funding policy contribution rate, after timing adjustment	26.35%

The total funding policy contribution rate includes a timing adjustment to account for contributions being made throughout the year. No additional adjustment is included to account for contributions not starting until the Plan Year beginning July 1, 2012.

The total funding policy contribution as an estimated dollar amount for the campus and medical center segment of UCRP is $2.165 billion based on projected covered payroll of $8.22 billion for Plan Year 2012-2013 Plan Year.

Restart of Contributions

In February 2009, the Regents approved restarting contributions for the campus and medical center segment of UCRP on or about April 15, 2010. The initial University contribution rate was four percent of covered payroll and the initial member rate was the amount that was previously redirected to the Defined Contribution Plan. In September 2010, the Regents approved increases in these rates for the Plan Years beginning July 1, 2011 and July 1, 2012. The University rate increased to seven percent of covered payroll on July 1, 2011 and will increase on July 1, 2012 to ten percent of covered payroll while the pre-tax rate for most members increased to 3.5 percent of covered payroll and will increase to five percent of covered payroll (less $19 per month for all members), respectively. Member rates are subject to collective bargaining for represented employees.

The University contributions and the member contributions for the Lawrence Berkeley National Laboratory (LBNL) segment are made on the same basis as determined for the campus and medical center segment of UCRP, subject to the terms of the University's contract with the Department of Energy and subject to collective bargaining, if applicable, for represented members at LBNL.

Funding of "Modified" Annual Required Contribution

In December 2010, the Regents delegated to the President discretion to fully fund the modified Annual Required Contribution (ARC) for the Plan from Fiscal Year 2010-2011 through 2018-2019 and the full ARC after that. The modified ARC consists of the Normal Cost plus interest on the Unfunded Actuarial Accrued Liability (UAAL). In March 2011, the Regents granted authority to transfer up to $2.1 billion from the STIP to UCRP during 2010-2011 and 2011-2012 to fully fund the modified ARC. During 2010-2011, approximately $1.1 billion was transferred into the Plan at the President's discretion.

Since the sum of the approved contributions and amount transferred is less than the total funding policy contributions, this will create additional future actuarial losses that will lead to increases in future total funding policy contributions. The accumulated total of these contribution losses is reported under Governmental Accounting Statement (GAS) 27 as a Net Pension Obligation (NPO).

Impact of Unrecognized Investment Losses for UCRP

The unrecognized investment losses represent about two percent of UCRP's market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the $885 million in market losses is expected to have an impact on the Plan's future funded ratio and future total funding policy contributions. This potential impact may be illustrated as follows:

- If the deferred losses were recognized immediately in the actuarial value of assets, the funded percentage would decrease from 82.5 percent to 80.8 percent.
- If the deferred losses were recognized immediately in the actuarial value of assets, the total funding policy contribution rate would increase from 26.35 percent of covered payroll to 27.09 percent of covered payroll.

Actuarial Experience Study

As a result of recommendations from the July 1, 2006 through June 30, 2010 Actuarial Experience Study that were approved by the Regents in July 2011, several actuarial assumptions were changed in this valuation. These assumptions were modified to more closely reflect anticipated future experience. These changes increased the Plan's Actuarial Accrued Liability by $1.8 billion and the total funding policy contribution rate by 2.29 percent of covered payroll. The change to the mortality assumption was the most significant of the changes in assumptions.

New Pension Tier

In December 2010, the Regents approved a new tier of UCRP benefits for members hired on or after July 1, 2013, which would increase the early retirement age from 50 to 55, but retain many of the current features of UCRP. The new tier would not offer lump sum cashouts, inactive member cost-of-living adjustments (COLAs), or subsidized survivor annuities for spouses and domestic partners. For represented employees, the new tier changes are subject to collective bargaining.

UC-PERS Plus 5 Plan Valuation Results

On October 18, 1990, the Regents approved an early retirement incentive program for University employees who were covered under the California Public Employees' Retirement System (CalPERS) pension plan. The most tax-effective method to provide this group with a benefit generally comparable to the incentive offered to UCRP members was to establish a "frozen" defined benefit plan described in Section 401(a) of the Internal Revenue Code.

The UC-PERS Plus 5 Plan required campus and Laboratory locations to fund their individual liabilities over no longer than five years. The UC-PERS Plus 5 Plan is a standard terminal funding arrangement under a wasting trust which, in this instance, is obligated to make fixed lifetime payments under either a single life or joint and survivor annuity option. The assets must remain in the trust until all benefit obligations have been satisfied. Market value of assets, rather than a smoothed value, is used for actuarial valuation purposes.

In Revenue Ruling 89-87, the Internal Revenue Service clarified that a wasting trust is subject to the standard pension plan qualification, funding and reporting requirements. The Regents' Consulting Actuary, the Segal Company, reviews the trust's fiscal position and funding status annually to assure that the UC-PERS Plus 5 Plan is adequately funded.

As of July 1, 2011, the net assets of the wasting trust were $67.5 million and the Actuarial Accrued Liability was $45.7 million. The surplus decreased by approximately $1.3 million due to the change in the post-retirement mortality assumption and the change in Plan provisions to include a one-time ad hoc COLA as of April 1, 2011 and an annual COLA effective July 1, 2011. This decrease in the surplus was offset somewhat by investment performance that was more favorable than assumed (approximately a 23 percent investment return versus the assumed 7.5 percent investment return).

The Regents approved a one-time ad hoc COLA of 15.19 percent for all UC-PERS Plus 5 Plan annuitants as of April 1, 2011 and an annual COLA provision, effective July 1, 2011, using the equivalent UCRP formula. The annual COLA will be the lesser of: (1) the same percentage increase as provided for UCRP annuitants whose retirement income commenced July 2, 1991 up through and including July 1, 1992, and (2) the percentage that the UC-PERS Plus 5 Plan's funded ratio for COLA purposes (determined as of the previous July 1) exceeds 100 percent.

For valuation purposes (but not for determining the funded ratio for COLA purposes), it is assumed that all future annual COLAs will be paid and they have been reflected in the UC-PERS PLUS 5 Plan liabilities.

As of July 1, 2011, there were 679 retired members and beneficiaries in the UC-PERS Plus 5 Plan, down from 695 as of July 1, 2010.

APPENDIX I – University of California Retirement Plan Overall Actuarial Valuation Highlights

APENDIX II – Summary of Annual Actuarial Valuation Results by UCRP Segment and for the UC-PERS Plus 5 Plan

APPENDIX III – Glossary of Actuarial Terms

Attachment 1 - UCRP Actuarial Valuation Report as of July 1, 2011;
Attachment 2 - UC-PERS Plus 5 Plan Actuarial Valuation Report as of July 1, 2011

APPENDIX I

UNIVERSITY OF CALIFORNIA RETIREMENT PLAN
Overall Actuarial Valuation Highlights
(Dollars in 000,000's)

Valuation Date	7/1/2002	7/1/2003	7/1/2004[1]	7/1/2005	7/1/2006	7/1/2007[2]	7/1/2008	7/1/2009	7/1/2010	7/1/2011[3]
Asset Information										
(1) Plan Assets at Fair Market Value (MV)	$34,442	$35,327	$39,216	$41,858	$43,362	$48,105	$42,023	$32,259	$34,574	$41,873
(2) Actuarial Value of Assets (AVA)[4]	41,649	41,429	41,293	41,085	41,972	43,434	43,840	42,799	41,195	42,757
Actuarial Valuation Results – Contribution Basis										
(3) Normal Cost (Beginning of Plan Year)	1,095	1,177	1,179	1,250	1,305	1,276	1,262	1,339	1,354	1,404
(4) % Payroll (Beginning of Plan Year)	15.15%	15.22%	15.04%	15.34%	15.81%	16.76%	16.90%	17.00%	16.94%	17.20%
(5) Actuarial Accrued Liability (AAL: Entry Age)[5]	30,100	32,955	35,034	37,252	40,302	41,437	42,577	45,161	47,504	51,831
(6) Actuarial Value of Assets in Excess of AAL	11,549	8,474	6,259	3,832	1,671	1,997	1,263	-2,362	-6,309	-9,074

[1] Liabilities and costs reflect the economic and demographic assumptions adopted 7/1/2004.

[2] Liabilities and costs reflect the economic and demographic assumptions adopted 7/1/2007.

[3] Liabilities and costs reflect the economic and demographic assumptions adopted 7/1/2011.

APPENDIX II
SUMMARY OF ANNUAL ACTUARIAL VALUATION RESULTS BY UCRP SEGMENT AND FOR THE UC-PERS PLUS 5 PLAN

UCRP Campus and Medical Center Segment Valuation Results

- The June 30, 2011 campus and medical center segment market value of assets was $34.6 billion and the segment actuarial value of assets was $35.3 billion.
- The July 1, 2011 segment Actuarial Accrued Liability was $43.0 billion.
- The segment funded ratio on an actuarial value of assets basis was 82 percent as of July 1, 2011.
- The segment Normal Cost calculated as of the beginning of Plan Year 2011-2012 is $1.36 billion or 17.19 percent of the $7.90 billion covered payroll at July 1, 2011. After adjusting for contributions being made throughout the year, the segment Normal Cost is 17.82 percent of covered payroll.
- Based on the funding policy approved by the Regents, the total funding policy contribution rate is 26.35 percent of projected covered payroll, or $2.16 billion effective for Plan Year 2012-2013.
- At the February 2009 meeting, the Regents approved restarting contributions on or about April 15, 2010. The initial University contribution rate was 4 percent of covered payroll and the initial member rate was the same as the amount that was previously redirected to the Defined Contribution Plan (approximately two percent of covered payroll). In September 2010, the Regents approved increases in these rates for Plan Years beginning July 1, 2011 and July 1, 2012. The University rate increased to seven percent of covered payroll and will increase to ten percent of covered payroll for those Plan Years while the rate for most members increased to 3.5 percent of covered payroll and will increase to five percent of covered payroll (less $19 per month for all member rates). Member rates are subject to collective bargaining for represented employees.
- In September 2010, the Regents approved increasing the amortization period used for any actuarial experience gains or losses from 15 years to 30 years. All amortization bases as of July 1, 2010 were combined and the combined base was amortized as a level dollar amount over 30 years.
- In December 2010, The Regents delegated to the President discretion to fully fund the modified Annual Required Contribution (ARC) for the UCRP from Fiscal Year 2010-2011 through 2018-2019 and the full ARC after that. The modified ARC consists of the Normal Cost plus interest on the Unfunded Actuarial Accrued Liability (UAAL).
- In March 2011, the Regents granted authority to transfer up to $2.1 billion from the STIP to UCRP during Plan Years 2010-2011 and 2011-2012 to fully fund the modified ARC. During Plan Year 2010-2011, University contributions included approximately $1.1 billion that was contributed to UCRP at the President’s discretion.

UCRP Lawrence Berkeley National Laboratory (LBNL) Segment Valuation Results

- The June 30, 2011 LBNL segment market value of assets was $1.68 billion and the segment actuarial value of assets was $1.71 billion.
- The July 1, 2011 segment Actuarial Accrued Liability is $1.74 billion.
- The University contributions and the member contributions for the LBNL segment will be made on the same basis as determined for the campus and medical center segment of UCRP,

subject to the terms of the University's contract with the Department of Energy and subject to collective bargaining, if applicable, for represented members at LBNL.

UCRP Lawrence Livermore National Laboratory (LLNL) Retained Segment Valuation Results

- The June 30, 2011 LLNL segment market value of assets was $2.96 billion and the segment actuarial value of assets was $3.02 billion.
- The July 1, 2011 segment Actuarial Accrued Liability was $3.86 billion.
- Based on a contractual obligation, the required contribution from the Department of Energy (DOE) for Plan Year2011-2012 is $198.3 million.

UCRP Los Alamos National Laboratory (LANL) Retained Segment Valuation Results

- The June 30, 2011 LANL segment market value of assets was $2.65 billion and the segment actuarial value of assets was $2.71 billion.
- The July 1, 2011 segment Actuarial Accrued Liability was $3.22 billion.
- Based on a contractual obligation, the required contribution from the Department of Energy (DOE) for Plan Year 2011-2012 is $108.5 million

UC-PERS Plus 5 Plan Valuation Results

- The June 30, 2011 market value of assets of the UC-PERS Plus 5 Plan was $67.5 million, up from $59.4 million for the prior year, reflecting approximately a 23 percent net investment return.
- The July 1, 2011 Actuarial Accrued Liability for the UC-PERS Plus 5 Plan increased to $45.7 million from $35.5 million for the prior year.
- The UC-PERS Plus 5 Plan funded ratio decreased from 167 percent as of July 1, 2010 to 148 percent as of July 1, 2011.
- The Regents approved a one-time ad hoc COLA of 15.19 percent for all annuitants as of April 1, 2011 and an annual COLA provision, effective July 1, 2011, using the equivalent UCRP formula. The annual COLA will be the lesser of: (1) the same percentage increase as provided for UCRP annuitants whose retirement income commenced July 2, 1991 up through and including July 1, 1992, and (2) the percentage that the UC-PERS PLUS 5 Plan's funded ratio for COLA purposes (determined as of the previous July 1) exceeds 100 percent.

APPENDIX III: GLOSSARY OF ACTUARIAL TERMS

- **Present Value of Benefits (PVB)**: the “value” at a particular point in time of all projected future benefit payments for current plan members. The “future benefit payments” and the “value” of those payments are determined using actuarial assumptions as to future events. Examples of these assumptions are estimates of retirement patterns, salary increases, investment returns, etc. Another way to think of the PVB is that if the plan has assets equal to the PVB and all actuarial assumptions are met, then no future contributions would be needed to provide all future service benefits for all members, including future service and salary increases for active members.

- **Actuarial Cost Method**: allocates a portion of the total cost (PVB) to each year of service, both past service and future service.

- **Normal Cost (NC)**: the cost allocated under the Actuarial Cost Method to each year of active member service.

- **Actuarial Accrued Liability (AAL)**: the value at a particular point in time of all past Normal Costs. This is the amount of assets the plan would have today if the current plan provisions, actuarial assumptions and participant data had always been in effect, contributions equal to the Normal Cost had been made and all actuarial assumptions came true.

- **Actuarial Value of Assets (AVA) or smoothed value**: a market-related value of the plan assets for determining contribution requirements. The AVA tracks the market value of assets over time, smoothes out short-term fluctuations in market values and produces a smoother pattern of contributions than would result from using market value.

- **Market Value of Assets**: the fair value of assets of the plan as reported by the plan’s trustee, typically shown in the plan’s audited financial statements

- **Unfunded Actuarial Accrued Liability (UAAL)**: the positive difference, if any, between the AAL and the AVA.

- **Surplus**: the positive difference, if any, between the AVA and the AAL.

- **Actuarial Value Funded Ratio**: the ratio of the AVA to the AAL

- **Market Value Funded Ratio**: the ratio of the MVA to the AAL

- **Actuarial Gains and Losses**: changes in UAAL or surplus due to actual experience different from what is assumed in the actuarial valuation. For example, if during a given year the assets earn more that the current assumption of 7.5 percent, the amount of earnings above 7.5 percent will cause an unexpected reduction in UAAL, or “actuarial gain” as of the next valuation. These include contribution gains and losses that result from actual contributions made being greater or less than the level determined under the policy.