



**Alabama Public Education Employees'
Health Insurance Plan
Report of Actuary on the Retiree Medical Valuation**

Prepared as of September 30, 2005



Cavanaugh Macdonald

CONSULTING, LLC

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May 30, 2006

Retirement Systems of Alabama
P.O. Box 302150
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Members of the Board:

Governmental Accounting Standards Board Statements No. 43 and 45 require actuarial valuations of retiree medical and other post employment benefit plans. We have submitted the results of the annual actuarial valuation of the Alabama Public Education Employees' Health Insurance Plan (PEEHIP) prepared as of September 30, 2005. While not verifying the data at source, the actuary performed tests for consistency and reasonability. The valuation indicates that an annual required contribution of \$1,086,441,830 payable for the fiscal year ending September 30, 2008 is required to fund the benefits of the PEEHIP in an actuarially sound manner.

The promised medical and drug benefits of the Plan, as well as the Optional Plans, are included in the actuarially calculated contribution rates which are developed using the unit credit actuarial cost method with projected benefits. GASB requires the discount rate used to value a plan be based on the likely return of the assets held in trust to pay benefits. As of September 30, 2005, the Plan does not have assets in trust solely to provide benefits to retirees and their beneficiaries. Therefore, since the previous valuation, the discount rate has been changed from 6% to 4%. If the Plan starts pre-funding benefits, the discount rate may be increased to reflect equity investment the fund may have after pre-funding begins. Gains and losses are reflected in the unfunded accrued liability that is assumed amortized by regular annual contributions as a level percentage of payroll within a 30-year period, on the assumption that payroll will increase by 4.50% annually. The assumptions recommended by the actuary are, in the aggregate, reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan and meet the parameters for the disclosures under GASB 43 and 45. Since the Medicare Part D Employer Retiree Drug Subsidy cannot be used to offset the liability under the current GASB proposed technical bulletin, the impact is not taken into account in this valuation.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the medical plans and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan.



In our opinion, if an asset Trust Fund is established and the required contributions to the Fund are made by the employer from year to year in the future at the levels required on the basis of the successive actuarial valuations, the Plan will operate in an actuarially sound manner.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read 'E. Macdonald'.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in cursive script, appearing to read 'Alisa Bennett'.

Alisa Bennett, EA, MAAA, ACA
Senior Actuary

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**ALABAMA PUBLIC EDUCATION EMPLOYEES'
HEALTH INSURANCE PLAN (PEEHIP)
REPORT OF ACTUARY ON THE RETIREE MEDICAL VALUATION
PREPARED AS OF SEPTEMBER 30, 2005**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation are summarized below:

Valuation Date	September 30, 2005	June 30, 2003*
Number of active members and retirees	199,492**	181,510
Annual salaries (Alabama Teachers)	\$ 4,733,415,807	\$ 4,486,058,170
Assets:		
Market value	\$ 0	\$ 0
Unfunded actuarial accrued liability	\$ 14,611,991,403	\$ 7,836,000,000
Amortization period (years)	30	30
Contribution for fiscal year ending:	September 30, 2008	September 30, 2006
Annual Required Contribution (ARC):		
Normal	\$ 634,660,521	\$ N/A
Accrued liability	<u>451,781,309</u>	<u>N/A</u>
Total	\$ 1,086,441,830	\$ 635,110,000
Annual Required Contribution as a Percent of Payroll	22.95%	14.16%
Discount Rate	4.00%	6.00%

*Results as of June 30, 2003 reported by prior actuarial firm.

**Before participation assumption is applied.

2. The valuation indicates that contributions of \$1,086,441,830 are sufficient to support the current benefits of the Plan. Comments on the valuation results as of September 30, 2005 are given in Section IV and further discussion of the contribution levels is set out in Sections V and VI.
3. Since the previous valuation, the discount rate has been changed from 6% to 4% because the Plan is currently not pre-funded. Schedule C of this report outlines the full set of actuarial assumptions and methods employed in the current valuation. We have shown in Schedule A the decrease in the



liabilities that could be accomplished if the Plan is pre-funded in an actuarially sound manner and thereby utilizes a 6% discount rate.

4. The valuation takes into account the Plan as in effect September 30, 2005. Since the previous valuation, a Retiree Sliding Scale premium based on years of service has been applied to all members who retire on October 1, 2005 or after.

SECTION II - MEMBERSHIP DATA

1. Data regarding the membership of the Plan for use as a basis of the valuation were furnished by the Retirement System office.

SECTION III - ASSETS

1. Schedule B shows information regarding assets for valuation purposes. As of September 30, 2005, no plan assets are held in trust solely to provide benefits to retirees and their beneficiaries in accordance with the terms of the plan.

SECTION IV - COMMENTS ON VALUATION

1. Schedule A of this report outlines the results of the actuarial valuation. The results are shown based on a discount rate of 4% and also at 6%. The valuation was prepared in accordance with the actuarial assumptions and the actuarial cost method, which are described in Schedule C.
2. The valuation shows that the Plan has an actuarial accrued liability of \$8,067,895,709 for benefits expected to be paid on account of the present active membership, based on service to the valuation date. The liability on account of benefits payable to retirees and covered spouses amounts to \$6,544,095,694. The total actuarial accrued liability of the Plan amounts to \$14,611,991,403. Against these liabilities, the Plan has present assets for valuation purposes of \$0. Therefore, the unfunded actuarial accrued liability is equal to \$14,611,991,403.
3. The normal contribution is equal to the actuarial present value of benefits accruing during the current year. The normal contribution is determined to be \$634,660,521.



SECTION V - CONTRIBUTIONS PAYABLE UNDER THE PLAN

ANNUAL REQUIRED CONTRIBUTION

For Fiscal Year Ending September 30, 2008

Annual Required Contribution (ARC):	
Normal	\$ 634,660,521
Accrued Liability	<u>451,781,309</u>
Total	\$ 1,086,441,830

1. The valuation indicates that a normal contribution of \$634,660,521 is required to meet the cost of benefits currently accruing.
2. The unfunded actuarial accrued liability amounts to \$14,611,991,403 as of the valuation date. An accrued liability contribution of \$451,781,309 is sufficient to amortize the unfunded actuarial accrued liability over a 30-year period, based on a 4% investment rate of return and the assumption that the payroll will increase by 4.5% annually. We assume an investment rate of return of 4% since PEEHIP has no assets pre-funded and, therefore, is not able to invest in equity. If the employer were to set up a trust or otherwise set aside assets within PEEHIP that are legally held exclusively for retiree health benefits, the investment rate of return can be increased to reflect the expected return on invested assets and the accrued liability contribution would subsequently decrease.
3. The total Annual Required Contribution is, therefore, \$1,086,441,830 or 22.95% of total active payroll.

SECTION VI - COMMENTS ON LEVEL OF FUNDING

1. The monthly contribution for retirees to opt into the medical plan is based on plan election, Medicare eligibility and election, and tobacco use. For members retiring October 1, 2005 or after, a Retire Sliding Scale premium based on year of service will be applicable. We recommend that the employer place in Trust the assets to fund the cost of the benefits to be provided.



2. The valuation indicates that an increase in the recommended employer contribution rate over last valuation's recommended rate from 14.16% of payroll to 22.95% is required to fund the plan in an actuarially sound manner. This corresponds to a state contribution of \$1,086,441,830 required to meet the cost of benefits currently accruing and provide for the amortization of the unfunded actuarial accrued liability over a period of 30 years. The major cause of the increase in the contribution rate is the decrease in discount rate from 6% to 4% due to the lack of pre-funding retiree medical benefits. If the plan begins pre-funding, the discount rate can be raised back to 6% or possibly even higher.

SECTION VII - ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statements 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the Plan and the employer.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Projected Unit Credit (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)*	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2003*	\$0	\$ 7,836,000,000	\$ 7,836,000,000	0%	\$ 4,486,058,170	174.7%
9/30/2005	0	14,611,991,403	14,611,991,403	0	4,733,415,807	308.7%

*Reported by prior actuarial firm.



2. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at September 30, 2005. Additional information as of the latest actuarial valuation follows.

Valuation date	9/30/2005
Actuarial cost method	Projected unit credit
Amortization method	Level percent of pay, open
Remaining amortization period	30 years
Asset valuation method	Market Value of Assets
Actuarial assumptions:	
Investment Rate of Return*	4.00%
Medical cost trend rate*	12.00%
Ultimate trend rate	6.00%
Year of Ultimate trend rate	2009
Dental trend rate	5.00%
*Includes inflation at	4.50%

The assumed investment rate of return reflects the fact that no assets are set aside within PEEHIP that are legally held exclusively for retire health benefits. If a trust or equivalent arrangement were set up for this purpose, the investment rate of return can be increased. This investment rate of return assumption is lower than the inflation assumption since short-term rates are lower than the assumed inflation.



SCHEDULE A

RESULTS OF THE VALUATION
PREPARED AS OF SEPTEMBER 30, 2005

	4% Discount Rate	6% Discount Rate
1. PAYROLL	\$ 4,733,415,807	\$ 4,733,415,807
2. ACTUARIAL ACCRUED LIABILITY		
Present value of prospective benefits payable in respect of:		
(a) Present active members:	\$ 8,067,895,709	\$ 5,104,709,869
(b) Present retired members and surviving spouses:	<u>6,544,095,694</u>	<u>5,055,264,792</u>
(c) Total actuarial accrued liability	\$14,611,991,403	\$ 10,159,974,661
3. PRESENT ASSETS FOR VALUATION PURPOSES	\$ 0	\$ 0
4. UNFUNDED ACTUARIAL ACCRUED LIABILITY [(2)(C) minus (3)]	\$14,611,991,403	10,159,974,661
5. AMORTIZATION PERIOD	30	30
6. NORMAL CONTRIBUTION	\$ 634,660,521	\$ 372,995,819
7. ACCRUED LIABILITY CONTRIBUTION	451,781,309	419,189,559
8. TOTAL CONTRIBUTION (6) + (7)	\$ 1,086,441,830	\$ 792,185,378
9. TOTAL CONTRIBUTION AS A PERCENT OF PAYROLL (8) ÷ (1)	22.95%	16.74%



SCHEDULE B

PLAN ASSETS

GASB 43 and 45 define plan assets as resources, usually in the form of stocks, bonds, and other classes of investments, that have been segregated and restricted in a trust, or equivalent arrangement, in which (a) employer contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, and (c) assets are legally protected from creditors of the employers or plan administrator, for the payment of benefits in accordance with the terms of the plan. We strongly recommend that the employer set up a trust or otherwise set aside assets within PEEHIP that are legally held exclusively for retiree health benefits and make regular contributions to this trust or equivalent arrangement in accordance with annual actuarial valuations.



SCHEDULE C

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION DATE: September 30, 2005

DISCOUNT RATE: 4.0% per annum, compounded annually.

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions.

Year	Trend	Dental Trend
2005-06	12.0%	5.0%
2006-07	10.5%	5.0%
2007-08	9.0%	5.0%
2008-09	7.5%	5.0%
2009 and beyond	6.0%	5.0%

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase
< 40	0.0%
40 – 44	2.6%
45 – 49	2.6%
50 – 54	3.2%
55 – 59	3.4%
60 - 64	3.7%
65 – 69	3.2%
70 – 74	2.4%
75 – 79	1.8%
80 – 84	1.3%
85 and over	0.0%

Dental costs are not age adjusted.



ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of plan participation and spouse coverage is as follows:

Medical	Under 65	Over 65
Participation	75%	75%
Spouse Coverage	70%	35%

Optional Plans	
Plan	Participation
Hospital Indemnity	10%
Dental	40%
Cancer	10%
Vision	10%

ANNUAL EXPECTED MEDICAL/RX CLAIMS (AGE 65): Following is a chart detailing expected claims for pre and post Medicare for the year following the valuation date. Claims are age-adjusted to age 65.

	Medical/Rx
Pre-65	\$8,501
Post-65	\$2,861

ACTUARIAL METHOD: Costs were determined using the Projected Unit Credit Actuarial Cost Method. The annual service cost is the present value of the portion of the projected benefit attributable to participation service during the upcoming year, and the accumulated postretirement benefit obligation (APBO) is equal to the present value of the portion of the projected benefit attributable to service before the valuation date. Service from hire date through the expected retirement date was used in allocating costs.



SEPARATIONS BEFORE SERVICE RETIREMENT: Representative values of the assumed annual rates of death, disability, and withdrawal are as follows:

<u>Age</u>	<u>Death</u>	<u>Annual Rate of</u>	
		<u>Disability</u>	<u>Withdrawal*</u>
		<u>Male</u>	
20	0.05%	0.05%	23.83%
25	0.06	0.06	11.59
30	0.08	0.07	7.86
35	0.08	0.12	6.08
40	0.09	0.14	4.78
45	0.14	0.24	3.75
50	0.21	0.61	2.82
55	0.36	1.35	1.85
60	0.63	2.50	1.41
65	1.15		
69	1.80		
		<u>Female</u>	
20	0.03%	0.07%	23.83%
25	0.03	0.07	11.14
30	0.03	0.07	7.93
35	0.04	0.10	6.08
40	0.06	0.16	4.35
45	0.09	0.32	3.71
50	0.12	0.65	2.57
55	0.19	0.95	2.07
60	0.34	1.89	1.95
65	0.67		
69	1.08		

*Withdrawal rates are higher during first three years of service.



SERVICE RETIREMENT: Representative values of the assumed annual rates of service retirement are as follows:

For members first eligible for unreduced benefits before age 50 or after age 60, rates are as follows:

<u>Age</u>	<u>Annual Rate</u>	
	<u>Male</u> ¹	<u>Female</u> ²
45	7.0%	4.0%
50	12.0	8.0
55	45.0	45.0
60	15.0	15.0
62	35.0	35.0
65	40.0	40.0
70	100.0	100.0

¹ Retirement rates are increased by 10% in year when member first becomes eligible for unreduced service retirement.

² Retirement rates are increased by 20% in year when member first becomes eligible for unreduced service retirement.

For members first eligible for unreduced benefits on or after age 50 but before age 60, no withdrawal or retirement is assumed to occur for the five years prior to DROP eligibility and 45% are assumed to retire in the first year eligible for DROP participation. The rates, thereafter, are as follows:

<u>Age</u>	<u>Annual Rate</u>	
	<u>Male</u>	<u>Female</u>
58	15.0%	15.0%
60	15.0	15.0
62	35.0	35.0
65	40.0	40.0
70	100.0	100.0

DEATHS AFTER RETIREMENT: Rates of mortality for the period after service retirement are according to the 1982 George B. Buck Men Teachers Mortality Study Table set back one year for males and the UP94 Mortality Table set back one year for females. Special tables are used for the period after disability retirement. Representative values of the assumed annual rates of death after service and disability retirement are as follows:



Annual Rate of Death after

<u>Age</u>	<u>Service Retirement</u>		<u>Disability Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	0.1%	0.1%	3.3%	2.6%
50	0.3	0.1	3.8	2.5
55	0.5	0.2	4.2	2.7
60	0.8	0.4	4.9	3.0
65	1.5	0.8	6.0	3.4
70	2.6	1.4	7.6	4.1
75	3.9	2.2	10.2	5.2
80	5.9	3.8	14.2	6.8
85	9.2	6.6	20.1	9.5
90	14.3	11.2	28.7	13.5
95	20.5	18.4	40.4	19.4



SCHEDULE D

**SUMMARY OF MAIN PLAN PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES**

ELIGIBILITY: Retiree medical eligibility is attained when an employee retires, and is immediately eligible to draw a retirement annuity from the Alabama Teachers Retirement System.

RETIREE CONTRIBUTIONS: Vary based on plan election, dependent coverage, Medicare eligibility and election, and tobacco use. Plan costs are determined for valuation purposes considering claims costs net of member premiums paid.

In November 2004, the Alabama Legislature enacted legislation (Act 2004-649) that required the Public Education Employees' Insurance Board to implement a sliding scale premium on all employees retiring after September 30, 2005, based on their years of service.

The premium for retiree coverage is broken down into the employer share (what PEEHIP pays) and the retiree share. Under the sliding scale, the retiree will still be responsible for the retiree share, however, the employer share will increase or decrease based upon a retiree's years of service. For those employees retiring with 25 years of service, the employer would pay 100% of the employer share of the premium. For each year less than 25, the employer share would be reduced by 2% and the retiree share will be increased accordingly. For each year over 25, the employer share would be increased by 2% and the retiree share reduced accordingly.

Retired Members

The premiums listed below show the retiree's out-of-pocket cost after subtracting the retiree allocation. These rates apply only to members who retire prior to October 1, 2005. All members who retire on or after October 1, 2005 will be subject to the Retiree Sliding Scale premium based on years of service.

Rate	Type of Contract	*Retiree Monthly Out-of-Pocket Expense	Cost to State	Total Premium
A	Individual Coverage/ Non-Medicare Eligible Retired Member	\$ 78.00	\$ 530.00	\$ 608.00
B	Family Coverage/Non-Medicare Eligible Retired Member and Non-Medicare Eligible Dependent(s)	\$ 210.00	\$ 853.00	\$ 1,063.00
C	Family Coverage/Non-Medicare Eligible Retired Member and Dependent Medicare Eligible	\$ 169.00	\$ 754.00	\$ 923.00
D	Individual Coverage/ Medicare Eligible Retired Member	\$ 1.14	\$ 312.86	\$ 314.00
E	Family Coverage/Medicare Eligible Retired Member and Non-Medicare Eligible Dependent(s)	\$ 133.14	\$ 635.86	\$ 769.00
F	Family Coverage/Medicare Eligible Retired Member and Dependent Medicare Eligible	\$ 92.14	\$ 536.86	\$ 629.00

*This applies to the PEEHIP Hospital Medical or any of the HMO Plans and is the monthly amount that will be deducted from a retiree's check.

The out-of-pocket costs for an eligible husband and wife who choose to combine their insurance allocations must be calculated on an individual basis because of the new Retiree Sliding Scale legislation.



The State allocation can be used to purchase the new PEEHIP Supplemental Plan or two optional plans at no cost to the retiree if the retiree is not using the allocation for one of the hospital medical plans. Additional optional plans can be purchased for \$38.00 per month per plan.

Optional Coverage: Active and Retired Members

Cancer	\$38.00/month Individual or Family Coverage
Indemnity	\$38.00/month Individual or Family Coverage
Dental	\$38.00/month Individual or Family Coverage
Vision	\$38.00/month Individual or Family Coverage

Retiree premiums for the four optional plans, Hospital Indemnity, Dental, Cancer and Vision, are \$38 per retiree per month. Since these plans can be purchased with State allocations, it is assumed that 75% of participants in the Dental plan and 50% of participants in the other optional plans are making the \$38 per month contributions.

The University System makes a contribution to PEEHIP for every University retiree regardless of age or plan tier election. For the 2005-2006 fiscal year, this amount is \$388 per month.