Kayne Anderson MLP Investment CO Form N-PX August 15, 2011

OMB APPROVAL

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, DC 20549

FORM N-PX

ANNUAL REPORT OF PROXY VOTING RECORD OF REGISTERED MANAGEMENT INVESTMENT COMPANY

Investment Company Act file number 811-21593

Kayne Anderson MLP Investment Company (Exact name of registrant as specified in charter)

717 Texas Avenue, Suite 3100 Houston, Texas 77002
(Address of principal executive offices) (Zip code)

David J. Shladovsky, Esq. KA Fund Advisors, LLC 717 Texas Avenue, Suite 3100 Houston, Texas 77002 (Name and address of agent for service)

Registrant's telephone number, including area code: (310) 284-6438

Date of fiscal year end: November 30

Date of reporting period: July 1, 2010 - June 30, 2011

Form N-PX is to be used by a registered management investment company, other than a small business investment company registered on Form N-5 (ss.ss. 239.24 and 274.5 of this chapter), to file reports with the Commission, not later than August 31 of each year, containing the registrant's proxy voting record for the most recent twelve-month period ended June 30, pursuant to section 30 of the Investment Company Act of 1940 and rule 30b1-4 thereunder (17

CFR 270.30b1-4). The Commission may use the information provided on Form N-PX in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-PX, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-PX unless the Form displays a currently valid Office of Management and Budget ("OMB") control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. ss. 3507.

ITEM 1. PROXY VOTING RECORD.

Disclose the following information for each matter relating to a portfolio security considered at any shareholder
meeting held during the period covered by the report and with respect to which the registrant was entitled to vote:

(a) The name of the issuer of the portfolio security; (b) The exchange ticker symbol of the portfolio security; (c) The Council on Uniform Securities Identification Procedures ("CUSIP") number for the portfolio security; (d) The shareholder meeting date; (e) A brief identification of the matter voted on; (f) Whether the matter was proposed by the issuer or by a security holder; Whether the registrant cast its vote on the matter; (g) (h) How the registrant cast its vote (e.g., for or against proposal, or abstain; for or withhold regarding election of directors); and (i) Whether the registrant cast its vote for or against management.

SIGNATURES

[See General Instruction F]

Pursuant to the requirements of the Investment Company Act of 1940, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

(Registrant) Kayne Anderson MLP Investment Company

By (Signature and Title)* /s/ Kevin S. McCarthy

Kevin S. McCarthy,

Chairman of the Board of Directors,

Date August 15, 2011 President and Chief Executive Officer

^{*} Print the name and title of each signing officer under his or her signature.

Item 1 – Proxy Voting Record – Attached on behalf of Kayne Anderson MLP Investment Company

Issuer	Symbol	CUSIP	Meeting Date	Matter:	Proposed by (I)ssuer or (S)hrhldr	Vote Cast?	How Voted	For/Against Mgmt
CAPITAL PRODUCT PARTNERS								
L.P.	CPLP	Y11082107	7/22/2010	ELECT: CLASS III DIRECTOR UNTIL THE 2013 ANNUAL MEETING NOMINEE: A. KEITH FORMAN	I	YES	FOR	FOR
				ELECT: CLASS III DIRECTOR UNTIL THE 2013 ANNUAL MEETING NOMINEE: A. EVANGELOS G. BAIRACTARIS	I	YES	FOR	FOR
WILLIAMS PIPELINE PARTNERS								
L.P.	WMZ	96950K103	8/31/2010	APPROVE & ADOPT: AGREEMENT AND PLAN OF MERGER DATED AS OF MAY 24, 2010 BY AND AMONG WILLIAMS PARTNERS L.P., WILLIAMS PARTNERS GP LLC, WILLIAMS PARTNERS OPERATING LLC, WPZ OPERATING COMPANY MERGER SUB LLC, WILLIAMS PIPELINE PARTNERS L.P. AND WILLIAMS PIPELINE GP, LLC, AS IT MAY BE AMENDED FROM TIME TO TIME AND THE MERGER SUB WITH AND INTO WILLIAMS PIPELINE PARTNERS L.P. CONTEMPLATED BY THE MERGER AGREEMENT.		YES	FOR	FOR

EAGLE ROCK ENERGY PARTNERS,

L.P. EROC 26985R104 9/17/2010 APPROVE:

		_						
				THE TERMS OF THE AMENDED AND RESTATED EAGLE ROCK ENERGY PARTNERS, L.P. LONG TERM INCENTIVE PLAN	I	YES	FOR	FOR
BUCKEYE GP								
HOLDINGS								
L.P.	BGH	11816710.	5 11/16/201	OAPPROVE: THE FIRST AMENDED AND RESTATED AGREEMENT AND PLAN OF MERGER BY AND AMONG BUCKEYE PARTNERS, L.P., BUCKEYE GP LLC, THE GENERAL PARTNER OF THE PARTNERSHIP, GRAND OHIO, LLC, BUCKEYE GP HOLDINGS L.P. AND MAINLINE MANAGEMENT LLC, THE MERGER AND THE TRANSACTIONS				
				CONTEMPLATED THEREBY	I	YES	FOR	FOR
BUCKEYE								
PARTNERS,								
L.P.	BPL	11823010	1 11/17/201	0APPROVE:				
				THE FIRST AMENDED AND RESTATED AGREEMENT AND PLAN OF MERGER BY AND AMONG BUCKEYE PARTNERS, L.P., BUCKEYE GP LLC, THE GENERAL PARTNER OF THE PARTNERSHIP, GRAND OHIO, LLC, BUCKEYE GP HOLDINGS L.P. AND MAINLINE MANAGEMENT LLC, DATED AS OF AUGUST 18, 2010 AND THE TRANSACTIONS CONTEMPLATED THEREBY, ALL AS MORE FULLY DESCRIBED IN THE PROXY STATEMENT	I	YES	FOR	FOR
				Approval:				
				THE AMENDED AND RESTATED AGREEMENT OF LIMITED PARTNERSHIP OF THE PARTNERSHIP	I	YES	FOR	FOR
					-	120	1010	1 010
	NRGP	45661Q10	7 11/2/2010) APPROVE:				

INERGY HOLDINGS, L.P.

> FIRST AMENDED AND RESTATED AGREEMENT AND PLAN OF MERGER BY AND AMONG INERGY, L.P., INERGY GP, LLC, THE MANAGING GENERAL PARTNER OF INERGY. HOLDINGS, INERGY HOLDINGS GP, LLC, THE GENERAL PARTNER OF HOLDINGS, NRGP LIMITED PARTNER, LLC, A WHOLLY OWNED SUBSIDIARY OF HOLDINGS GP AND NRGP MS. LLC A WHOLLY OWNED SUBSIDIARY OF HOLDINGS **GP DATED AS OF SEPTEMBER** 3, 2010, AS SUCH AGREEMENT MAY BE AMENDED FROM TIME TO TIME, PURSUANT TO WHICH, AMONG OTHER THINGS, MERGERCO WILL MERGE WITH AND INTO HOLDINGS, THE SEPARATE **EXISTENCE OF MERGERCO** WILL CEASE AND HOLDINGS WILL SURVIVE AND CONTINUE TO EXIST AS A **DELAWARE LIMITED** PARTNERSHIP, SUCH THAT **IMMEDIATELY FOLLOWING CONSUMMATION OF THE** MERGER, HOLDINGS GP WILL CONTINUE TO BE THE SOLE GENERAL PARTNER OF HOLDINGS, AND HOLDINGS GP AND NEW NRGP LP WILL REMAIN AS THE ONLY **HOLDERS OF LIMITED** PARTNER INTERESTS IN HOLDINGS. Ι YES FOR **FOR**

TRANSACT:

OTHER BUSINESS AS MAY PROPERLY COME BEFORE THE SPECIAL MEETING AND ANY ADJOURNMENT OF POSTPONEMENT THEREOF

YES FOR

Ι

FOR

COPANO ENERGY,								
L.L.C.	CPNO	217202100	11/17/2010		I	YES	FOR	FOR
				CHANGES TO THE TERMS OF SERIES A CONVERTIBLE PREFERRED UNITS TO PROVIDE FOR FULL VOTING RIGHTS FOR SUCH UNITS AND FULL CONVERTIBILITY OF SUCH UNITS INTO COMMON UNITS ON A ONE-FOR-ONE BASIS AND THE ISSUANCE OF ADDITIONAL COMMON UNITS UPON CONVERSION OF SERIES A CONVERTIBLE PREFERRED UNITS				
DENIN								
PENN VIRGINIA GP HOLDINGS,								
L.P.	PVG	70788P105	2/16/2011	CONSIDER AND VOTE: ON THE APPROVAL AND	I	YES	FOR	FOR
				ADOPTION OF (A) THE AGREEMENT AND PLAN OF MERGER BY AND AMONG PENN VIRGINIA RESOURCE PARTNERS, L.P., PENN VIRGINIA RESOURCE G.P., LLC, PVR RADNOR, LLC, PENN VIRGINIA GP HOLDINGS, L.P. AND PVG GP, LLC, THE GENERAL PARTNER OF HOLDINGS, (B) MERGER & (C) TRANSACTIONS CONTEMPLATED THEREBY, ALL AS MORE FULLY DESCRIBED IN THE PROXY STATEMENT.				
				CONSIDER AND VOTE:	I	YES	FOR	FOR
				UPON ANY PROPOSAL THAT MAY BE PRESENTED TO ADJOURN THE PARTNERSHIP SPECIAL MEETING TO A LATER DATE, IF NECESSARY, TO SOLICIT ADDITIONAL PROXIES IN THE EVENT THAT THERE ARE INSUFFICIENT VOTES IN FAVOR OF ANY OF	•			

THE FOREGOING PROPOSALS

PENN VIRGINIA RESOURCE PARTNERS,							
L.P.	PVR	707884102 2/16/	ON THE APPROVAL AND ADOPTION OF (A) THE AGREEMENT AND PLAN OF MERGER BY AND AMONG PENN VIRGINIA RESOURCE PARTNERS, L.P., PENN VIRGINIA RESOURCE G.P., LLC, PVR RADNOR, LLC, PENN VIRGINIA GP HOLDINGS, L.P. AND PVG GP, LLC, THE GENERAL PARTNER OF HOLDINGS, (B) MERGER & (C) TRANSACTIONS CONTEMPLATED THEREBY, ALL AS MORE FULLY DESCRIBED IN THE PROXY STATEMENT.	{	YES	FOR	FOR
			CONSIDER AND VOTE:	I	YES	FOR	FOR
			UPON THE APPROVAL AND ADOPTION OF THE FOURTH AMENDED AND RESTATED AGREEMENT OF LIMITED PARTNERSHIP OF THE PARTNERSHIP				
			CONSIDER AND VOTE:	I	YES	FOR	FOR
			UPON ANY PROPOSAL THAT MAY BE PRESENTED TO ADJOURN THE PARTNERSHIP SPECIAL MEETING TO A LATER DATE, IF NECESSARY, TO SOLICIT ADDITIONAL PROXIES IN THE EVENT THAT THERE ARE INSUFFICIENT VOTES IN FAVOR OF ANY OF THE FOREGOING PROPOSALS	Γ	1120	TOR	TOK
MAGELLAN							
MIDSTREAM PARTNERS							
L.P.	MMP	559080106 4/27/		I	YES	FOR	FOR
			JAMES C. KEMPNER MICHAEL N. MEARS				

		JAMES R. MONTAGUE				
		AMEND: LONG TERM INCENTIVE PLAN	I	YES	FOR	FOR
		VOTE: ON EXECUTIVE COMPENSATION	I	YES	FOR	FOR
		VOTE: FREQUENCY OF VOTE TO APPROVE COMPENSATION OF EXECUTIVES	I	3YR	AGAINST	1 YEAR
ONEOK, INC.	OKE 682680103 5/25/201	JAMES C. DAY JULE H. EDWARDS WILLIAM L. FORD JOHN W. GIBSON BERT H. MACKIE JIM W. MOGG PATTYE L. MOORE GARY D. PARKER EDUARDO A. RODRIGUEZ GERAL B. SMITH DAVID J. TIPPECONNIC	I	YES	FOR	FOR
		RATIFY: PRICEWATERHOUSECOOPERS LLP AS THE INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR YE DEC 31, 2011	I	YES	FOR	FOR
		APPROVE: ADVISORY VOTE ON EXECUTIVE COMPENSATION	I	YES	FOR	FOR
		APPROVE: ADVISORY VOTE ON THE FREQUENCY OF HOLDING THE ADVISORY VOTE ON EXECUTIVE COMPENSATION	I	1 YEAR	FOR	FOR
LEGACY RESERVES LP	LGCY 524707304 5/11/201	1 ELECT: CARY D. BROWN KYLE A. MCGRAW DALE A . BROWN	I	YES	FOR	FOR

				G. LARRY LAWRENCE WILLIAM D. SULLIVAN WILLIAM R. GRANBERRY KYLE D. VANN				
				APPROVE: EXECUTIVE COMPENSATION	I	YES	FOR	FOR
				VOTE: ON FREQUENCY OF ADVISORY VOTES ON EXECUTIVE COMPENSATION	I	3 YEAR A	GAINST	1 YEAR
				RATIFY:	I	YES	FOR	FOR
				APPOINTMENT OF BDO USA, LLP AS INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FY ENDING DECEMBER 31, 2011	ŕ	LES	TOR	TOR
BUCKEYE								
PARTNERS, L.P.	RPI.	118230101	6/7/2011	ELECT:	I	YES	FOR	FOR
				FORREST E. WYLIE JOSEPH A. LASALA, JR. MARTIN A. WHITE				
				RATIFY: DELOITTE & TOUCHE LLP	I	YES	FOR	FOR
				VOTE	.	MEG	EOD	EOD
				VOTE: ADVISORY RESOLUTION ON EXECUTIVE COMPENSATION	I	YES	FOR	FOR
				VOTE:	I	3 YEAR	FOR	FOR
				FREQUENCY OF FUTURE ADVISORY VOTES ON EXECUTIVE COMPENSATION	•	3 ILIK	TOK	TOR
COPANO								
ENERGY,								
L.L.C.	CPNO	217202100	5/18/2011	ELECT:	I	YES	FOR	FOR
				JAMES G. CRUMP ERNIE L. DANNER SCOTT A. GRIFFITHS				
				MICHAEL L. JOHNSON				
				MICHAEL G. MACDOUGALL				
				R. BRUCE NORTHCUTT T. WILLIAM PORTER				
				WILLIAM L. THACKER				

				RATIFY: DELOITTE & TOUCHE LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR 2011	I	YES	FOR	FOR
				APPROVE: AMENDMENT TO THE COMPANY'S LONG-TERM INCENTIVE PLAN TO	Ι	YES	FOR	FOR
				INCREASE THE NUMBER OF COMMON UNITS FROM 5,000,000 TO 6,200,000				
				A DDD OVE	.	MEG	EOD	EOD
				APPROVE: AMENDMENT TO THE COMPANY'S LONG-TERM INCENTIVE PLAN TO EXTEND THE TERM OF THE PLAN FROM NOVEMBER 15, 2014 TO NOVEMBER 15, 2019	I	YES	FOR	FOR
				VOTE:	I	YES	FOR	FOR
				ON THE COMPENSATION PHILOSOPHY, POLICIES AND PROCEDURES AND THE EXECUTIVE COMPENSATION DISCLOSED IN THIS PROXY STATEMENT.	1	ILS	TOK	TOK
				VOTE	т	2 XE A D A	CAINICE	1 MEAD
				VOTE: ON THE FREQUENCY OF THE ADVISORY VOTE ON EXECUTIVE COMPENSATION	I	3 YEARA	GAINST	IYEAR
PENN VIRGINIA RESOURCE PARTNERS,								
L.P.	PVR	707884102	6/22/2011	ELECT: EDWARD B. CLOUES, II	I	YES	FOR	FOR
				JAMES L. GARDNER ROBERT J. HALL				
				THOMAS W. HOFMANN JAMES R. MONTAGUE				
				MARSHA R. PERELMAN				
				WILLIAM H. SHEA, JR. JOHN C. VAN RODEN, JR.				
				JONATHAN B. WELLER				

		APPROVE:	I	YES	FOR	FOR
		BY ADVISORY				
		(NON-BINDING) VOTE,				
		EXECUTIVE COMPENSATION				
		RECOMMEND:	I	1 YEAR	AGAINS'	Γ 3 YEARS
		BY ADVISORY				
		(NON-BINDING) VOTE, THE				
		FREQUENCY OF FUTURE				
		ADVISORY VOTES ON				
		EXECUTIVE COMPENSATION				
MARKWEST						
ENERGY						
PARTNERS,						
L.P.	MWE 570759100 6/1/20		I	YES	FOR	FOR
		FRANK M. SEMPLE				
		DONALD D. WOLF				
		KEITH E. BAILEY MICHAEL L. BEATTY				
		CHARLES K. DEMPSTER				
		DONALD C. HEPPERMANN				
		WILLIAM A. KELLSTROM				
		ANNE E. FOX MOUNSEY				
		WILLIAM P. NICOLETTI				
		APPROVE:	I	YES	FOR	FOR
		ON AN ADVISORY BASIS THE	1	ILS	POK	TOK
		COMPENSATION OF THE				
		PARTNERSHIP'S NAMED				
		EXECUTIVE OFFICERS AS				
		DESCRIBED IN THE				
		PARTNERSHIP'S PROXY STATEMENT FOR THE 2011				
		ANNUAL MEETING OF				
		COMMON UNITHOLDERS				
			_	3		
		RECOMMEND:	I	YEARS	FOR	3 YEARS
		ON AN ADVISORY BASIS, THE FREQUENCY OF THE				
		ADVISORY VOTE ON THE				
		COMPENSATION OF THE				
		PARTNERSHIP'S NAMED				
		EXECUTIVE OFFICERS				
		DATIEV.	T	VEC	EOD	EOD
		RATIFY: DELOITTE & TOUCHE LLP AS	I	YES	FOR	FOR
		THE PARTNERSHIP'S				
		INDEPENDENT REGISTERED				
		PUBLIC ACCOUNTANTS FOR				

THE FY ENDING DECEMBER 31, 2011

		31, 2011				
EAGLE ROCK ENERGY PARTNERS,						
L.P.	EROC 26985R104 6/7/20	011 ELECT:	I	YES	FOR	FOR
		WILLIAM K. WHITE				
		APPROVE:	I	YES	FOR	FOR
		ADVISORY VOTE ON COMPENSATION OF OUR NAMES EXECUTIVE OFFICERS				
		APPROVE:	I	1 YEAR	FOR	1 YEAR
		ADVISORY VOTE ON THE FREQUENCY OF FUTURE ADVISORY VOTES ON COMPENSATION OF THE COMPANY'S NAMED EXECUTIVE OFFICERS				
TEEKAY TANKERS						
LTD.	TNK Y8565N102 6/10/2		I	YES	FOR	FOR
		C. SEAN DAY				
		BJORN MOLLER				
		PETER EVENSEN				
		RICHARD T. DU MOULIN				
		RICHARD J.F. BRONKS				
		WILLIAM LAWES				