ClearBridge Energy MLP Fund Inc. Form N-Q October 25, 2010

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM N-Q

QUARTERLY SCHEDULE OF PORTFOLIO HOLDINGS OF REGISTERED MANAGEMENT INVESTMENT COMPANY

Investment Company Act file number

ClearBridge Energy MLP Fund Inc. (Exact name of registrant as specified in charter)

811-22405

55 Water Street, New York, NY (Address of principal executive offices) 10041 (Zip code)

Robert I. Frenkel, Esq.

Legg Mason & Co., LLC

100 First Stamford Place

Stamford, CT 06902 (Name and address of agent for service)

(888)777-0102

Registrant s telephone number, including area code:

Date of fiscal year end: November 30

Date of reporting period: August 31, 2010

ITEM 1.

SCHEDULE OF INVESTMENTS

CLEARBRIDGE ENERGY MLP FUND INC.

FORM N-Q

AUGUST 31, 2010

CLEARBRIDGE ENERGY MLP FUND INC.

Schedule of investments (unaudited)

August 31, 2010

SECURITY MASTER LIMITED PARTNERSHIPS 95.2% Crude/Refined Products Pipelines 28.8% Buckeye Partners LP SHARES

VALUE