FIRST TRUST ENERGY INFRASTRUCTURE FUND Form N-O

April 19, 2012

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 811-22528

First Trust Energy Infrastructure Fund _____ (Exact name of registrant as specified in charter)

> 120 East Liberty Drive, Suite 400 Wheaton, IL 60187

(Address of principal executive offices) (Zip code)

W. Scott Jardine, Esq. First Trust Portfolios L.P. 120 East Liberty Drive, Suite 400 Wheaton, IL 60187

(Name and address of agent for service)

Registrant's telephone number, including area code: 630-765-8000

Date of fiscal year end: November 30

Date of reporting period: February 29, 2012

Form N-Q is to be used by management investment companies, other than small business investment companies registered on Form N-5 (ss.ss. 239.24 and 274.5 of this chapter), to file reports with the Commission, not later than 60 days after the close of the first and third fiscal quarters, pursuant to rule 30b1-5 under the Investment Company Act of 1940 (17 CFR 270.30b1-5). The Commission may use the information provided on Form N-Q in its regulatory, disclosure review, inspection, and policymaking roles.

A registrant is required to disclose the information specified by Form N-Q, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-Q 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, 100 F Street, NE, Washington, DC 20549. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. ss. 3507.

ITEM 1. SCHEDULE OF INVESTMENTS. The Schedule(s) of Investments is attached herewith.

FIRST TRUST ENERGY INFRASTRUCTURE FUND PORTFOLIO OF INVESTMENTS (A) FEBRUARY 29, 2012 (UNAUDITED)

SHARES/ UNITS	DESCRIPTION	
MASTER LIMITED P	PARTNERSHIPS - 31.8%	
	GAS UTILITIES - 1.2%	
107,664	AmeriGas Partners, L.P. (b)	\$
	OIL, GAS & CONSUMABLE FUELS - 30.6%	
20,000	Alliance GP Holdings, L.P	
54,700	Alliance Resource Partners, L.P	
	*	
124,000		
31,600		
116,223		
89,300		
348,952	·	
199,000	31.	
29,600	NuStar GP Holdings, LLC	
16,000	,	
·		
102,700 245,409	1	
245,409 353,095		
289,828	•	
289,828		
41,300		
	TOTAL MASTER LIMITED PARTNERSHIPS	
OMMON STOCKS -	97.1%	
	ELECTRIC UTILITIES - 21.3%	
385,100	Duke Energy Corp. (b)	
274,600	Emera, Inc. (CAD) (b)	
296,450	Exelon Corp. (b)	
89,800	Fortis, Inc. (CAD) (b)	
70,000	ITC Holdings Corp. (b)	
301,200	54.	
438,700		
340,000	Southern Co. (b)	
15.000	GAS UTILITIES - 5.0%	
15,800	ONEOK, Inc. (b)	
260,000 492,600	• • • • • • • • • • • • • • • • • • • •	
492,000	UGI Corp. (b)	

35,000 45,500 807,600 366,400	MULTI-UTILITIES - 17.6% Atco, Ltd. (CAD) (b) Canadian Utilities, Ltd. (CAD) (b) Centerpoint Energy, Inc. (b) Dominion Resources, Inc. (b)	2 1! 18
	See Notes to Quarterly Portfolio of Investments Page 1	
	RGY INFRASTRUCTURE FUND VESTMENTS (a) - (CONTINUED) L2 (UNAUDITED)	
SHARES	DESCRIPTION	V/
COMMON STOCKS -	(CONTINUED)	
175,000 708,300 50,000 75,000	MULTI-UTILITIES - (CONTINUED) National Grid PLC, ADR (b) NiSource, Inc. (b) Sempra Energy (b) Wisconsin Energy Corp.	\$ 1
639,700 189,969 860,684 549,600 380,169 252,300 493,281 292,300 482,100 428,850 480,400 258,000 730,700	OIL, GAS & CONSUMABLE FUELS - 53.2% El Paso Corp. (b). Enbridge Energy Management, LLC (b) (c). Enbridge Energy Management, LLC (c) (d) (e). Enbridge Income Fund Holdings, Inc. (CAD) (b). Enbridge, Inc. (b). Keyera Corp. (CAD) (b). Kinder Morgan Management, LLC (b) (c). Kinder Morgan, Inc. (b). Pembina Pipeline Corp. (CAD) (b). Spectra Energy Corp. (b). TransCanada Corp. (b). Veresen, Inc. (CAD) (b). Williams Cos., Inc. (b).	 1 2 1 1 3 1 1 1 2 2
	TOTAL COMMON STOCKS	39
	TOTAL INVESTMENTS - 128.9%	52
NUMBER OF	DESCRIPTION	V

CALL OPTIONS WRITTEN - (0.5%)

20

2,000	Centerpoint Energy, Inc., Call @ 20 due May 12	
975 1,853	Dominion Resources, Inc., Calls @ 55 due April 12	
91 316 400	@ 22 due April 12	
2,000 1,800 97	•	
Page 2	See Notes to Quarterly Portfolio of Investments	
	RGY INFRASTRUCTURE FUND VESTMENTS (a) - (CONTINUED) .2 (UNAUDITED)	
NUMBER OF CONTRACTS	DESCRIPTION	
	ETTEN - (CONTINUED) Enbridge, Inc., Call @ 40 due April 12 Exelon Corp., Calls @ 41 due March 12 @ 42 due July 12	\$
800 700	Kinder Morgan, Inc., Calls @ 35 due March 12	

550 @ 50 due March 12

NiSource, Inc., Calls

National Grid PLC, Call

1,000 2,306 1,000 320	@ 30 due March 12	
1,000	UGI Corp., Call @ 30 due March 12	\$
NUMBER OF CONTRACTS CALL OPTIONS WRI	DESCRIPTION	
	RGY INFRASTRUCTURE FUND VESTMENTS (a) - (CONTINUED) .2 (UNAUDITED)	
	See Notes to Quarterly Portfolio of Investments Page 3	
2,186 500	TransCanada Corp., Calls @ 45 due May 12 @ 45 due August 12	
500 800 73 1,200	@ 32 due March 12	
1,379 95	Southern Co., Calls @ 46 due May 12 @ 47 due August 12	
850 714	Questar Corp., Calls @ 20 due March 12	
129 700	Northeast Utilities, Calls @ 35 due March 12	
3,200 883	*	

(2	TOTAL CALL OPTIONS WRITTEN(Premiums received \$1,353,809)
(123	OUTSTANDING LOAN - (30.5%)
8	NET OTHER ASSETS AND LIABILITIES - 2.1%
\$ 403	NET ASSETS - 100.0%

._____

- (a) All percentages shown in the Portfolio of Investments are based on net assets.
- (b) All or a portion of this security is available to serve as collateral on the outstanding loan.
- (c) Non-income producing security which pays in-kind distributions.
- (d) This security is fair valued in accordance with procedures adopted by the Fund's Board of Trustees.
- (e) This security, sold within the terms of a private placement memorandum, is exempt from registration upon resale under Rule 144A under the Securities Act of 1933, as amended (the "1933 Act"), and may be resold in transactions exempt from registration, normally to qualified institutional buyers (see Note 1D - Restricted Securities in the Notes to Quarterly Portfolio of Investments).
- (f) Aggregate cost for financial reporting purposes, which approximates the aggregate cost for federal income tax purposes. As of February 29, 2012, the aggregate gross unrealized appreciation for all securities in which there was an excess of value over tax cost was \$64,560,577 and the aggregate gross unrealized depreciation for all securities in which there was an excess of tax cost over value was \$2,395,655.
- ADR American Depositary Receipt
- CAD Canadian Dollar Security is denominated in Canadian Dollars and is translated into U.S. Dollars based upon the current exchange rate.
- Page 4 See Notes to Quarterly Portfolio of Investments

FIRST TRUST ENERGY INFRASTRUCTURE FUND PORTFOLIO OF INVESTMENTS (a) - (CONTINUED) FEBRUARY 29, 2012 (UNAUDITED)

VALUATION INPUTS

A summary of the inputs used to value the Fund's investments as of February 29, 2012 is as follows (see Note 1A - Portfolio Valuation in the Notes to Quarterly Portfolio of Investments):

ASSETS TABLE

		TOTAL VALUE AT 2/29/2012	 LEVEL 1 QUOTED PRICES	LEVEL 2 SIGNIFICANT OBSERVABLE INPUTS
Master Limited Partnerships*	\$	128,257,238	\$ 128,257,238	\$
Oil, Gas & Consumable Fuels Other Industry Categories*		214,938,308 177,191,487		28,832,914
TOTAL INVESTMENTS	\$	520,387,033		\$ 28,832,914
I	LIAE	BILITIES TABLE		
		TOTAL VALUE AT 2/29/2012	LEVEL 1 QUOTED PRICES	LEVEL 2 SIGNIFICANT DBSERVABLE INPUTS
Call Options Written	\$	(2,136,977)	\$ (2,136,977)	\$

^{*} See the Portfolio of Investments for the industry breakout. Industry categories are only shown separately if they include holdings in two or more levels.

See Notes to Quarterly Portfolio of Investments

Page 5

NOTES TO QUARTERLY PORTFOLIO OF INVESTMENTS

FIRST TRUST ENERGY INFRASTRUCTURE FUND FEBRUARY 29, 2012 (UNAUDITED)

1. VALUATION AND INVESTMENT PRACTICES

A. PORTFOLIO VALUATION:

The net asset value ("NAV") of the Common Shares of First Trust Energy Infrastructure Fund (the "Fund") is determined daily as of the close of regular trading on the New York Stock Exchange ("NYSE"), normally 4:00 p.m. Eastern time, on each day the NYSE is open for trading. If the NYSE closes early on a valuation day, the NAV is determined as of that time. Domestic debt securities and foreign securities are priced using data reflecting the earlier closing of the principal markets for those securities. The NAV per Common Share is calculated by dividing the value of all assets of the Fund (including accrued interest and dividends), less all liabilities (including accrued expenses, dividends declared but unpaid and any borrowings of the Fund) by the total number of Common Shares outstanding.

The Fund's investments are valued daily in accordance with valuation procedures adopted by the Fund's Board of Trustees, and in accordance with provisions of the Investment Company Act of 1940, as amended (the "1940 Act"). The following

securities, for which accurate and reliable market quotations are readily available, will be valued as follows:

Common stocks, master limited partnerships ("MLPs") and other securities listed on any national or foreign exchange (excluding the NASDAQ National Market ("NASDAQ") and the London Stock Exchange Alternative Investment Market ("AIM")) are valued at the last sale price on the exchange on which they are principally traded. If there are no transactions on the valuation day, the securities are valued at the mean between the most recent bid and asked prices.

Securities listed on the NASDAQ or the AIM are valued at the official closing price. If there is no official closing price on the valuation day, the securities are valued at the mean between the most recent bid and asked prices.

Securities traded in the over-the-counter market are valued at their closing bid prices.

Exchange-traded options and futures contracts are valued at the closing price in the market where such contracts are principally traded. If no closing price is available, exchange-traded options and futures contracts are valued at the mean between the most recent bid and asked prices. Over-the-counter options and futures contracts are valued at their closing bid prices.

Short-term investments that mature in less than 60 days when purchased are valued at amortized cost.

All market quotations used in valuing the Fund's securities will be obtained from a third party pricing service. If no quotation is received from a pricing service, attempts will be made to obtain one or more broker quotes for the security. In the event the pricing service does not provide a valuation, broker quotations are not readily available, or the valuations received are deemed unreliable, the Fund's Board of Trustees has designated First Trust Advisors L.P. ("First Trust") to use a fair value method to value the Fund's securities. Additionally, if events occur after the close of the principal markets for certain securities (e.g., domestic debt and foreign securities) that could materially affect the Fund's NAV, First Trust will use a fair value method to value the Fund's securities. The use of fair value pricing is governed by valuation procedures adopted by the Fund's Board of Trustees, and in accordance with the provisions of the 1940 Act. As a general principle, the fair value of a security is the amount which the Fund might reasonably expect to receive for the security upon its current sale. However, in light of the judgment involved in fair valuations, there can be no assurance that a fair value assigned to a particular security will be the amount which the Fund might be able to receive upon its current sale. Fair valuation of a security will be based on the consideration of all available information, including, but not limited to the following:

- 1) the type of security;
- 2) the size of the holding;
- 3) the initial cost of the security;
- 4) transactions in comparable securities;
- 5) price quotes from dealers and/or pricing services;
- 6) relationships among various securities;

- 7) information obtained by contacting the issuer, analysts, or the appropriate stock exchange;
- 8) an analysis of the issuer's financial statements; and
- 9) the existence of merger proposals or tender offers that might affect the value of the security.

If the securities in question are foreign securities, the following additional information may be considered:

- the value of similar foreign securities traded on other foreign markets;
- 2) ADR trading of similar securities;
- 3) closed-end fund trading of similar securities;
- 4) foreign currency exchange activity;
- 5) the trading prices of financial products that are tied to baskets of foreign securities;
- 6) factors relating to the event that precipitated the pricing problem;
- 7) whether the event is likely to recur; and
- 8) whether the effects of the event are isolated or whether they affect entire markets, countries or regions.

Page 6

NOTES TO FINANCIAL STATEMENTS - (CONTINUED)

FIRST TRUST ENERGY INFRASTRUCTURE FUND FEBRUARY 29, 2012 (UNAUDITED)

The Fund is subject to fair value accounting standards that define fair value, establish the framework for measuring fair value and provide a three-level hierarchy for fair valuation based upon the inputs to the valuation as of the measurement date. The three levels of the fair value hierarchy are as follows:

- o Level 1 Level 1 inputs are quoted prices in active markets for identical securities. An active market is a market in which transactions for the security occur with sufficient frequency and volume to provide pricing information on an ongoing basis.
- o Level 2 Level 2 inputs are observable inputs, either directly or indirectly, and include the following:
 - o Quoted prices for similar securities in active markets.
 - O Quoted prices for identical or similar securities in markets that are non-active. A non-active market is a market where there are few transactions for the security, the prices are not current, or price quotations vary substantially either over time or among market makers, or in which little information is released publicly.
 - o Inputs other than quoted prices that are observable for the security

(for example, interest rates and yield curves observable at commonly quoted intervals, volatilities, prepayment speeds, loss severities, credit risks, and default rates).

- o Inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- o Level 3 Level 3 inputs are unobservable inputs. Unobservable inputs may reflect the reporting entity's own assumptions about the assumptions that market participants would use in pricing the security.

The inputs or methodology used for valuing securities are not necessarily an indication of the risk associated with investing in those securities. A summary of the inputs used to value the Fund's investments as of February 29, 2012, is included with the Fund's Portfolio of Investments.

B. OPTION CONTRACTS:

The Fund is subject to equity price risk in the normal course of pursuing its investment objective and may enter into options written to hedge against changes in the value of equities. Also, by writing (selling) options, the Fund seeks to generate additional income, in the form of premiums received for writing (selling) the options. The Fund may write (sell) covered call or put options ("options") on all or a portion of the common stock of equities held in the Fund's portfolio as determined to be appropriate by Energy Income Partners, LLC ("EIP" or the "Sub-Advisor"). The number of options the Fund can write (sell) is limited by the amount of common stock of equities the Fund holds in its portfolio. The Fund will not write (sell) "naked" or uncovered options. Options are marked-to-market daily and their value will be affected by changes in the value and dividend rates of the underlying equity securities, changes in interest rates, changes in the actual or perceived volatility of the securities markets and the underlying equity securities and the remaining time to the options' expiration. The value of options may also be adversely affected if the market for the options becomes less liquid or trading volume diminishes.

Options the Fund writes (sells) will either be exercised, expire or be cancelled pursuant to a closing transaction. If the price of the underlying equity security exceeds the option's exercise price, it is likely that the option holder will exercise the option. If an option written (sold) by the Fund is exercised, the Fund would be obligated to deliver the underlying equity security to the option holder upon payment of the strike price. In this case, the option premium received by the Fund will be added to the amount realized on the sale of the underlying security for purposes of determining gain or loss. If the price of the underlying equity security is less than the option's strike price, the option will likely expire without being exercised. The option premium received by the Fund will, in this case, be treated as short-term capital gain on the expiration date of the option. The Fund may also elect to close out its position in an option prior to its expiration by purchasing an option of the same series as the option written (sold) by the Fund.

The options that the Fund writes (sells) give the option holder the right, but not the obligation, to purchase a security from the Fund at the strike price on or prior to the option's expiration date. The ability to successfully implement the writing (selling) of covered call options depends on the ability of the Sub-Advisor to predict pertinent market movements, which cannot be assured. Thus, the use of options may require the Fund to sell portfolio securities at inopportune times or for prices other than current market value, which may limit the amount of appreciation the Fund can realize on an investment, or may cause the Fund to hold a security that it might otherwise sell. As the writer (seller) of a covered option, the Fund foregoes, during the option's life, the opportunity to profit from increases in the market value of the security covering the option above the sum of the premium and the strike price of the

option, but has retained the risk of loss should the price of the underlying security decline. The writer (seller) of an option has no control over the time when it may be required to fulfill its obligation as a writer (seller) of the option. Once an option writer (seller) has received an exercise notice, it cannot effect a closing purchase transaction in order to terminate its obligation under the option and must deliver the underlying security to the option holder at the exercise price.

Page 7

NOTES TO FINANCIAL STATEMENTS - (CONTINUED)

FIRST TRUST ENERGY INFRASTRUCTURE FUND FEBRUARY 29, 2012 (UNAUDITED)

Over-the-counter ("OTC") options have the risk of the potential inability of counterparties to meet the terms of their contracts. The Fund's maximum equity price risk for purchased options is limited to the premium initially paid. In addition, certain risks may arise upon entering into option contracts including the risk that an illiquid secondary market will limit the Fund's ability to close out an option contract prior to the expiration date and that a change in the value of the option contract may not correlate exactly with changes in the value of the securities hedged.

C. SECURITIES TRANSACTIONS:

Securities transactions are recorded as of the trade date. Realized gains and losses from securities transactions are recorded on the identified cost basis.

Distributions received from the Fund's investments in MLPs generally are comprised of return of capital and investment income. The Fund records estimated return of capital and investment income based on historical information available from each MLP. These estimates may subsequently be revised based on information received from the MLPs after their tax reporting periods are concluded.

D. FOREIGN CURRENCY:

The books and records of the Fund are maintained in U.S. dollars. Investments denominated in foreign currency are translated into U.S. dollars at the exchange rates prevailing at the end of the period. Purchases and sales of investment securities are translated on the respective dates of such transactions.

E. RESTRICTED SECURITIES:

The Fund may invest up to 15% of its Managed Assets in restricted securities. Managed Assets means the average daily total asset value of the Fund minus the sum of the Fund's liabilities other than the principal amount of borrowings. Restricted securities are securities that may not be offered for public sale without first being registered under the Securities Act of 1933, as amended (the "1933 Act"). Prior to registration, restricted securities may only be resold in transactions exempt from registration under Rule 144A under the 1933 Act, normally to qualified institutional buyers. As of February 29, 2012, the Fund held restricted securities as shown in the following table. The Fund does not have the right to demand that such securities be registered. These securities are valued according to the valuation procedures as stated in the Portfolio Valuation note (Note 1A).

SECURITY	ACQUISITION DATE	SHARES/ UNITS	PRICE	CARRYING COST	
Enbridge Energy Management, LLC	11/14/2011	860,684	\$33.50	\$ 25,700,000	\$

2. OPTION ACTIVITY

Written option activity for the Fund for the period ended February 29, 2012 was as follows:

		Number of	
Written	Options	Contracts	Premiums
Options	outstanding at November 30, 2011	29 , 526	\$ 1,735,315
Options	Written	35 , 970	1,165,294
Options	Expired	(21,403)	(1,012,974)
Options	Exercised	(8,034)	(426,402)
Options	Closed	(514)	(107,424)
Options	outstanding at February 29, 2012	35,545	\$ 1,353,809

Page 8

ITEM 2. CONTROLS AND PROCEDURES.

- (a) The registrant's principal executive and principal financial officers, or persons performing similar functions, have concluded that the registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940, as amended (the "1940 Act") (17 CFR 270.30a-3(c))) are effective, as of a date within 90 days of the filing date of the report that includes the disclosure required by this paragraph, based on their evaluation of these controls and procedures required by Rule 30a-3(b) under the 1940 Act (17 CFR 270.30a-3(b)) and Rules 13a-15(b) or 15d-15(b) under the Securities Exchange Act of 1934, as amended (17 CFR 240.13a-15(b) or 240.15d-15(b)).
- (b) There were no changes in the registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the 1940 Act (17 CFR 270.30a-3(d)) that occurred during the registrant's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the registrant's internal control over financial reporting.

ITEM 3. EXHIBITS.

Certifications pursuant to Rule 30a-2(a) under the 1940 Act and Section 302 of the Sarbanes-Oxley Act of 2002 are attached hereto.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934 and 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) First Trust Energy Infrastructure Fund

By (Signature and Title) * /s/ Mark R. Bradley

Mark R. Bradley, President and Chief Executive Officer (principal executive officer)

Date April 16, 2012

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By (Signature and Title) * /s/ Mark R. Bradley

Mark R. Bradley, President and Chief Executive Officer (principal executive officer)

Date April 16, 2012

By (Signature and Title) * /s/ James M. Dykas

James M. Dykas, Treasurer, Chief Financial Officer and Chief Accounting Officer (principal financial officer)

Date April 16, 2012

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