



DIVISION OF
CORPORATION FINANCE

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

December 6, 2011

Via E-mail

R. Brooks Sherman, Jr.
Chief Financial Officer
Inergy Midstream, LLC
Two Brush Creek Boulevard, Suite 200
Kansas City, Missouri 64112

**Re: Inergy Midstream, LLC
Amendment No. 5 to
Registration Statement on Form S-1
Filed December 5, 2011
Amendment No. 6 to
Registration Statement on Form S-1
Filed December 6, 2011
File No. 333-176445**

Dear Mr. Sherman:

We have reviewed your filings and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Summary, page 1

The Offering, page 10

Use of Proceeds, page 10

1. We note your disclosure that you intend to use the estimated net proceeds of approximately \$297.2 million along with expected borrowings of \$2.8 million under your revolving credit facility to repay all of the \$300 million of indebtedness outstanding under your promissory note and to fund a cash distribution to NRGY for reimbursement of capital expenditures. It appears that you will need to borrow an additional \$80 million

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under your revolver in order to fund this distribution to NRGY, and we note that you have made disclosures to this effect throughout your filing. Please revise your disclosure under this heading to clarify this matter.

Unaudited Pro Forma Condensed Consolidated Financial Statements, page F-2

Pro Forma Adjustments, page F-5

2. Pro forma adjustment (f) states that it reflects the recording of pro forma interest expense on the \$80 million in borrowings discussed in pro forma adjustment (e) and capital expenditures during the period. It appears that your pro forma interest expense should also include interest expense on the additional \$2.8 million in borrowings used to pay the promissory note in full. If so, please clarify this matter for your investors.

Historical Consolidated Financial Statements, page F-7

Note 10. Subsequent Events, page F-22

3. We note that this disclosure relates to the period from the balance sheet through the date of this filing. Your audit opinion is dated November 18, 2011, except for the second paragraph of Note 1, as to which the date is November 25, 2011. It therefore appears to us that this footnote should be labeled as unaudited. Please advise or revise.

You may contact Lisa Sellars, Staff Accountant, at (202) 551-3348 or Jennifer Thompson, Accounting Branch Chief, at (202) 551-3737, if you have questions regarding comments on the financial statements and related matters. Please contact Angie Kim, Staff Attorney, at (202) 551-3535, Catherine Brown, Staff Attorney, at (202) 551-3513 or me, at (202) 551-3720 with any other questions.

Sincerely,

/s/ Jennifer Thompson for

Mara L. Ransom
Assistant Director

cc: Laura Ozenberger
Inergy, L.P.

Gillian Hobson
Vinson & Elkins LLP