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

Post-Effective Amendment No. 2 to

Form S-3

REGISTRATION STATEMENT UNDER **THE SECURITIES ACT OF 1933**

TARGA RESOURCES PARTNERS LP

TARGA RESOURCES PARTNERS FINANCE CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

Delaware (State or other jurisdiction of incorporation or organization)

65-1295427 32-0249658 (I.R.S. Employer Identification No.)

1000 Louisiana, Suite 4300 Houston, Texas 77002

(713) 584-1000 (Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Rene R. Joyce

Chief Executive Officer 1000 Louisiana, Suite 4300 Houston, Texas 77002 (713) 584-1000 (Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

David P. Oelman **Christopher S. Collins** Vinson & Elkins LLP 1001 Fannin Street, Suite 2500 Houston, Texas 77002 (713) 758-2222

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement as determined by market conditions and other factors.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering, o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. o

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one): Large accelerated filer \square Accelerated filer o Non-accelerated filer o Smaller reporting company o

(Do not check if a smaller reporting company)

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This Amendment No. 2 is being filed solely for the purposes of filing an updated Exhibit 23.1 to the Registration Statement on Form S-3 (Registration Statement Nos. 333-159678 and 333-159678-01) with the signature page for Targa Resources Partners Finance Corporation, and will become effective upon filing pursuant to Rule 462(d) under the Securities Act of 1933. This Amendment No. 2 does not reflect events occurring after the original filing date of the Registration Statement on Form S-3, or modify or update the disclosures therein in any way other than as required to reflect the amendment described above. Accordingly, no changes are made to the prospectus constituting Part I of the Registration Statement on Form S-3 or to Items 14, 15 and 17 of Part II thereof.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

Set forth below are the expenses (other than underwriting discounts and commissions) expected to be incurred in connection with the issuance and distribution of the securities registered hereby. With the exception of the Securities and Exchange Commission registration fee, the amounts set forth below are estimates:

| Securities and Exchange Commission registration fee | \$ 27,900 |
|---|-----------|
| Legal fees and expenses | 50,000 |
| Accounting fees and expenses | 50,000 |
| Printing and engraving expenses | 5,000 |
| Miscellaneous | 1,300 |
| Total | \$134,200 |

Item 15. Indemnification of Directors and Officers

Section 17-108 of the Delaware Revised Uniform Limited Partnership Act empowers a Delaware limited partnership to indemnify and hold harmless any partner or other persons from and against any and all claims and demands whatsoever. The partnership agreement of Targa Resources Partners LP provides that the partnership will, to the fullest extent permitted by law but subject to the limitations expressly provided therein, indemnify and hold harmless its general partner, any Departing General Partner (as defined therein), any person who is or was an affiliate of the general partner or any Departing General Partner, any person who is or was a member, partner, officer, director, fiduciary or trustee of the general partner, any Departing General Partner, any Group Member (as defined therein) or any affiliate of the general partner, any Departing General Partner or any Group Member, or any person who is or was serving at the request of the general partner or any affiliate of the general partner, or any Departing General Partner or any affiliate of any Departing General Partner as an officer, director, member, partner, fiduciary or trustee of another person, or any person that the general partner designates as a Partnership Indemnitee for purposes of the partnership agreement (each, a "Partnership Indemnitee") from and against any and all losses, claims, damages, liabilities (joint or several), expenses (including legal fees and expenses), judgments, fines, penalties, interest, settlements or other amounts arising from any and all claims, demands, actions, suits or proceedings, whether civil, criminal, administrative or investigative, in which any Partnership Indemnitee may be involved, or is threatened to be involved, as a party or otherwise, by reason of its status as a Partnership Indemnitee, provided that the Partnership Indemnitee shall not be indemnified and held harmless if there has been a final and non-appealable judgment entered by a court of competent jurisdiction determining that, in respect of the matter for which the Partnership Indemnitee is seeking indemnification, the Partnership Indemnitee acted in bad faith or engaged in fraud, willful misconduct or, in the case of a criminal matter, acted with knowledge that the Partnership Indemnitee's conduct was unlawful. This indemnification would under certain circumstances include indemnification for liabilities under the Securities Act. To the fullest extent permitted by law, expenses (including legal fees and expenses) incurred by a Partnership Indemnitee who is indemnified pursuant to the partnership agreement in defending any claim, demand, action, suit or proceeding shall, from time to time, be advanced by the partnership prior to a determination that the Partnership Indemnitee is not entitled to be indemnified upon receipt by the partnership of any undertaking by or on behalf of the Partnership Indemnitee to repay such amount if it shall be determined that the Partnership Indemnitee is not entitled to be indemnified under the partnership agreement. Any indemnification under these provisions will be only out of the assets of the partnership.

Targa Resources Partners LP is authorized to purchase (or to reimburse its general partner or its affiliates for the costs of) insurance against liabilities asserted against and expenses incurred by its general partner, its affiliates and such other persons as its general partner may determine and described in the paragraph above in connection with their activities, whether or not they would have the power to indemnify such person against such liabilities under the provisions described in the paragraphs above. Targa Resources Partners LP's general partner has purchased insurance covering its officers and directors against liabilities asserted and expenses incurred in connection with their activities as officers and directors of the general partner or any of its direct or indirect subsidiaries.

Targa Resources Partners LP and Targa Resources GP LLC have entered into Indemnification Agreements (each, an "Indemnification Agreement") with each independent director of Targa Resources GP LLC (each, an "Indemnitee"). Each Indemnification Agreement provides that each of the Partnership and Targa Resources GP LLC will indemnify and hold harmless each Indemnitee against Expenses (as defined in the Indemnification Agreement) to the fullest extent permitted or authorized by law, including the Delaware Revised Uniform Limited Partnership Act and the Delaware Limited Liability Company Act in effect on the date of the agreement or as such laws may be amended to provide more advantageous rights to the Indemnitee. If such indemnification is unavailable as a result of a court decision and if the Partnership or Targa Resources GP LLC is jointly liable in the proceeding with the Indemnitee, the Partnership and Targa Resources GP LLC will contribute funds to the Indemnitee for his Expenses in proportion to relative benefit and fault of the Partnership or Targa Resources GP LLC on the one hand and Indemnitee on the other in the transaction giving rise to the proceeding.

Each Indemnification Agreement also provides that each of the Partnership and Targa Resources GP LLC will indemnify and hold harmless the Indemnitee against Expenses incurred for actions taken as a director or officer of the Partnership or Targa Resources GP LLC, or for serving at the request of the Partnership or Targa Resources GP LLC as a director or officer or another position at another corporation or enterprise, as the case may be, but only if no final and non-appealable judgment has been entered by a court determining that, in respect of the matter for which the Indemnitee is seeking indemnification, the Indemnitee acted in bad faith or engaged in fraud or willful misconduct or, in the case of a criminal proceeding, the Indemnitee acted with knowledge that the Indemnitee's conduct was unlawful. The Indemnification Agreement also provides that the Partnership and Targa Resources GP LLC must advance payment of certain Expenses to the Indemnitee, including fees of counsel, subject to receipt of an undertaking from the Indemnitee to return such advance if it is ultimately determined that the Indemnitee is not entitled to indemnification.

Targa Resources Investments Inc. ("Targa Investments"), the indirect parent of Targa Resources, Inc. ("Targa"), has entered into Indemnification Agreements (each, a "Targa Investments Indemnification Agreement") with each director and officer of Targa, including Messrs. Joyce, Perkins, Heim, McParland, Johnson, Whalen, Chung, Kagan, Joung and Hwang (each, an "Indemnitee"). Each Targa Investments Indemnification Agreement provides that Targa Investments will indemnify and hold harmless each Indemnitee for Expenses (as defined in the Targa Investments Indemnification Agreement) to the fullest extent permitted or authorized by law in effect on the date of the agreement or as it may be amended to provide more advantageous rights to the Indemnitee. If such indemnification is unavailable as a result of a court decision and if Targa Investments and the Indemnitee are jointly liable in the proceeding, Targa Investments will contribute funds to the Indemnitee for his Expenses in proportion to relative benefit and fault of Targa Investments and Indemnitee in the transaction giving rise to the proceeding.

Each Targa Investments Indemnification Agreement also provides that Targa Investments will indemnify the Indemnitee for monetary damages for actions taken as a director or officer of Targa Investments, or for serving at Targa Investments' request as a director or officer or another position at another corporation or enterprise, as the case may be but only if (i) the Indemnitee acted in good faith and, in the case of conduct in his official capacity, in a manner he reasonably believed to be in the best interests of Targa Investments and, in all other cases, not opposed to the best interests of Targa Investments and (ii) in the case of a criminal proceeding, the Indemnitee must have had no reasonable cause to believe that his conduct was unlawful. The Targa Investments Indemnification Agreement also provides that Targa Investments must advance payment of certain Expenses to the Indemnitee, including fees of counsel, subject to receipt of an undertaking from the Indemnitee to return such advance if it is it is ultimately determined that the Indemnitee is not entitled to indemnification.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

The following documents are filed as exhibits to this registration:

- 1.1** Form of Underwriting Agreement
- 4.1 Certificate of Limited Partnership of Targa Resources Partners LP (incorporated by reference to Exhibit 3.2 to Targa Resources Partners LP's Registration Statement on Form S-1 filed November 16, 2006 (File No. 333-138747))

- 4.2 Certificate of Formation of Targa Resources GP LLC (incorporated by reference to Exhibit 3.3 to Targa Resources Partners LP's Registration Statement on Form S-1 filed January 19, 2007 (File No. 333-138747))
- 4.3 Agreement of Limited Partnership of Targa Resources Partners LP (incorporated by reference to Exhibit 3.3 to Targa Resources Partners LP's Annual Report on Form 10-K filed April 2, 2007 (File No. 001-33303))
- 4.4 First Amended and Restated Agreement of Limited Partnership of Targa Resources Partners LP (incorporated by reference to Exhibit 3.1 to Targa Resources Partners LP's current report on Form 8-K filed February 16, 2007 (File No. 001-33303))
- 4.5 Amendment No. 1 to First Amended and Restated Agreement of Limited Partnership of Targa Resources Partners LP (incorporated by reference to Exhibit 3.5 to Targa Resources Partners LP's Quarterly Report on Form 10-Q filed May 14, 2008 (File No. 001-33303))
- 4.6 Limited Liability Company Agreement of Targa Resources GP LLC (incorporated by reference to Exhibit 3.4 to Targa Resources Partners LP's Registration Statement on Form S-1 filed January 19, 2007 (File No. 333-138747))
- 4.7 Specimen Unit Certificate representing common units (incorporated by reference to Exhibit 4.1 to Targa Resources Partners LP's Annual Report on Form 10-K filed April 2, 2007 (File No. 001-33303))
- 4.8** Certificate of Incorporation of Targa Resources Partners Finance Corporation
- 4.9** Bylaws of Targa Resources Partners Finance Corporation
- 4.10** Form of Senior Indenture
- 4.11** Form of Subordinated Indenture
- 4.12** Form of Debt Securities
- 5.1** Opinion of Vinson & Elkins L.L.P. as to the legality of the securities registered hereby
- 8.1** Opinion of Vinson & Elkins L.L.P. as to tax matters
- 12.1** Statement Regarding Computation of Ratios
- 23.1* Consent of PricewaterhouseCoopers LLP
- 23.2** Consent of Vinson & Elkins L.L.P. (contained in Exhibits 5.1 and 8.1)
- 24.1** Powers of Attorney
- 25.1** Form T-1 Statement of Eligibility and Qualification under the Trust Indenture Act of 1939 of the Trustee under the Senior Indenture
- 25.2** Form T-1 Statement of Eligibility and Qualification under the Trust Indenture Act of 1939 of the Trustee under the Subordinated Indenture
- Filed herewith.
- ** Previously filed.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- 1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

2. That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

4. That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

5. That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

6. For purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

7. To file an application for the purpose of determining the eligibility of the trustee under subsection (a) of Section 310 of the Trust Indenture Act ("Act") in accordance with the rules and regulations prescribed by the Securities and Exchange Commission under Section 305(b)(2) of the Act.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions set forth in response to Item 15, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Houston, in the State of Texas on November 8, 2011.

TARGA RESOURCES PARTNERS LP

By: TARGA RESOURCES GP LLC, its General Partner

By:/s/ Rene R. JoyceName:Rene R. JoyceTitle:Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated on the dates indicated:

| Signature | Title | Date |
|-----------------------|--|------------------|
| /s/ Rene R. Joyce | Chief Executive Officer and Director | November 8, 2011 |
| Rene R. Joyce | (Principal Executive Officer) | |
| /s/ Matthew J. Meloy | Senior Vice President, Chief | November 8, 2011 |
| Matthew J. Meloy | Financial Officer and Treasurer (Principal Financial Officer) | |
| * | Senior Vice President and Chief Accounting Officer (Principal Accounting Officer) | November 8, 2011 |
| John R. Sparger | | |
| * | Executive Chairman of the Board | November 8, 2011 |
| James W. Whalen | | |
| * | Director | November 8, 2011 |
| Peter R. Kagan | | |
| * | Director | November 8, 2011 |
| Barry R. Pearl | | |
| * | Director | November 8, 2011 |
| Robert B. Evans | | |
| * | Director | November 8, 2011 |
| William D. Sullivan | | , - |
| By: /s/ Rene R. Joyce | | |
| ene R. Joyce | | |
| Attorney-in-Fact | | |

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Houston, in the State of Texas on November 8, 2011.

TARGA RESOURCES PARTNERS FINANCE CORPORATION

By: /s/ Rene R. Joyce Name: Rene R. Joyce

Title: Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated on the dates indicated:

| Signature | Title | Date |
|---|---|------------------|
| /s/ Rene R. Joyce Rene R. Joyce | Chief Executive Officer and Director (Principal Executive Officer) | November 8, 2011 |
| /s/ Matthew J. Meloy Matthew J. Meloy | Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer) | November 8, 2011 |
| * Jeffrey J. McParland | President — Finance and Administration and Director | November 8, 2011 |
| * John R. Sparger | Senior Vice President and Chief Accounting Officer (Principal Accounting Officer) | November 8, 2011 |
| *By: /s/ Rene R. Joyce Rene R. Joyce Attorney-in-Fact | | |

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Post-Effective Amendment No. 2 to the Registration Statement on Form S-3 (Nos. 333-159678 and 333-159678-01) of our report dated February 25, 2011 relating to the consolidated financial statements of Targa Resources Partners LP (the "Partnership"), and the effectiveness of internal control over financial reporting, which appears in the Partnership's Annual Report on Form 10-K for the year ended December 31, 2010. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/PricewaterhouseCoopers LLP

Houston, Texas November 8, 2011