GSE SYSTEMS INC Form SC 13D/A April 20, 2012

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 2)*

GSE Systems, Inc.

(Name of Issuer)

Common Stock, par value \$.01 per share (Title of Class of Securities)

> 36227K106 (CUSIP Number)

Philip J. Deutch

NGP Energy Technology Partners II, L.P.

1700 K Street, NW

Suite 750

Washington, D.C. 20006

(202) 536-3920 (Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

with copies to:

Daniel S. Peale

Wilson Sonsini Goodrich & Rosati,

Professional Corporation

1700 K Street, NW

Fifth Floor

Washington, D.C. 20006

(202) 973-8800

April 19, 2012 (Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this Schedule because of Sections 240.13d-1(e), 240.13d-1(f), or 240.13d-1(g), check the following box: "

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. *See* Section 240.13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person s initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.
 The information required on the remainder of this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities
 Exchange Act of 1934 (Act) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the *Notes*).

CUSIP No. 36227K106

(1) Names of reporting persons

NGP Energy Technology Partners II, L.P.

(2) Check the appropriate box if a member of a group (see instructions)

(a) " (b) "

(3) SEC use only

(4) Source of funds (see instructions)

WC

..

(5) Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

(6) Citizenship or place of organization

State of Delaware (7) Sole voting power

Number of

shares

beneficially	(8)	2,416,925 shares Shared voting power	
owned by			
each	(9)	Sole dispositive power	

reporting

person 2,416,925 shares (10) Shared dispositive power

with

(11) Aggregate amount beneficially owned by each reporting person

2,416,925 shares

- (12) Check if the aggregate amount in Row (11) excludes certain shares (see instructions) "
- (13) Percent of class represented by amount in Row (11)

13.16%(*)

(14) Type of reporting person (see instructions)

PN

* Percentage calculated based on dividing (a) the total number of shares of the Issuer s common stock being reported in this Statement (2,416,925) by (b) the number of shares of the Issuer s common stock outstanding on March 8, 2012 (18,363,728) as reported in the Issuer s Annual Report on Form 10-K for the year ended December 31, 2011.

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CUSIP No. 36227K106

(1) Names of reporting persons

NGP ETP II, L.L.C.

- (2) Check the appropriate box if a member of a group (see instructions)
 - (a) " (b) "
- (3) SEC use only
- (4) Source of funds (see instructions)

WC

..

- (5) Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)
- (6) Citizenship or place of organization

State of Delaware (7) Sole voting power Number of shares beneficially (8) Shared voting power

owned by

each

(9) Sole dispositive power

reporting

person 2,416,925 shares⁽¹⁾ (10) Shared dispositive power

with

(11) Aggregate amount beneficially owned by each reporting person

2,416,925 shares

(12) Check if the aggregate amount in Row (11) excludes certain shares (see instructions) "

(13) Percent of class represented by amount in Row (11)

 $13.16\%^{()}$

(14) Type of reporting person (see instructions)

OO- Limited Liability Company

The reporting person is the general partner of NGP Energy Technology Partners II, L.P., which owns the reported securities. The reporting person disclaims beneficial ownership of the reported securities except to the extent of any pecuniary interest therein. Percentage calculated based on dividing (a) the total number of shares of the Issuer s common stock being reported in this Statement (2,416,925) by (b) the number of shares of the Issuer s common stock outstanding on March 8, 2012 (18,363,728) as reported in the Issuer s Annual Report on Form 10-K for the year ended December 31, 2011.

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CUSIP No. 36227K106

(1) Names of reporting persons

Energy Technology Partners, L.L.C.

(2) Check the appropriate box if a member of a group (see instructions)

(a) " (b) "

(3) SEC use only

(4) Source of funds (see instructions)

WC

..

(5) Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

(6) Citizenship or place of organization

 State of Delaware

 (7)
 Sole voting power

 Number of
 Sole voting power

 shares
 2,416,925 shares^(§)

 beneficially
 (8)
 Shared voting power

 owned by
 (8)
 Sole dispositive power

 reporting
 (9)
 Sole dispositive power

 person
 (10)
 2,416,925 shares⁽¹⁾

 with
 Shared dispositive power

(11) Aggregate amount beneficially owned by each reporting person

2,416,925 shares

(12) Check if the aggregate amount in Row (11) excludes certain shares (see instructions) "

(13) Percent of class represented by amount in Row (11)

13.16%(**)

(14) Type of reporting person (see instructions)

OO- Limited Liability Company

- § The reporting person is the sole manager of NGP ETP II, L.L.C., which is the general partner of NGP Energy Technology Partners II, L.P., which owns the reported securities. The reporting person disclaims beneficial ownership of the reported securities except to the extent of any pecuniary interest therein.
- ** Percentage calculated based on dividing (a) the total number of shares of the Issuer s common stock being reported in this Statement (2,416,925) by (b) the number of shares of the Issuer s common stock outstanding on March 8, 2012 (18,363,728) as reported in the Issuer s Annual Report on Form 10-K for the year ended December 31, 2011.

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CUSIP No. 36227K106

(1) Names of reporting persons

Philip J. Deutch

(2) Check the appropriate box if a member of a group (see instructions)

(a) " (b) "

(3) SEC use only

(4) Source of funds (see instructions)

WC

..

(5) Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

(6) Citizenship or place of organization

```
United States of America

(7) Sole voting power

Number of

shares

beneficially (8) 2,416,925 shares<sup>(-)</sup>

Shared voting power

owned by

each (9) Sole dispositive power

reporting

person (10) 2,416,925 shares<sup>(1)</sup>

Shared dispositive power
```

(11) Aggregate amount beneficially owned by each reporting person

2,416,925 shares

(12) Check if the aggregate amount in Row (11) excludes certain shares (see instructions) "

(13) Percent of class represented by amount in Row (11)

13.16%(--)

(14) Type of reporting person (see instructions)

IN

The reporting person is the sole member and manager of Energy Technology Partners, L.L.C., the manager of NGP ETP II, L.L.C. NGP ETP II, L.L.C. is the general partner of NGP Energy Technology Partners II, L.P., which owns the reported securities. The reporting person is also a member of the investment committee of NGP ETP II, L.L.C. By virtue of these relationships, the reporting person may be deemed to have the power to vote, or to direct the vote, and dispose of, or direct the disposition of, the reported securities held by NGP Energy Technology Partners II, L.P. The reporting person disclaims beneficial ownership of the reported securities except to the extent of any pecuniary interest therein.

Percentage calculated based on dividing (a) the total number of shares of the Issuer s common stock being reported in this Statement (2,416,925) by (b) the number of shares of the Issuer s common stock outstanding on March 8, 2012 (18,363,728) as reported in the Issuer s Annual Report on Form 10-K for the year ended December 31, 2011.

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Item 1. Security and Issuer.

This statement relates to the shares of common stock, \$.01 per share (the Common Stock), of GSE Systems, Inc., a Delaware corporation (the Issuer), which has its principal executive offices at 1332 Londontown Blvd., Suite 200, Sykesville, MD 21784.

Item 2. Identity and Background.

(a) Name

NGP Energy Technology Partners II, L.P. (NGP Energy Tech), NGP ETP II, L.L.C. (NGP GP), Energy Technology Partners, L.L.C. (ETP) and Philip J. Deutch (Deutch). NGP GP is the general partner of NGP Energy Tech. ETP is the sole manager of NGP GP and Deutch is the sole member and manager of ETP. Each of NGP Energy Tech, NGP GP, ETP and Deutch may be referred to herein as a Reporting Person .

(b) Residence or Business Address

The address and principal business office of each Reporting Person is 1700 K Street NW, Suite 750, Washington, D.C. 20006.

(c) Present Principal Occupation or Employment and the Name, Principal Business and Address of any Corporation or Other Organization in Which Such Employment Is Conducted

Deutch is the sole member and manager of ETP. ETP s principal business is to serve as the sole manager of NGP GP. NGP GP s principal business is to serve as the general partner of NGP Energy Tech. The principal business of NGP Energy Tech is to make investments in, buy, sell, hold, pledge and assign securities.

(d) Criminal Convictions

None of the Reporting Persons has, during the past five years, been convicted in a criminal proceeding (excluding traffic violations and similar misdemeanors).

(e) Civil Proceedings

None of the Reporting Persons has, during the past five years, been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) *Citizenship*

Mr. Deutch is a citizen of the United States of America.

Item 3. Source and Amount of Funds or Other Consideration.

The Common Stock of the Issuer beneficially owned by the Reporting Persons was acquired with working capital set aside for the general purpose of investing. All shares of Common Stock reported as beneficially owned by the Reporting Persons are directly held by NGP Energy Tech. The aggregate funds used by such Reporting Persons to make such purchases were \$5,518,856.74.

Item 4. Purpose of Transaction.

The Reporting Persons have acquired the Common Stock for investment purposes, and such purchases have been made in the Reporting Persons ordinary course of business and not for the purpose of acquiring control of the Issuer.

Subject to the conditions and restrictions of a 10b5-1 Trading Plan adopted by NGP Energy Technology Partners II, L.P. on March 16, 2012, the Reporting Persons may from time to time acquire additional securities of the Issuer depending on prevailing market, economic and other conditions. The Reporting Persons intend to review their investment in the Issuer on a continuing basis and, depending upon the price and availability of the Issuer s securities, subsequent developments concerning the Issuer, the Issuer s business and prospects, other investment and business opportunities available to the Reporting Persons, general stock market and economic conditions, tax considerations and other factors considered relevant, may decide at any time to increase or decrease the size of their investment in the Issuer or to sell any or all of the securities of the Issuer that they hold.

Except as set forth above in this Item 4, none of the Reporting Persons has any plans or proposals which relate to or would result in: (a) the acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries; (c) a sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries; (d) any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board of directors; (e) any material change in the present capitalization or dividend policy of the Issuer; (f) any other material change in the Issuer s business or corporate structure; (g) changes in the Issuer s Charter, By-laws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person; (h) causing a class of securities of the Issuer to be de-listed from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association; (i) a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Exchange Act; or (j) any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

(a) The information requested by this paragraph is incorporated herein by reference to the information provided on the cover pages to this Schedule 13D.

(b) The Reporting Persons have the sole power to vote and sole power to dispose of the shares of Common Stock to which this Statement relates.

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(c) The following transactions in the Common Stock were effected by the Reporting Persons on the open market since the Schedule 13D/A filed by the Reporting Persons on April 19, 2012.

Reporting Person	Trade Date	Shares*	Price/Share
NGP Energy Technology Partners II, L.P.	4/19/2012	235,074	\$ 2.4116

* Shares purchased in the open market pursuant to a Rule 10b5-1 Trading Plan.(d) Not applicable.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer. None.

Item 7. Material to be Filed as Exhibits. None.

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SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: April 20, 2012

NGP ENERGY TECHNOLOGY PARTNERS II, L.P.

- By: NGP ETP II, L.L.C.
- Its: General Partner
- By: /s/ Philip J. Deutch Name: Philip J. Deutch Title: Authorized Member

NGP ETP II, L.L.C.

By: /s/ Philip J. Deutch Name: Philip J. Deutch Title: Authorized Member

ENERGY TECHNOLOGY PARTNERS L.L.C.

By: /s/ Philip J. Deutch Name: Philip J. Deutch Title: Sole Member and Manager

PHILIP J. DEUTCH

Signed: /s/ Philip J. Deutch

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