Storage & SO Costs

Gas TCMF

6th November 2007

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Introduction

◆ This presentation covers analysis of SO costs in relation to a potential SO Storage Commodity Charge (As proposed by GCM03 and subsequently vetoed)

◆ This analysis covers those costs incurred on a daily basis and hence those costs that can be directly compared with on the day storage utilisation

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SO Cost Components

- Daily Costs
  - Shrinkage: Own Use Gas (OUG) =Compressor fuel
  - Shrinkage: Un-accounted for Gas (UAG)
- Annual Costs
  - Operating Margins
  - Constrained LNG (CLNG)
  - Deemed Interruption.
  - Internal Costs
  - Outcome of Incentive Schemes
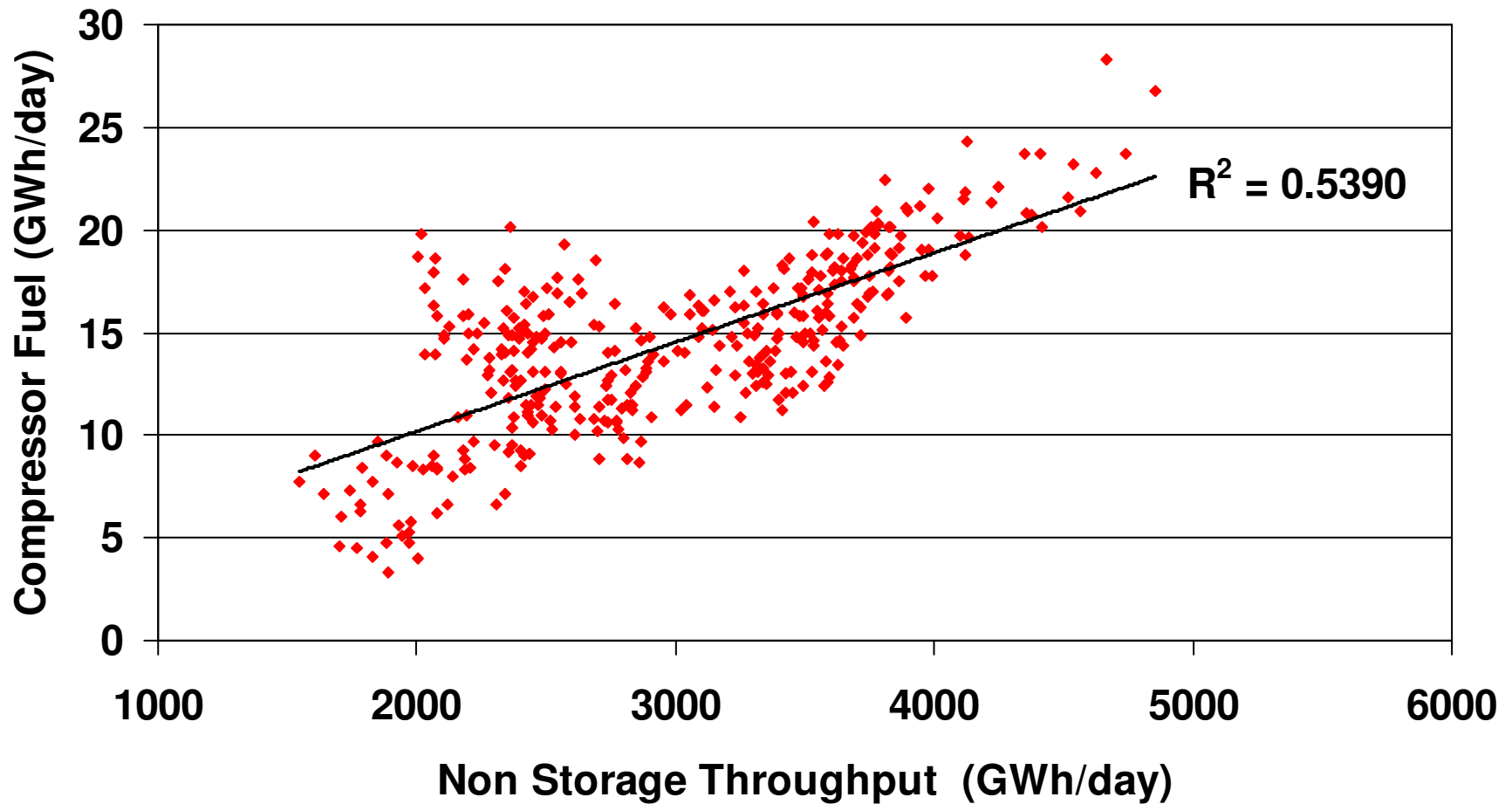 - Under or over-recovery from previous year ('K')

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OUG (Compression) v Throughput
(April 2006 to March 2007)
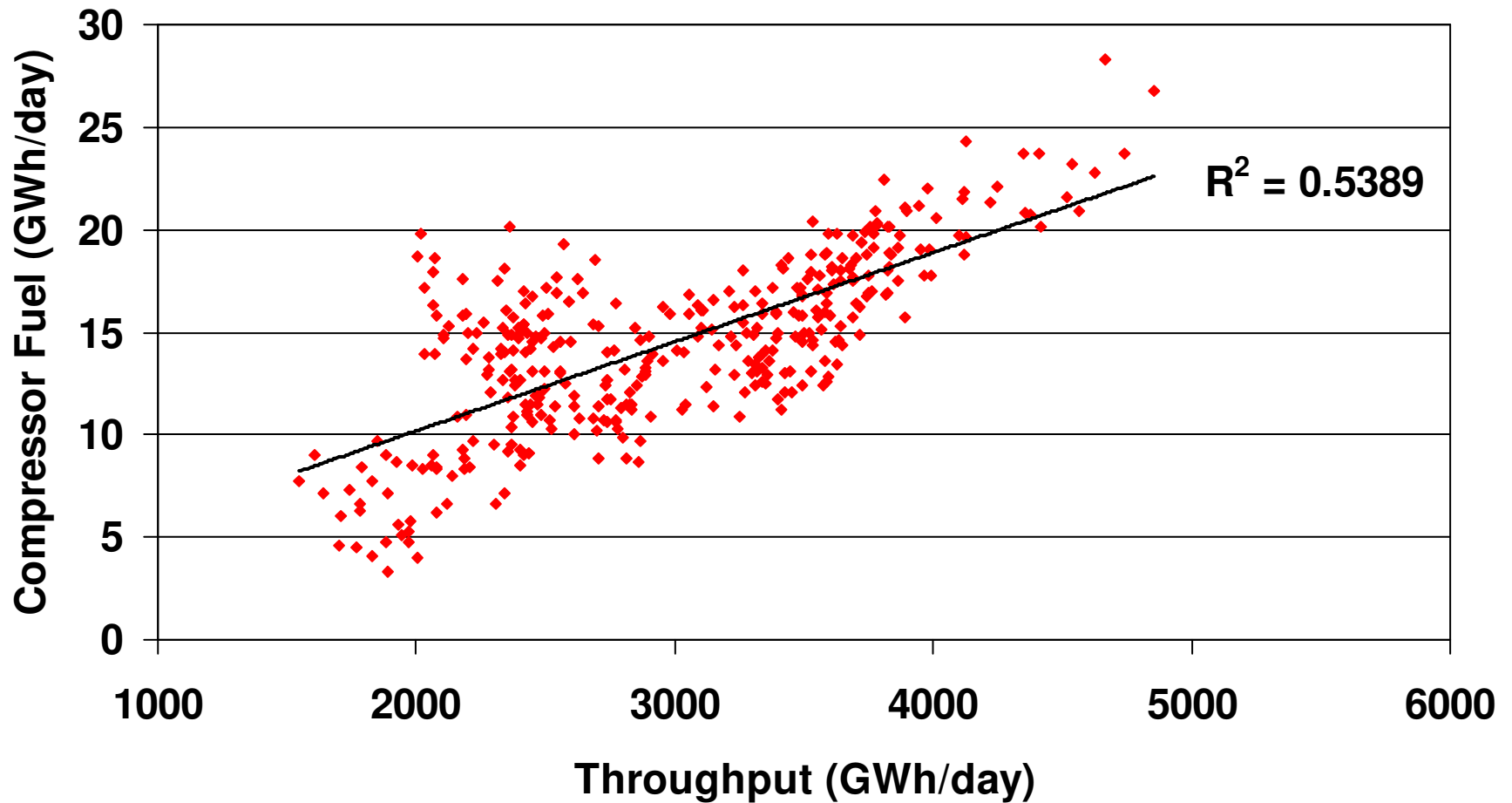
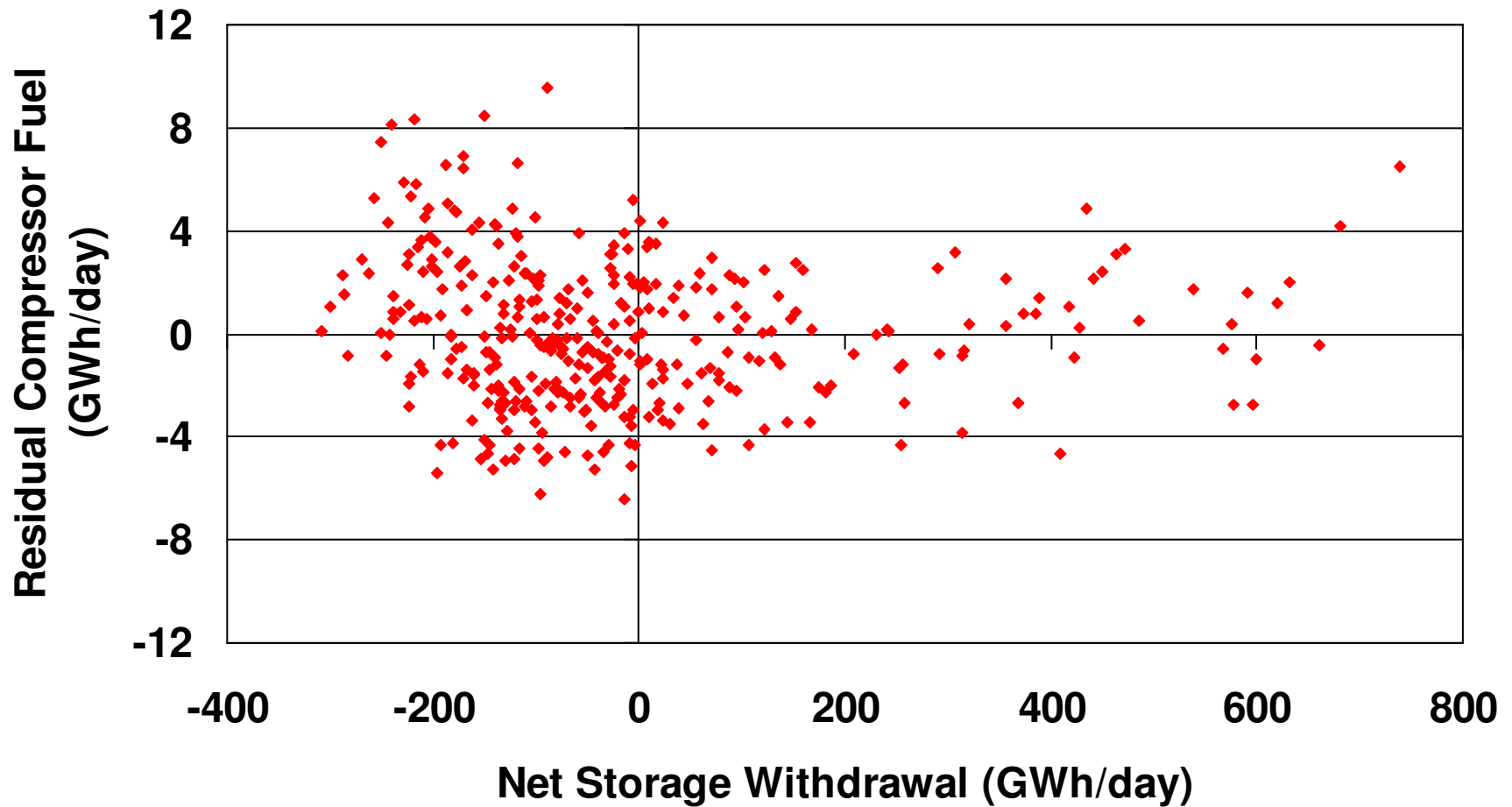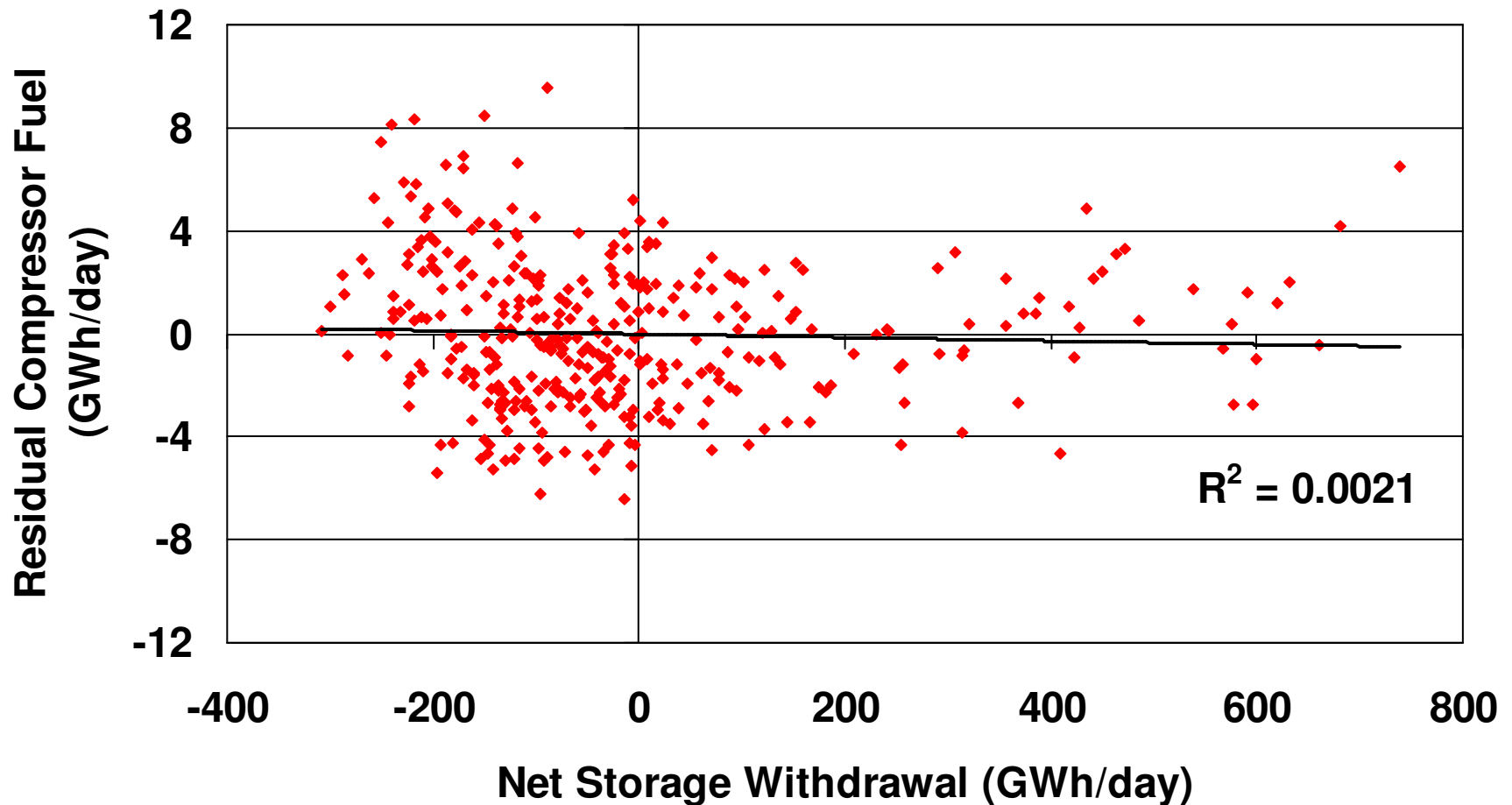# OUG (Compression) v Throughput (excluding Storage)
(April 2006 to March 2007)

Discussion

- Clearly there is a relationship between Throughput and Compressor fuel (OUG)

- We can remove the impact of throughput by fitting a linear model and looking at the residuals
  - If compressor fuel increased with storage withdrawal we would expect to see a positive relationship
  - If compressor fuel increased with storage withdrawal we would expect to see a negative relationship
  - If compressor fuel was not linked to storage withdrawal we would expect to see no relationship

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Residual OUG (Compression) v Storage Throughput (April 2006 to March 2007)
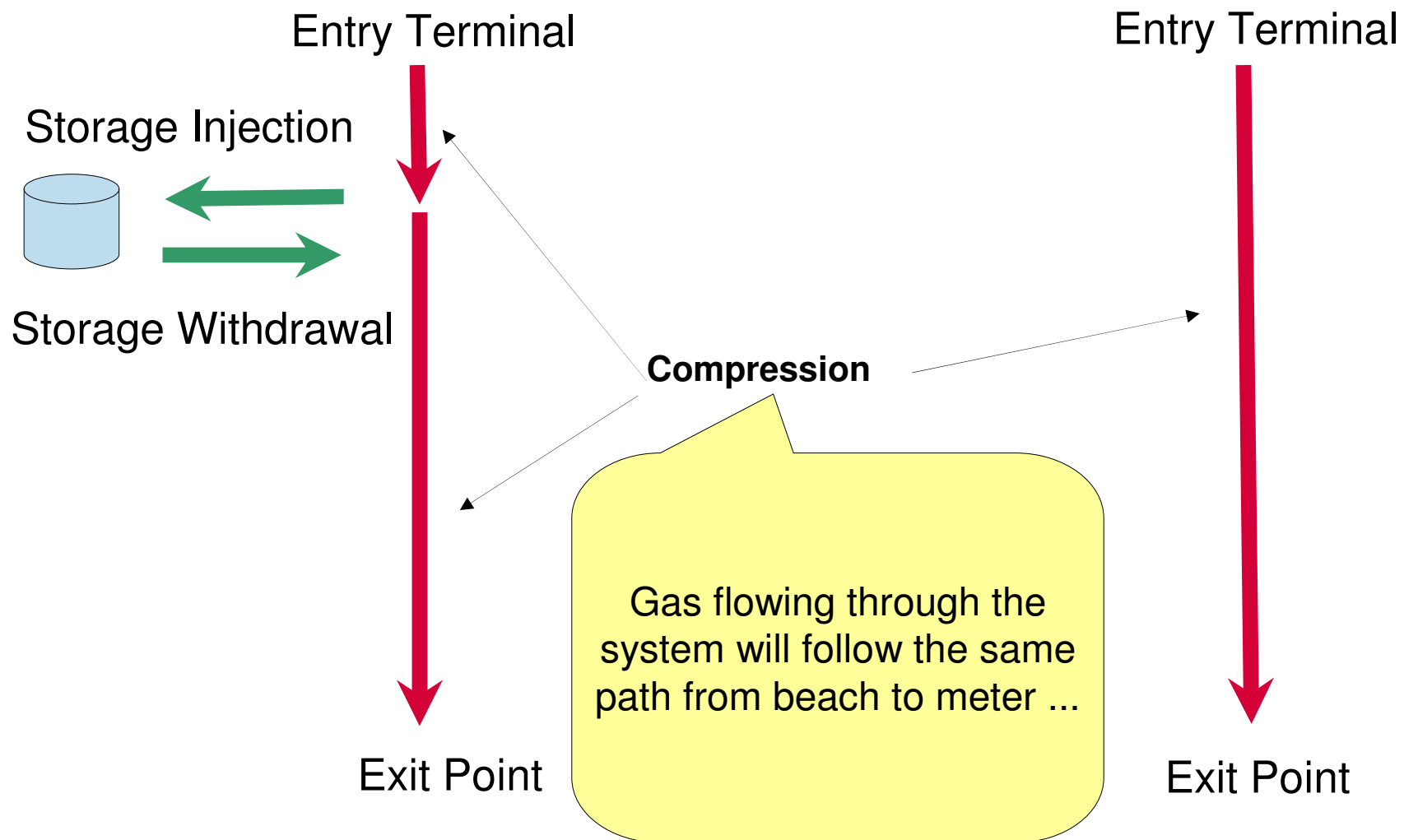

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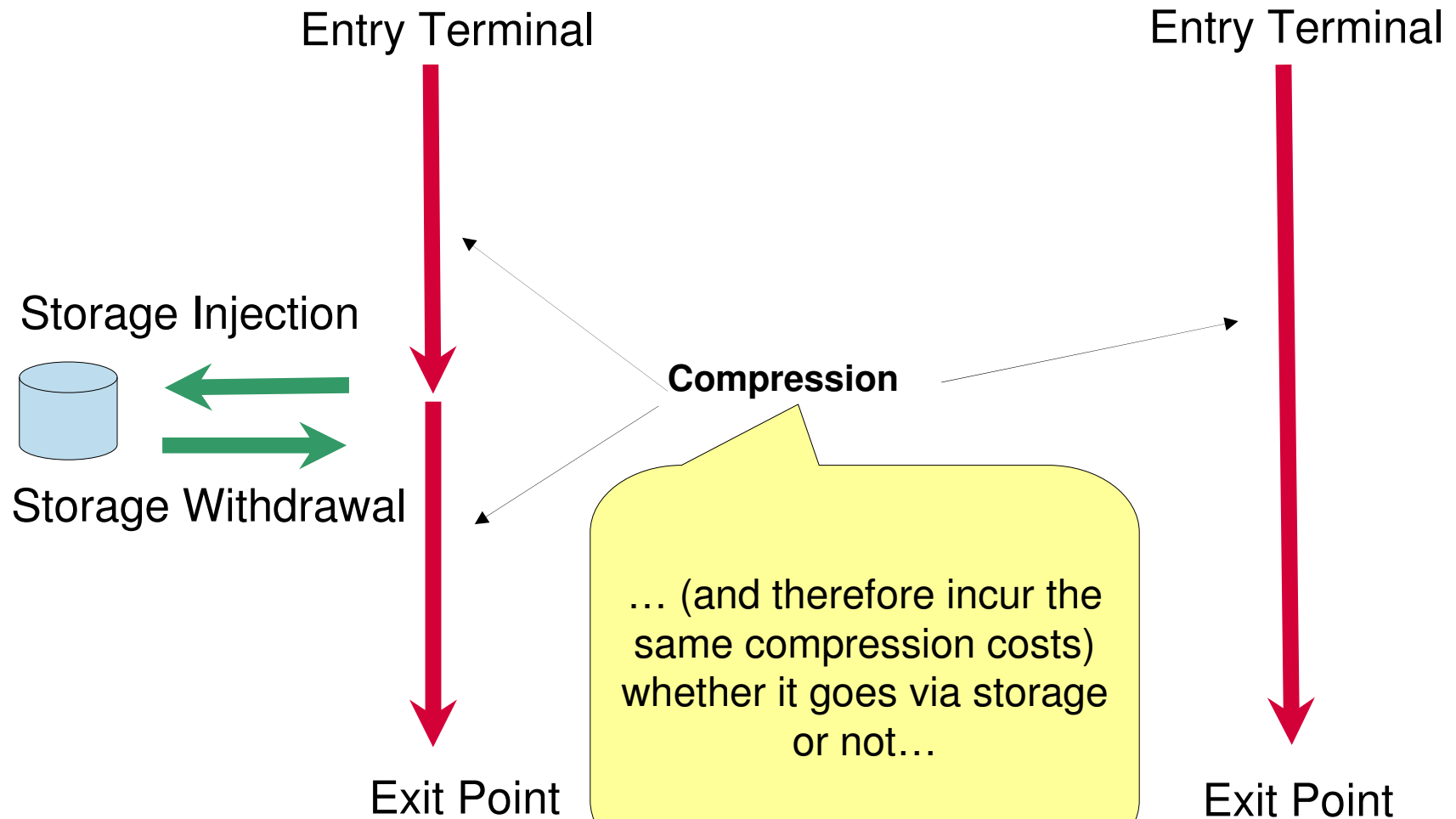# Residual OUG (Compression) v Storage Throughput (April 2006 to March 2007)

Why is this the case?

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Compression (OUG) & Storage (1)

Entry Terminal   Entry Terminal

Storage Injection

Storage Withdrawal

Compression

Gas flowing through the system will follow the same path from beach to meter ...

Exit Point   Exit Point

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Compression (OUG) & Storage (2)

Entry Terminal

Entry Terminal

Storage Injection

Storage Withdrawal

Compression

… (and therefore incur the same compression costs) whether it goes via storage or not…

Exit Point

Exit Point

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Compression (OUG) & Storage (3)

Entry Terminal

Entry Terminal

Compression

Storage Injection

Storage Withdrawal

…wherever the storage site is.

Exit Point

Exit Point

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# Shrinkage (UAG)

- Unaccounted for Shrinkage Gas is thought to be largely meter error
  - It has been argued that any meter error at storage sites would have no annual impact as injection errors would be cancelled out by withdrawal errors

  - If this was not the case
    - the volume of gas held in storage (which is published) would not agree with in the 'inputs' and 'outputs'
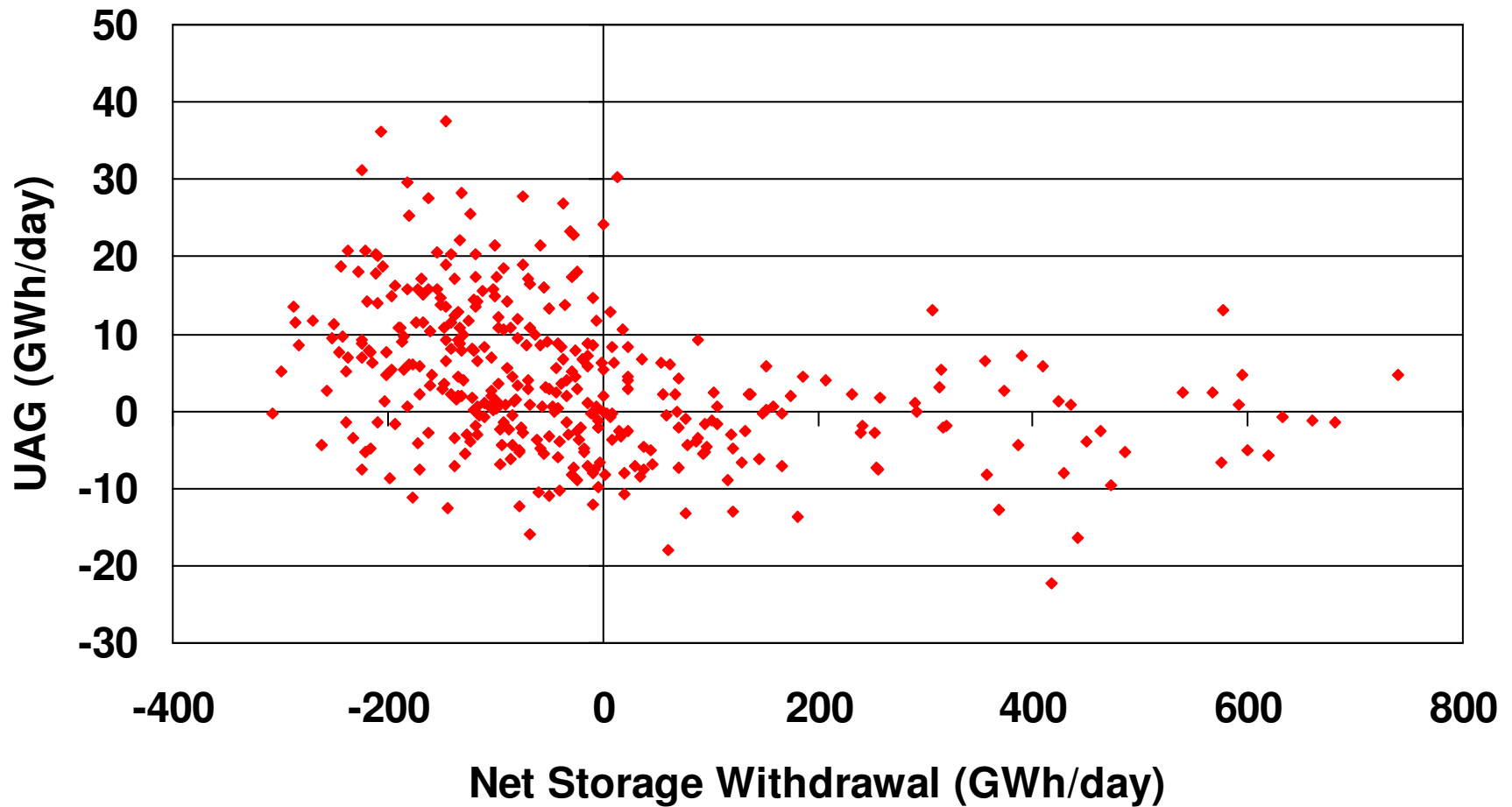   - There would be an unexplainable increase or decrease in storage stock

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UAG v Throughput
(April 2006 to March 2007)
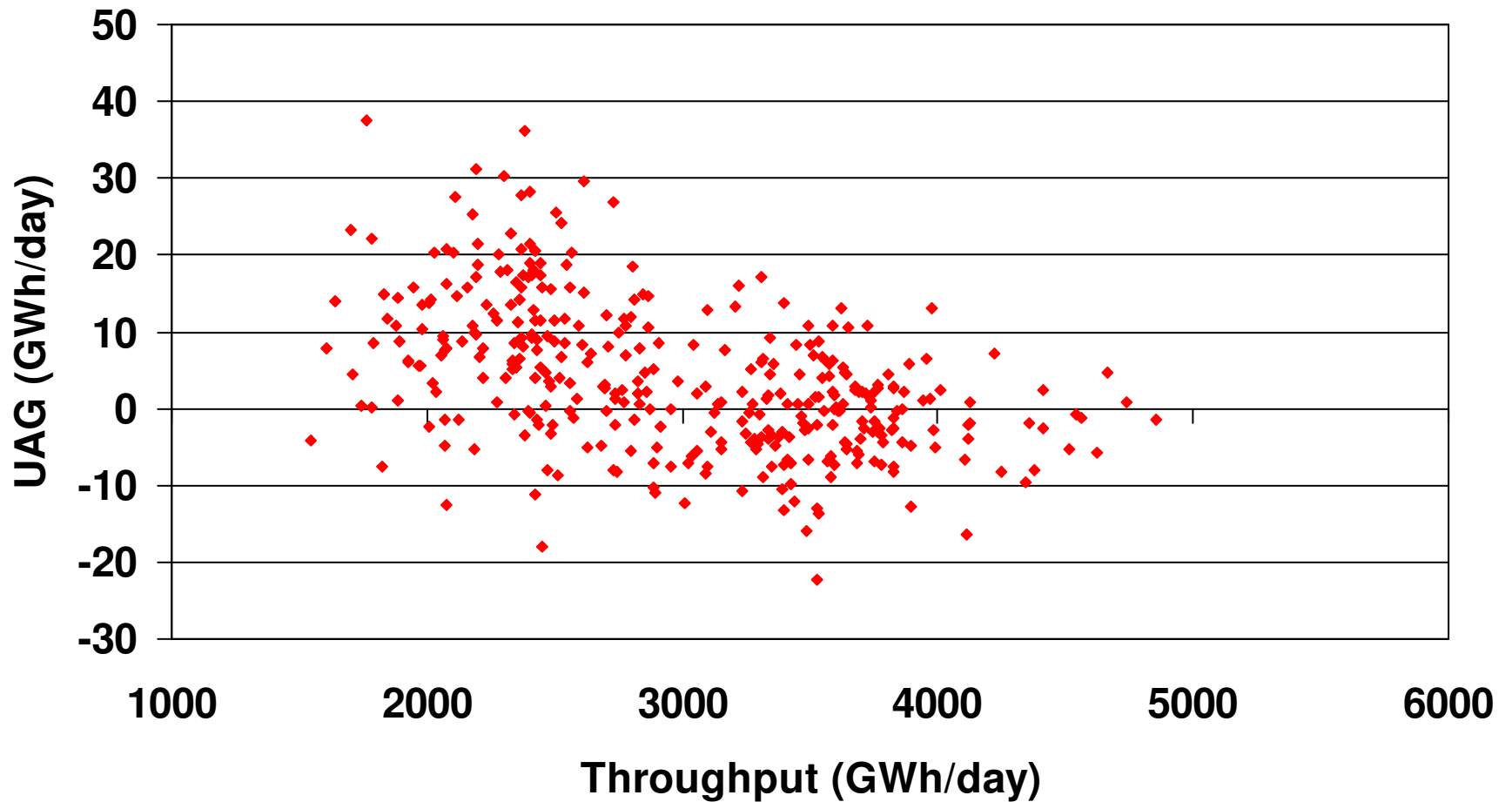
UAG v Storage Throughput
(April 2006 to March 2007)

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Conclusions

- No additional compressor usage as a result of storage injection & withdrawal
  - Including the cost within an SO Storage Commodity charge would therefore lead to double counting

- No positive relationship between UAG and throughput or storage flows;
  - Including the cost within an SO Storage Commodity charge could not be said to be cost reflective
  - Would including the cost within an SO Storage Commodity charge achieve the remaining charging relevant objectives e.g. promote competition?

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