

CUB CROSS EX

October 17, 2013

**NORTHERN ILLINOIS GAS COMPANY d/b/a NICOR GAS COMPANY  
RESPONSE TO CITIZENS UTILITY BOARD  
THIRD SET DATA REQUESTS  
DOCKET NO. 03-0703**

- CUB 3.05 Q. Reference NICOR 003410:
- a. Please provide the same information for 2002/2003.
  - b. Please provide the analysis supporting the amount of storage to be assigned to "Utility" for the winter of 2002/2003 and 2003/2004.
- A. Nicor Gas objects to this request as unduly burdensome to the extent it seeks information not maintained by Nicor Gas in the ordinary course of business, and to the extent it seeks analysis performed by the Company a decade ago. Subject to and without waiving these objections, Nicor Gas states that it has not located any responsive documents.

**OFFICIAL FILE**

I.C.C. DOCKET NO. 03-0703

CUB Cross Exhibit No. 2

Witness Shelwood

Date 3/17/15 Reporter TD

# Estimated Storage Utilization

2003/2004

roy Grove Hub - 4 bcf

Hub - 14.2 bcf

Cust Select - 11 bcf

\*Transport - 21.5 bcf

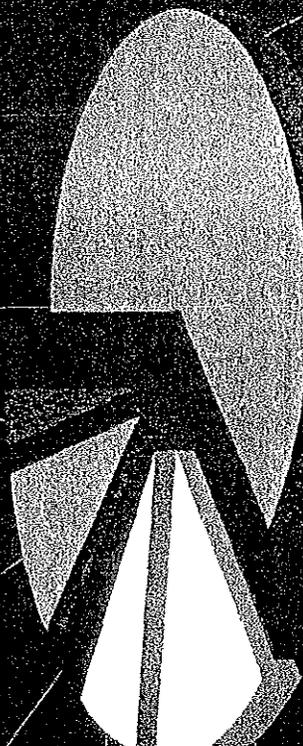
Comp. Use - .5 bcf

Unutilized - 4.8 bcf

Utility - 95 bcf

\*Based on Transportation Customers filling to 21.5 bcf inventory

151 bcf all time max inventory



Aug. 25, 2004

**NORTHERN ILLINOIS GAS COMPANY d/b/a NICOR GAS COMPANY  
RESPONSE TO ILLINOIS COMMERCE COMMISSION  
DATA REQUEST  
DOCKET NO. 03-0703**

- ENG 2.90      Q.      Does Nicor utilize any other storage fields or services besides Troy Grove to conduct Hub transactions? If so, provide the name of the field or service and the amount of capacity allotted to the Hub.
- A.      Yes. Nicor Gas uses its on-system assets in general to provide Hub services. No other Hub capacity allocations are attributed to specific storage fields. NICOR 003401-003419 are documents related to Hub capacity allocations in 2003.

Nicor Gas

EFFECTIVE: June 23, 2004

POLICY ORDER: L-5

SUPERSEDES: L-5 Policy dated  
May 21, 2003

SUBJECT: Hub Capacity Allocation

REFERENCE: Gas Supply Planning Policy  
L - 4

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This Policy Order will serve as the guideline for determining the allocation of Nicor storage and transportation capacity to the Hub on both a long term (seasonal and/or annual) and short-term (monthly or daily) basis. The primary drivers for allocating capacity to the Hub will be i) the optimization of available daily/short term capability, while maintaining adequate operational flexibility, ii) achieving long range inventory cycling targets to benefit overall storage operations for all customers, and iii) to promote increased market liquidity for all parties conducting business on Nicor's system.

#### **Long Term Capacity Allocation**

The long-term allocation of capacity to the Hub is based upon optimizing utilization of system storage and transportation capacity, and in improving system operating efficiencies on a long and short-term basis. Approximately November 15 of each year, the Manager of Gas Control will review the physical storage balances by customer class as of October 31. This review should provide a validation of utilization of storage capacity on a historical basis, and allow for an allocation of injection capacity to the Hub for the summer months of at least the current and next calendar years. A recommendation will be presented to the Risk Management Committee ("RMC") for the allocation of this injection capacity, which may be considered for approval on a multi-year basis.

During the first quarter of each calendar year, Nicor Gas Control, Reservoir Engineering and Supply personnel will update and analyze the current status of individual customer class and total storage inventories, and the anticipated utilization of capacity for the upcoming year. This analysis may identify an additional level of system storage and transportation capacity that is likely to be available for the Hub during the ensuing season(s). Based upon the analysis, a recommendation of capacity allocation would be presented to the RMC for its consideration and approval. In order to appropriately document and support the allocation process, the Manager of Gas Control will retain the analysis.

If conditions were to change during the subsequent months that would indicate a change in the utilization of Nicor's storage capacity, any unsold capacity previously allocated to the Hub may be revised accordingly.

#### **Short Term or Daily Capacity Allocation**

Allocating capacity and/or capability to the Hub on a daily or short term basis is a function of the utility's ability to optimize its short term operating flexibility, while at the same time maintaining adequate flexibility to accommodate unanticipated changes in system demands or receipts. This allocation will be the result of the following process:

1. Each spring Gas Control will review the upcoming season reservoir injection/withdrawal plan, estimate the Transportation customer injection/withdrawal patterns and the PGA storage injection/withdrawal plan and determine the monthly and daily limits for Hub injection/withdrawal activity. This will be provided to the Hub to manage their volumes.
2. Each month, Gas Control and Gas Supply personnel will establish a procurement & operating plan for the upcoming month. Based on existing market conditions and operating status, modifications to the capacity levels identified earlier for the Hub may be made. These modifications may be an increase to available capacity, decrease previously allocated but unsold capacity, or hold firm previous allocations of capacity from prior limits.

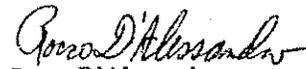
3. On a daily basis, Gas Control and Gas Supply personnel will meet to prepare an operating plan for the subsequent day(s), incorporating current weather forecasts and market conditions. This daily plan will be prepared with the goal of achieving the best results for the utility's sales customers, using a preferred mix of purchases and storage capability that provides for reliable supply and adequate flexibility to meet unanticipated needs. Inherent in this daily plan will be an allocation of interruptible capacity to the Hub, which is consistent with the levels of capacity contracted for by Hub customers. Any additional capacity determined within the planning timeline may be made available to the Hub.
4. In conjunction with this daily planning routine and Hub capacity allocation process, all decisions made with respect to the allocation of Hub capacity, along with all supporting documentation, will be retained by the Manager of Gas Control in such a manner that these decisions may be supported at a later date.

#### **Hub Interruption Criteria**

Interruption of Hub services will be handled in a manner consistent with the provisions of Rate 21 and the FERC Nicor Gas Chicago Hub Operating Statement.

#### **Hub Activity Reporting**

On a quarterly basis, the Hub will report to the RMC on activity related to capacity allocated for its use.



Rocco D' Alessand  
Senior Vice President, Operations



MEMORANDUM

Date: January 20, 2003

Subject: **HUB Capacity**

From: Len Gilmore

To: George Behrens  
Rocco D'Alessandro  
Ted Lenart

cc: Steve Cittadine  
Dan Dodge  
Al Harms  
Mark Rueff

On January 17, 2003, a meeting was held to determine if a quantity of interruptible storage capacity could be identified for allocation to the Nicor Gas HUB. It was proposed that firm storage capacity rights elected by Nicor Gas' end-use transportation customers that were not expected to be fully utilized could be made available to the Nicor Gas HUB without potential adverse impact on Nicor Gas' ability to provide reliable service to all of its customers, and without an expected adverse cost impact on Nicor Gas' sales customers.

Attached is an analysis of the level of end-use transportation customer storage capacity rights and storage capacity utilization. These customers typically elect storage rights that allow them to store up to 36 Bcf on the Nicor Gas system. However, since May, 1996, this class of customers has never had end-of-month storage balances in excess of 29.7 Bcf. It is reasonable to expect that over the next two years, this level of elected capacity (6.2 Bcf) will, at a minimum, continue to be under-utilized by Nicor Gas' transportation customers.

Based on these considerations, it was recommended that the Nicor Gas HUB be permitted to sell, at this time, 6.2 Bcf of interruptible storage service. Further, the Nicor Gas HUB should consider this capacity as being available for the next two years on an interruptible basis. This quantity may be adjusted from time-to-time based upon further analysis, discussion and updated numbers.

Len

A handwritten signature in black ink, appearing to be "Len Gilmore".

NICOR 003403

**Traditional Transportation customer gas  
EOM balances per the Aquifer report**

	96-97	97-98	98-99	99-00	00-01	01-02	02-03		average
May	11,340,896	8,942,801	15,476,861	17,961,165	11,066,406	15,058,879	15,288,261	7	13,590,753
Jun	12,306,470	13,654,497	21,560,808	21,809,219	12,227,174	17,951,185	18,960,024	7	16,924,197
Jul	15,192,295	14,307,974	23,120,669	21,442,494	13,723,461	20,167,689	21,681,692	7	18,519,468
Aug	17,413,369	15,357,176	25,544,790	22,553,477	13,851,666	21,830,609	22,755,169	7	19,900,894
Sep	21,265,564	18,598,898	27,229,242	25,990,082	15,551,670	25,305,593	24,325,271	7	22,609,474
Oct	17,236,330	20,916,893	28,115,204	26,940,429	19,284,500	26,219,482	23,241,987	7	23,136,404
Nov	18,275,907	22,004,221	29,415,267	29,896,219	21,277,777	29,741,191	20,844,825	7	24,493,630
Dec	12,096,667	19,515,143	27,025,108	23,725,302	13,452,030	25,939,496		6	20,292,291
Jan	11,500,000	16,199,441	19,462,790	12,261,654	10,204,240	22,693,501		6	15,386,938
Feb	11,600,000	14,702,931	16,242,227	11,737,637	7,680,259	17,581,938		6	13,257,499
Mar	9,475,484	13,247,062	16,422,023	13,582,870	6,676,067	15,360,966		6	12,460,745
Apr	10,896,048	14,134,288	14,399,102	11,147,263	10,606,205	14,850,096		6	12,672,167
season injections	9,924,668	13,061,420	16,168,205	15,497,117	10,211,371	23,065,124	9,475,175	7	13,914,726
season withdrawals	12,322,763	8,757,159	15,016,165	18,829,813	14,601,710	14,891,095		6	14,069,784

Highest injections in a season	23,065,124					23,065,124		
lowest injections in a season	9,475,175						9,475,175	
Highest Withdrawals in a season	18,829,813			18,829,813				
Lowest Withdrawals in a season	8,757,159	8,757,159						

**transportation customer rights**

	96-97	97-98	98-99	99-00	00-01	01-02	02-03	
highest cycle balance	21,265,564	22,004,221	29,415,267	29,896,219	21,277,777	29,741,191	24,325,271	
unused capacity	15,289,412	12,749,560	6,762,618	6,928,889	15,210,826	6,236,907	11,638,547	
	max unused					min unused		
using November EOM bal. only	18,275,907	22,004,221	29,415,267	29,896,219	21,277,777	29,741,191	20,844,825	
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**Average:**  
**trans cust rights**  
**36,106,038**  
highest cycle balance  
25,417,930  
10,688,108  
unused capacity  
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unused capacity

**Storage Allocation Meeting  
1/17/03**

**Discuss/approve initial Hub Allocation per 12/20/02 memo from Len Gilmore**

- Approve allocation of 6 Bcf 2003 parking capacity

**Discuss/approve marketing of 4 Bcf Troy Grove off-system storage**

**Discuss other 2003 planned Hub services waiting for Nicor Gas approval**

- Troy Grove Expansion capacity
- 9 Bcf of additional parking capacity per the Enerchange business plan (13 Bcf from 2002)
- 10 Bcf of interruptible winter loans per the 2003 budget
- 4 Bcf, 60,000 multi-cycle loan (\$2.2 mil per 2003 budget, current deal ends April 30, 2003)
- firm, multi-cycle deals (do we need to sell?)
- interruptible multi-cycle deals (\$2-3 mm annually, first of 4 deals expires Feb. 28)
- daily flexibility (\$200,000 per month, currently under \$25,000 per month)

**Macro discussion of 2003 third party storage fill**

## Hub Allocation Process

### Parking Allocation

January 20, 2003

Memo from Len Gilmore providing 6.2 bcf of allocation to the Hub based on traditional unused Transportation Customers allocation of 36 bcf.

Supply Purchasing determines the portion required from storage to serve the sales customers for normal weather is 94.2 bcf.

Gas Control estimates the Transportation Customers will fill storage to 21.5 bcf based on historical fill patterns and economic considerations.

Hub is allocated an additional 6 bcf bringing the total to 12.2 bcf based on storage fill to 143 bcf and combined allocations for all parties.

### Loan Allocation

Gas Control evaluated the inventories of the Transportation Customers and the Utility to determine historical ending volumes. The total storage volumes were also evaluated for March and April ending volumes. Statistical analysis was performed to determine the standard deviations and 99 % confidence level of the ending balances. Using this information it was recommended the Hub be allocated between 9 and 12 bcf of loans. Ten bcf was recommended by Ted Lenart and approved by the Risk Committee. These loans were to occur in March and April to help cycle storage.

Gas Control developed a plan to provide the Hub daily and monthly injection levels and limits. This was modeled using our company storage injection plan and also our DSS contract which is modeled using the NGPL Herscher Storage Field operation requirements.

Supply Purchasing first determined what their buying pattern would be. This was applied to the storage allocation plan. All other allocations were applied excluding the Hub. The Hub limits were then set to cover the left over volume and capacity. The allocations were then provided to the Hub to manage.

### Additional Hub Allocations

Two additional allocations have been made. Two bcf of parks were added in June and 1 bcf of parks added in August. No additional loans have been allocated.



MEMORANDUM

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From: Len Gilmore

To: George Behrens  
Rocco D'Alessandro  
Ted Lenart

cc: Steve Cittadine  
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**transportation customer rights**

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trans cust rights**  
36,106,038  
highest cycle balance 25,417,930  
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Seasonal Analysis of PGA Activity

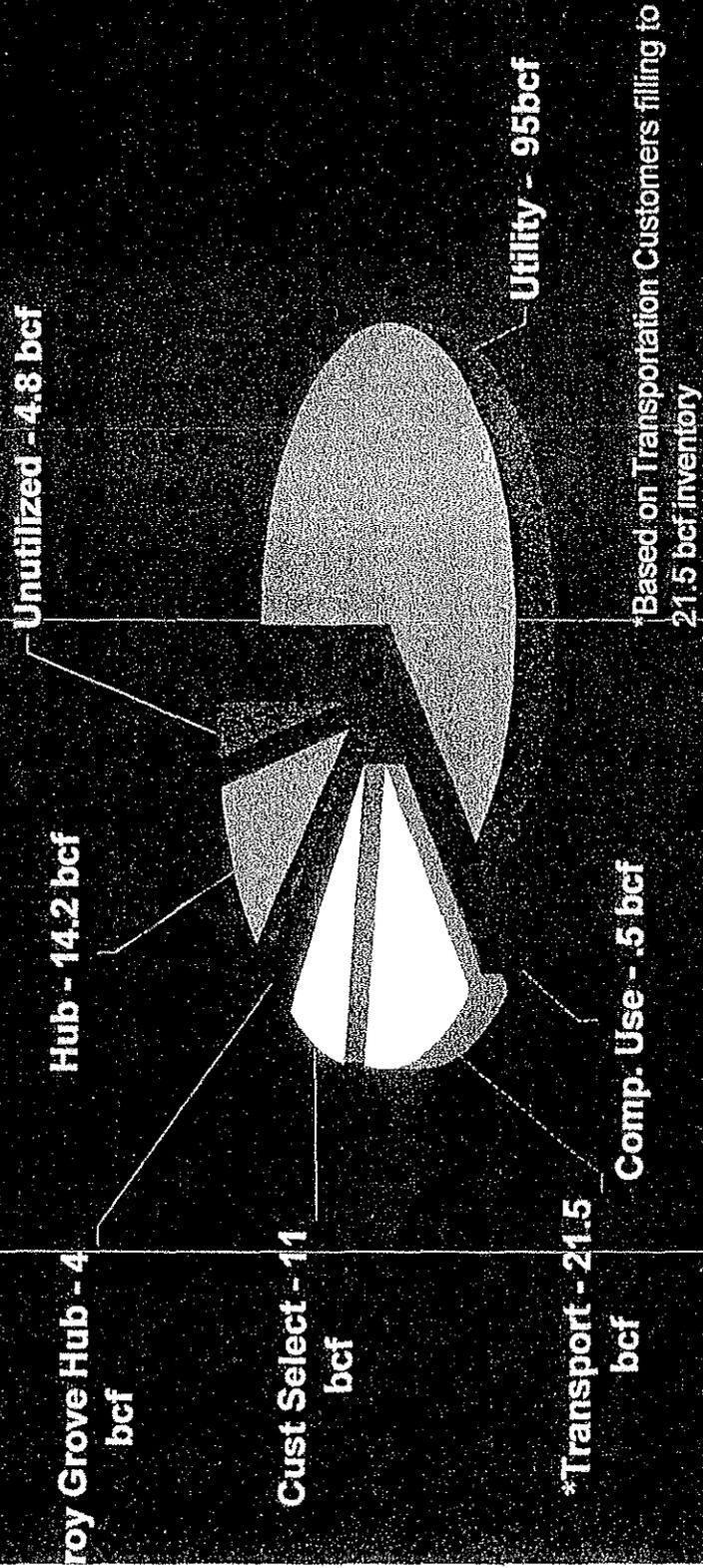
	Nov	Dec	Jan	Feb	Mar	Nov-Mar Total	April	Nov-Apr Total
<b>ormal</b>								
Heating load	29,397	49,995	61,440	46,368	36,775	222,975	18,532	241,507
Sendout	50,827	72,129	81,825	65,088	56,800	326,669	39,122	365,791
Non-PGA Sendout	22,741	26,586	29,171	24,412	23,159	126,069	20,952	147,021
PGA Sales (A)	28,086	45,543	52,654	40,676	33,641	200,600	18,170	218,770
<b>PGA Base Flow Requirements</b>								
NGPL reqment - 32% sales	8,988	14,574	16,849	13,016	10,765	64,192	5,814	70,006
NNG reqment - 130/d	3,900	4,030	4,030	3,640	4,030	19,630	3,900	23,530
NBPL reqment - 100/d	3,000	3,100	3,100	2,800	3,100	15,100	3,000	18,100
MGT reqment - 50/d	1,500	1,550	1,550	1,400	1,550	7,550	1,500	9,050
Base Flow	17,388	23,254	25,529	20,856	19,445	106,472	14,214	120,686
Cover E.U. 32% NGPL @ 0%	-	-	-	-	-	-	-	-
Total PGA Min Flow (B)	17,388	23,254	25,529	20,856	19,445	106,472	14,214	120,686
Max PGA Storage A-B	10,698	22,289	27,125	19,820	14,196	94,128	3,956	98,084
<b>Warmer-than-Normal</b>	<b>10%</b>							
Heating load	26,457	44,996	55,296	41,731	32,198	200,678	16,679	217,358
Sendout	47,887	67,130	75,681	60,451	53,223	304,372	37,269	341,640
Non-PGA Sendout	22,006	25,336	27,635	23,253	22,265	120,495	20,489	140,983
PGA Sales (A)	25,881	41,793	48,046	37,198	30,958	183,877	16,780	200,657
<b>PGA Base Flow Requirements</b>								
NGPL reqment - 32% sales	8,202	13,374	15,375	11,903	9,907	58,841	5,370	64,210
NNG reqment - 130/d	3,900	4,030	4,030	3,640	4,030	19,630	2,400	22,030
NBPL reqment - 100/d	3,000	3,100	3,100	2,800	3,100	15,100	3,000	18,100
MGT reqment - 50/d	1,500	1,550	1,550	1,400	1,550	7,550	1,500	9,050
Base Flow	16,682	22,054	24,055	19,743	18,587	101,121	12,270	113,390
Cover E.U. 32% NGPL @ 0%	-	-	-	-	-	-	-	-
Total PGA Min Flow (B)	16,682	22,054	24,055	19,743	18,587	101,121	12,270	113,390
Max PGA Storage A-B	9,199	19,739	23,991	17,455	12,371	82,756	4,510	87,267
<b>Colder-than-Normal</b>	<b>10%</b>							
Heating load	32,337	54,995	67,584	51,005	39,353	245,273	20,385	265,658
Sendout	53,767	77,129	87,969	69,725	60,378	348,967	40,975	389,942
Non-PGA Sendout	23,476	27,836	30,707	25,571	24,053	131,643	21,415	153,059
PGA Sales (A)	30,291	49,293	57,262	44,154	36,324	217,323	19,560	236,883
<b>PGA Base Flow Requirements</b>								
NGPL reqment - 32% sales	9,693	15,774	18,324	14,129	11,624	69,543	6,259	75,803
NNG reqment - 130/d	3,900	4,030	4,030	3,640	4,030	19,630	2,400	22,030
NBPL reqment - 100/d	3,000	3,100	3,100	2,800	3,100	15,100	3,000	18,100
MGT reqment - 50/d	1,500	1,550	1,550	1,400	1,550	7,550	1,500	9,050
Base Flow	18,093	24,454	27,004	21,969	20,304	111,823	13,159	124,983
Cover E.U. 32% NGPL @ 0%	-	-	-	-	-	-	-	-
Total PGA Min Flow (B)	18,093	24,454	27,004	21,969	20,304	111,823	13,159	124,983
Max PGA Storage A-B	12,198	24,839	30,258	22,184	16,020	105,500	6,401	111,900

on 3/4/5/6

Top Gas	143
End Users	36
Customer Select	11
Total 3rd party	47
Remaining	96
Utility Max-normal sendout	98
Remaining	(2)

# Estimated Storage Utilization

2003/2004



151 bcf all time max inventory

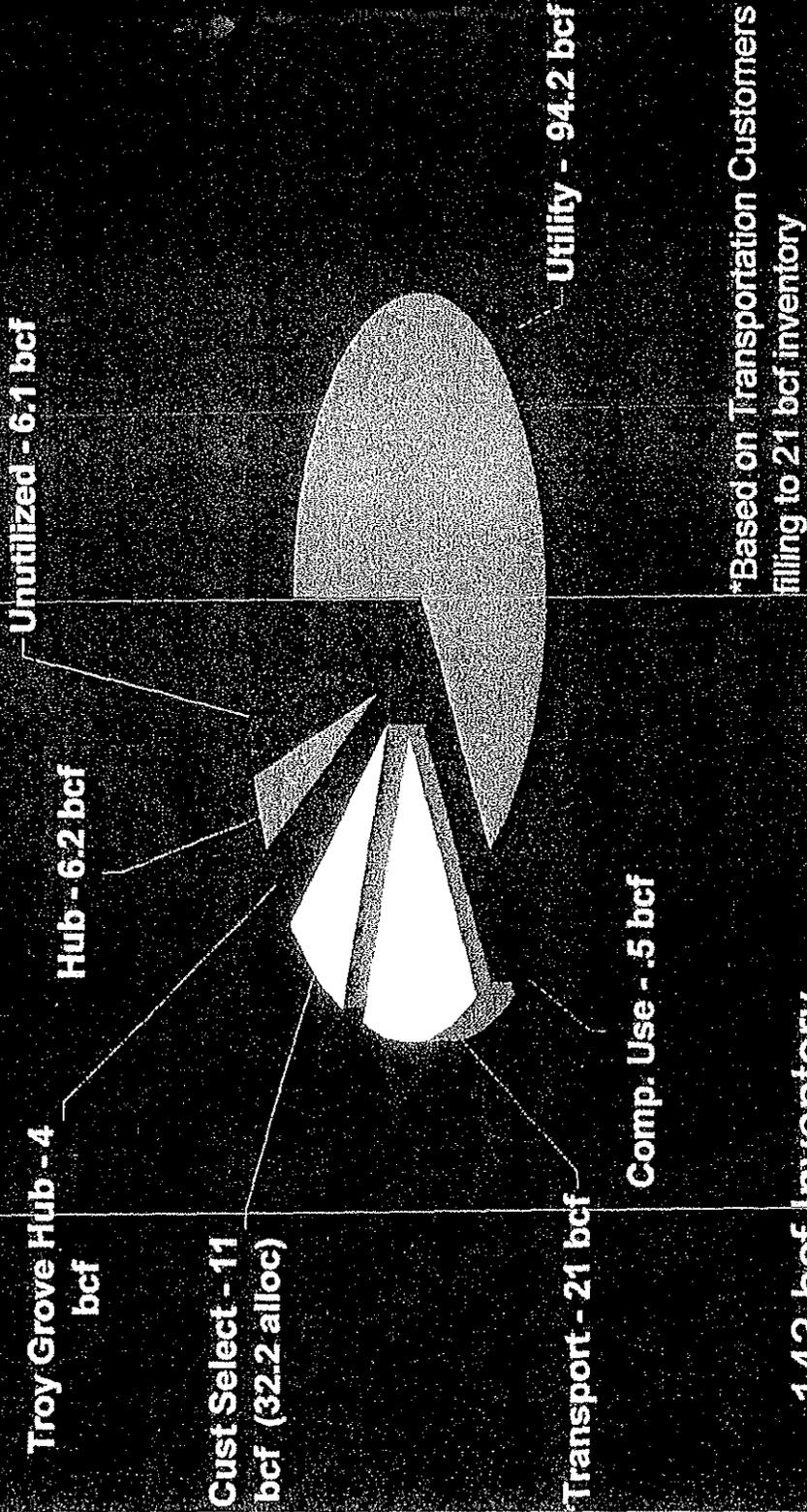
STORAGE ALLOCATION DETAIL 2003/2004 Planning

Fill to 143 bcf Top Gas Inventory

	2003	2004	Change	2004	2003	2004	%
Utility W/d							
Utility Inj	94,128	94,128	(27,926)	66,202	(10,784)	74,644	46.3%
Prefill (Oxy+Axia) W/d							
Prefill (Oxy+Axia) Inj							
Transportation W/d							
Transportation Inj	32,300	21,000	(11,092)	9,908	(13,092)	7,908	6.9%
CS Storage W/d							
CS Storage Inj	11,000	11,000	(179)	10,821	340	11,543	7.6%
Hub W/d							
Hub Inj	6,200	6,200	7,950	14,150	(6,807)	13,007	9.9%
TG Expansion W/d							
TG Expansion Inj							
Virginia Power W/d(TG/Aquila)							
Virginia Power Inj (TG/Aquila)	4,000	4,000	(1)	3,999	(550)	3,450	2.8%
Company Use W/d							
Company Inj	500	500	(405)	95	(495)	5	0.1%
Total W/d							
Total Inj							
Net (G)							
	148,128	136,828	(31,652)	105,176	(26,470)	10,358	Inventory 95.7%
		6,172		6,172		6,172	Unallocated 4.3%

# Estimated Storage Utilization

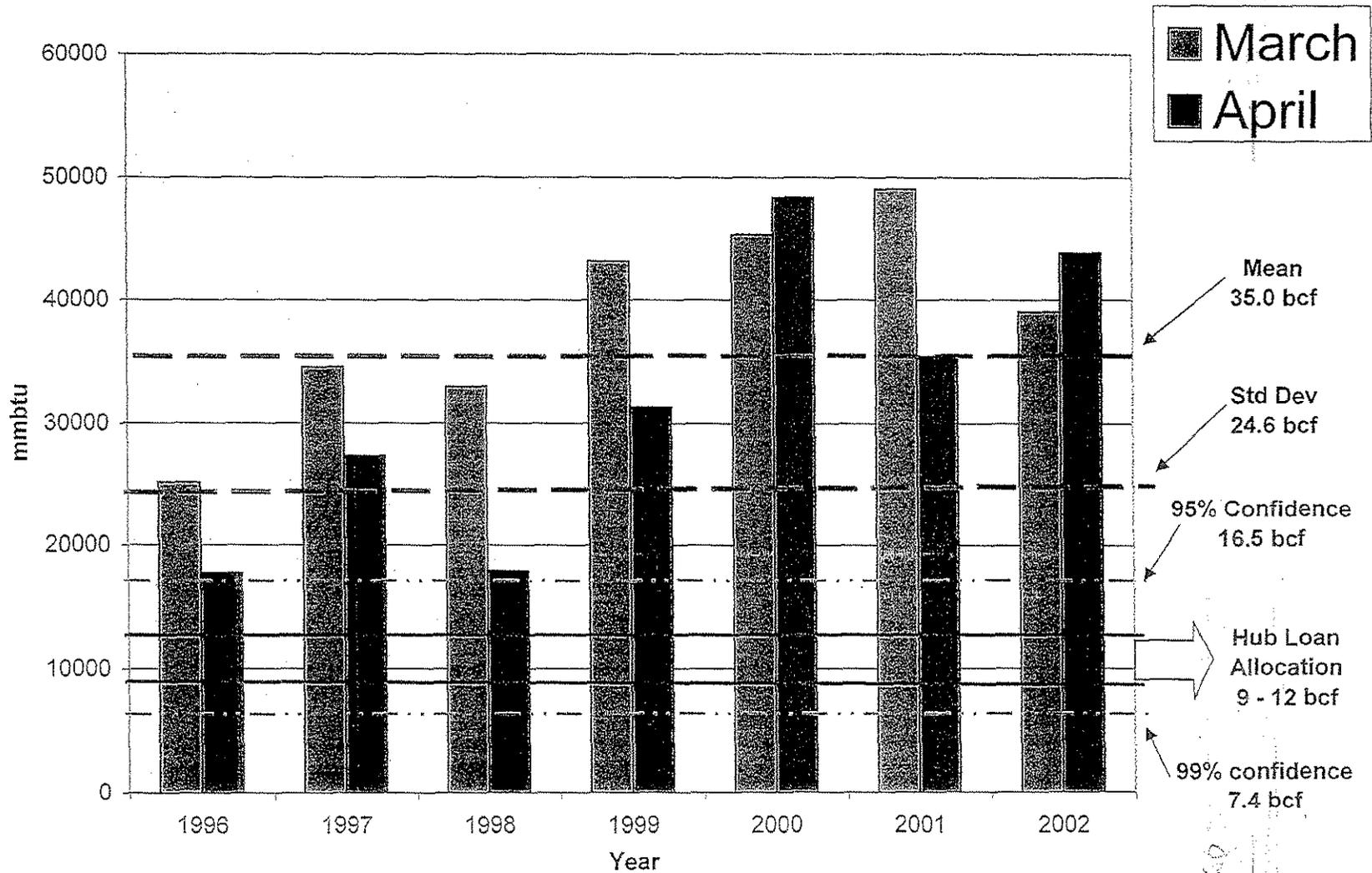
2003/2004



\*Based on Transportation Customers filling to 21 bcf inventory

143 bcf Inventory

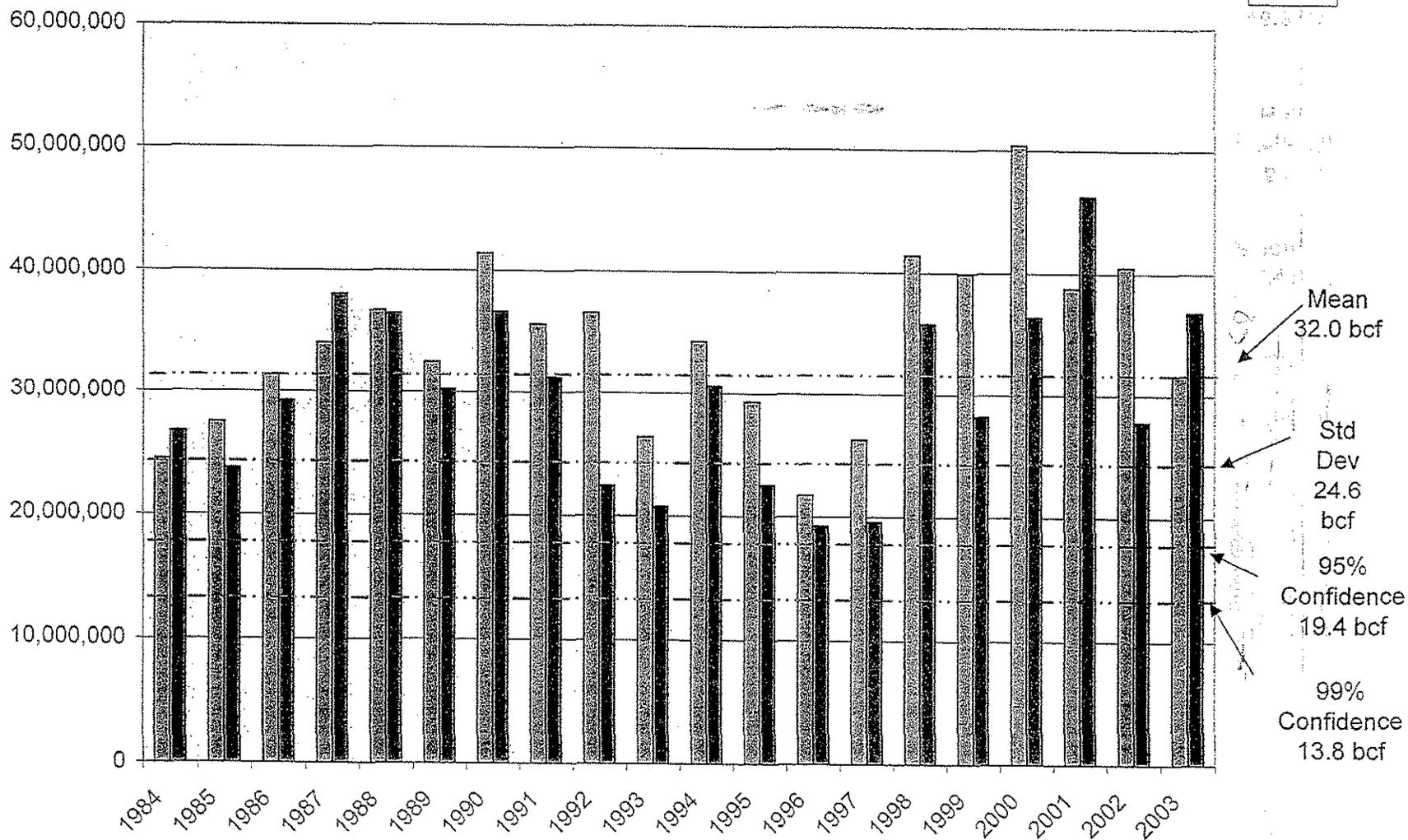
# March & April Combined Inventory



# Total Top Gas Inventory Volumes

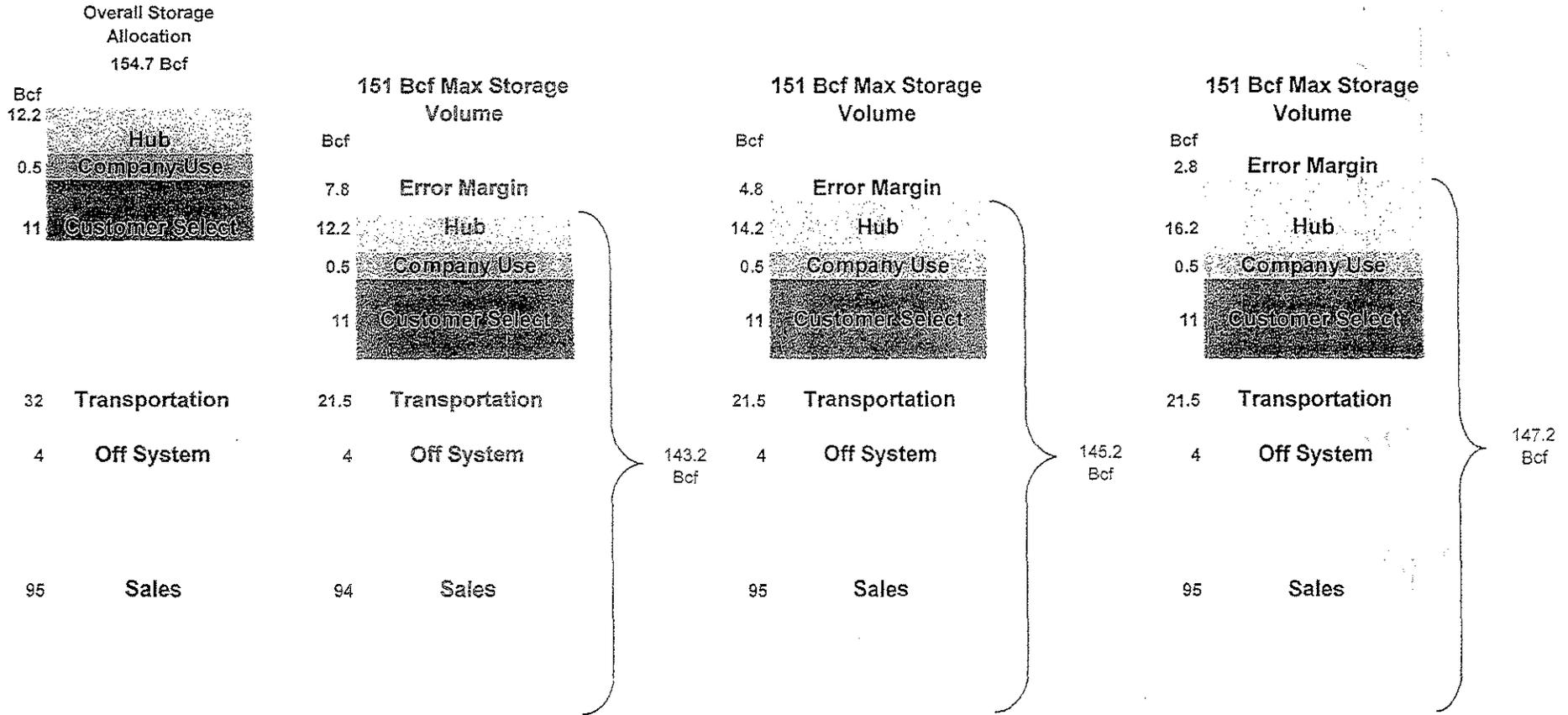
mmbtu

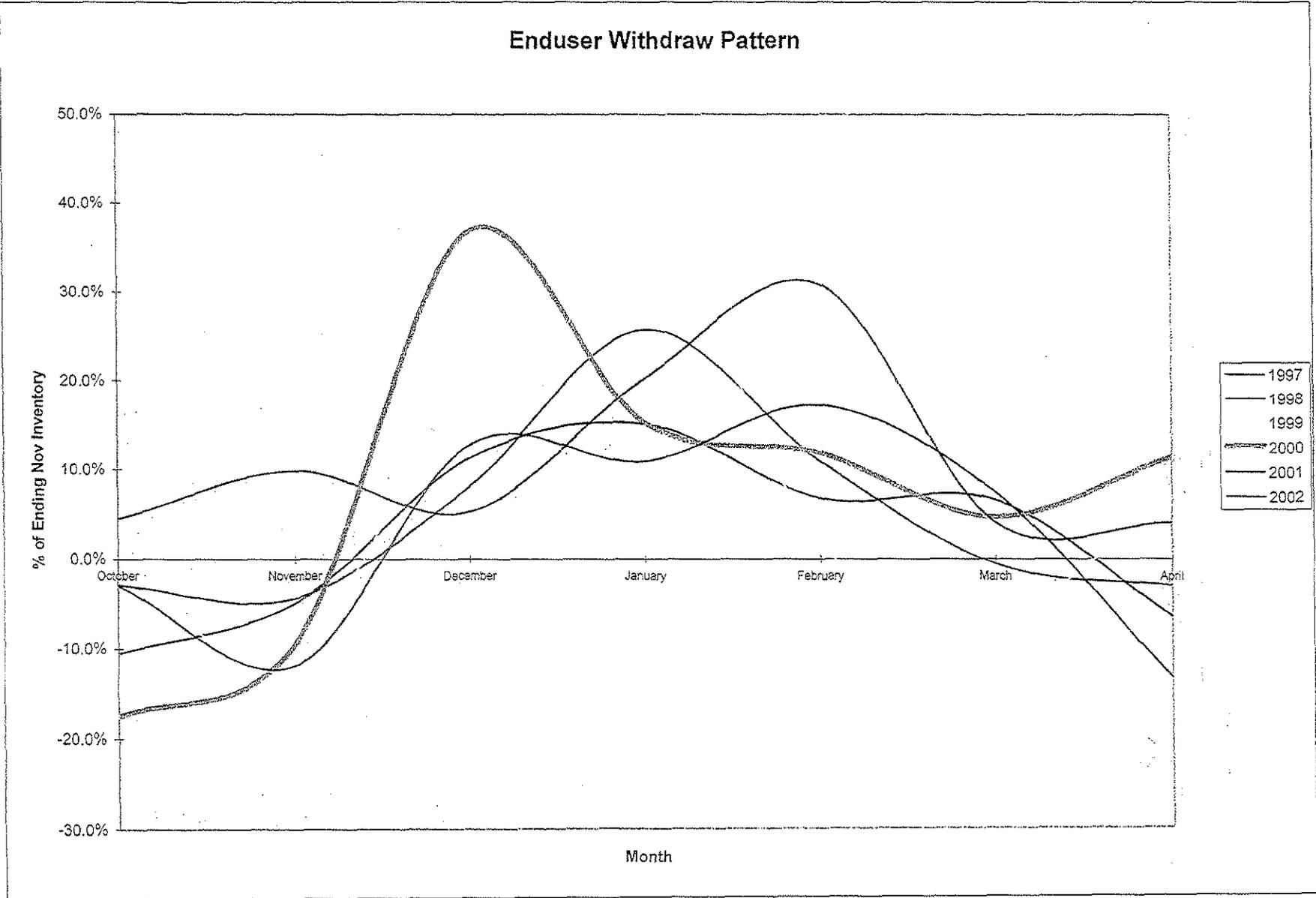
March  
April



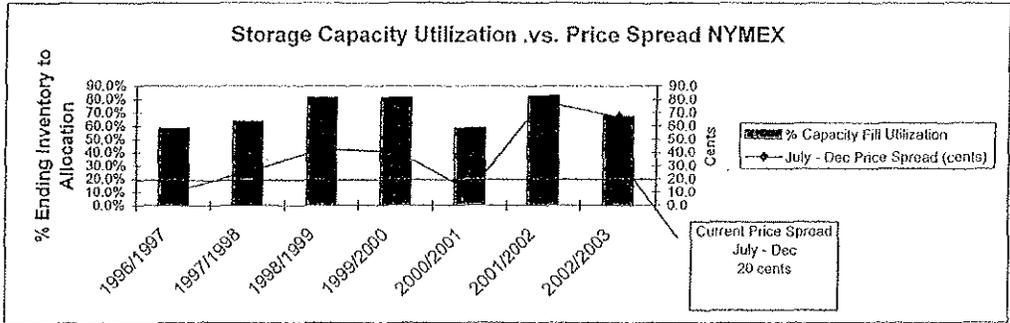
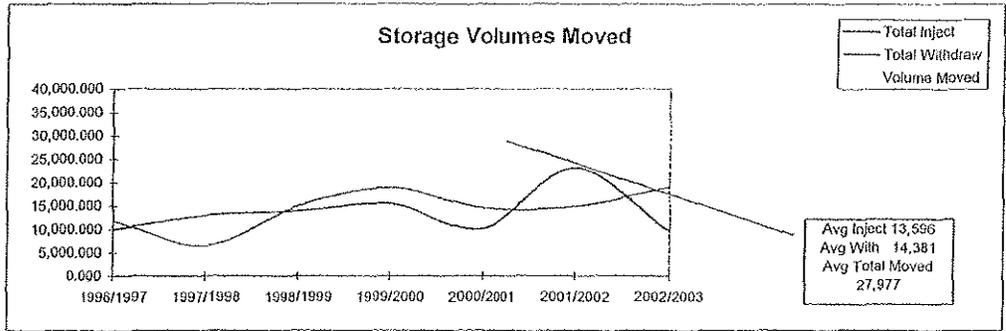
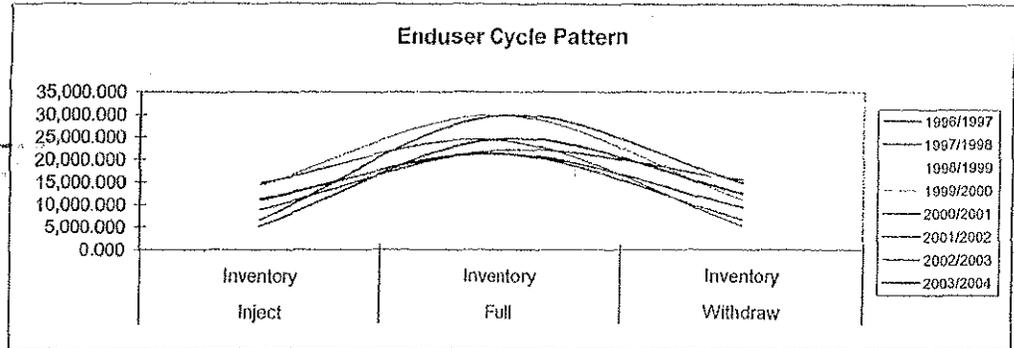
# Storage Allocation

24-Jun-03





# Hub Parking Enhancement



G	B	C	D	E	F	G	H			
Start	End	End	Total	Total	Total	Transportation	% Capacity	Un-utilized	Hub	Storage
Inject	Full	Withdraw	Inject	Withdraw	D+E	Customer	Fill	Inventory	Enhancement	Potential
5,313.209	15,000.000	618.816	9,888.791	14,381.184	24,067.975	36,000.000	41.7%	21,000.000	14,800.000	157,000.000
5,313.209	20,988.000	6,606.816	15,674.791	14,381.184	30,055.975	36,000.000	58.3%	11,012.000	4,812.000	147,812.000
5,313.209	22,793.260	8,412.076	17,480.051	14,381.184	31,861.234	36,000.000	63.3%	9,206.740	3,006.740	146,006.740
5,313.209	25,344.000	10,962.816	20,030.791	14,381.184	34,411.975	36,000.000	70.4%	6,656.000	456.000	143,456.000
5,313.209	29,520.000	15,138.816	29,520.000	14,381.184	43,901.184	36,000.000	82.0%	2,480.000	0.000	143,000.000
5,313.209	29,696.219	15,515.035	29,886.219	14,381.184	44,277.403	36,000.000	Max Inventory	2,103.781	0.000	143,000.000

Current July - December Spread 20 cents

# Enduser Cycling

	A	B	C	D	E	F	G	H	
	Start Inject Inventory	Full Inventory	End Withdraw Inventory	Total Inject	Total Withdraw	D+E Total Volume Moved	Transportation Customer Rights	G/B % Capacity Fill Utilization	July - Dec Price Spread (cents)
1996/1997	11,340.896	21,265.564	9,475.484	9,924.668	11,790.080	21,714.748	36,554.976	58.2%	10.5
1997/1998	8,942.801	22,004.221	15,476.861	13,061.420	6,527.360	19,588.780	34,753.781	63.3%	25.5
1998/1999	15,476.861	29,415.267	14,399.102	13,938.406	15,016.165	28,954.571	36,177.885	81.3%	42.5
1999/2000	14,399.102	29,896.219	11,066.406	15,497.117	18,829.813	34,326.930	36,825.108	81.2%	40.5
2000/2001	11,066.406	21,277.777	6,676.067	10,211.371	14,601.710	24,813.081	36,488.603	58.3%	11.5
2001/2002	6,676.067	29,741.191	14,850.096	23,065.124	14,891.095	37,956.219	35,978.098	82.7%	78.0
2002/2003	14,850.096	24,325.271	5,313.209	9,475.175	19,012.062	28,487.237	35,963.818	67.6%	67.0
2003/2004	5,313.209								
Average	11,821.747	25,417.930	11,036.746	13,596.163	14,381.184	27,977.367	32,000.000	70.4%	39.4
Transportation Customer Allocation at 36 Bcf									
								04/07/2003	20.0 cents
								06/26/2003	54.0 cents
2003/2004	5,313.209	15,000.000	618.816	15,000.000	14,381.184	29,381.184	32,000.000	46.9%	18.0
	5,313.209	16,656.000	2,274.816	13,342.791	14,381.184	27,723.975	32,000.000	58.3%	18.0
	5,314.209	20,260.675	5,879.492	14,946.466	14,381.184	29,327.650	32,000.000	63.3%	18.0
	5,315.209	22,528.000	8,148.816	17,212.791	14,381.184	31,593.975	32,000.000	70.4%	18.0
	5,313.209	26,240.000	11,858.816	26,240.000	14,381.184	40,621.184	32,000.000	82.0%	18.0
	5,313.209	29,896.219	15,515.035	29,896.219	14,381.184	44,277.403	32,000.000	Max Inventory	18.0

Un-utilized Inventory	Hub Enhancement	Storage Inventory Potential
17,000.000	10,800.000	153,800.000
13,344.000	7,124.000	140,144.000
11,739.325	5,539.325	148,539.325
9,472.000	3,272.000	146,272.000
5,760.000	0.000	143,000.000
2,103.781	0.000	143,000.000

