P.O. Box 2001
50 Keil Drive North
Chatham, Ontario
N7M 5M1

June 2, 2006

Ontario Energy Board
2300 Yonge Street,
Suite 2700
Toronto, ON M4P 1E4

Attention: Mr. Peter O'Dell, Acting Board Secretary

Re: EB-2005-0551 – Union Gas Undertaking Responses – Issue I & Issue III

Dear Mr. O'Dell:

Attached please find 10 copies of Union's and EEA Consulting Inc. responses to all Issue II undertakings received in the above noted proceeding. In addition, EEA Consulting has included evidence in response the Board Hearing Team request to supply a series of articles; UGL Undertaking 53. Also, EEA Consulting Inc. has confirmed a reference that was "subject to check", which may be found in UGL Undertaking 54.

This material was also provided to the Board and all intervenors electronically in searchable format on June 2, 2006.

If you have any questions concerning this filing please call me at (519) 436-5382.

Yours truly,

Connie Burns, CMA, PMP
Manager, Regulatory Initiatives

cc: Glenn Leslie, Blakes
All EB-2005-0551 Intervenors
EEA Consulting Inc.
Richard Schwindt

UNION GAS LIMITED

Undertaking of EEA Consultants
To

To provide updated Tables 12 & 13.

Please see attachment for updated Tables 12 & 13.

Tables 12 and 13 have been updated to separately specify storage capacity which is owned by Texas Eastern, but operated by Dominion. Texas Eastern is a subsidiary of Duke Energy.

In addition, Dominion capacity includes only Dominion capacity located in Pennsylvania and New York. The WV state label has been removed the Dominion record in Table 12 to reflect this.

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

Table 12 (Updated): Physical Storage Capacity in the Union Gas Core and Non-Core Competitive Market Area (Concentration by Operating Company)

Operating Company	Parent Company	State/ Province	Working Gas [MMscf]	Peak Delivery [MMscf]		Working Gas Market Share	Peak Delivery Market Share
Union Gas	***Duke***	***Ontario***	***152,200***	***2,300***		***8.6%***	***6.2%***
Texas Eastern\1	***Duke***	***PA***	***51,001***	***694***		***2.9%***	***1.9%***
Enbridge	Enbridge	Ontario	92,000	*1,792*	*est*	5.2%	4.8%
ANR Pipeline	El Paso	Michigan	117,000	*3,431*	*est*	6.6%	9.2%
ANR Storage	El Paso	Michigan	55,673	950		3.2%	2.6%
Blue Lake Storage	El Paso	Michigan	47,086	657		2.7%	1.8%
Eaton Rapids Gas Storage	El Paso/Semco	Michigan	13,534	120		0.8%	0.3%
Consumers Energy	CMS Energy	Michigan	142,800	*3,665*	*est*	8.1%	9.9%
Mich Con	DTE Energy	Michigan	124,444	3,300		7.1%	8.9%
Washington 10 Storage Corp.	DTE Energy	Michigan	60,500	*641*	*est*	3.4%	1.7%
Washington 28	DTE Energy	Michigan	9,725	275		0.6%	0.7%
Michigan Gas Utilities	Aquila	Michigan	5,100	*116*	*est*	0.3%	0.3%
Semco Energy Gas Co.	Semco Energy	Michigan	5,015	184		0.3%	0.5%
Bluewater Gas Storage	Plains All American Pipeline	Michigan	24,500	700		1.4%	1.9%
WPI- ESI Gas Storage	WPS Resources	Michigan	3,000	100		0.2%	0.3%
Lee 8	Vectren/Citizen's Gas	Michigan	2,450	*55*	*est*	0.1%	0.1%
Southwest Gas Storage Co.	Southern Union Co.	MI/IL	20,603	*430*	*est*	1.2%	1.2%
National Fuel Gas Supply	National Fuel Gas Supply	NY/PA	84,115	1,391		4.8%	3.7%
Natural Gas Pipeline of America	Kinder Morgan	Illinois	25,000	1,270		1.4%	3.4%
Nicor Gas	Nicor, Inc.	Illinois	144,300	2,800		8.2%	7.5%
Peoples Gas Light & Coke Co.	Peoples Energy	Illinois	28,000	920		1.6%	2.5%
Northern Indiana Public Service Co.	NiSource	Indiana	6,663	220		0.4%	0.6%
Indiana Gas Company	Vectren	Indiana	2,530	75		0.1%	0.2%
Dominion Transmission	Dominion Resources	PA/NY	269,786	5,929		15.3%	15.9%
Columbia Gas Transmission	NiSource	WV/PA/NY	245,000	4,445		13.9%	11.9%
Steuben Gas Storage	Arlington Storage Partners	New York	6,200	60		0.4%	0.2%
NYSE&G	Energy East Corp.	New York	1,450	145		0.1%	0.4%
Honeoye Storage	EHA LLC	New York	6,718	*41*	*est*	0.4%	0.1%
Central New York O&G	Stagecoach Holding LLC	New York	13,600	500		0.8%	1.3%
Total			**1,759,994**	**37,205**			
4 Firm Concentration			**811,286**	**15,474**		**46.1%**	**41.6%**
HHI			**0.082**	**0.083**			

1/ Texas Eastern Storage is operated by Dominion Transmission

Data Sources:

Natural Gas Intelligence, Natural Gas and Storage in the United States and Canada (2004/2005)

Michigan Public Service Commission, Natural Gas Field Storage Summary, 2005

Company Websites, SEC Filings: Form 10-K

Table 13 (Updated):
Physical Storage Capacity in the Union Gas
Core and Non-Core Competitive Market Area
(Concentration by Parent Company)

Parent Company	Working Gas [MMscf]	Peak Delivery [MMscf]		Working Gas Market Share	Peak Delivery Market Share
Duke	***203,201***	***3,382***		***11.5%***	***8.8%***
Enbridge	92,000	*1,792*	*est.*	5.2%	4.7%
El Paso	226,526	*5,098*	*est.*	12.9%	13.3%
CMS Energy	142,800	*3,665*	*est.*	8.1%	9.6%
DTE Energy	194,669	*4,216*	*est.*	11.1%	11.0%
Aquila	5,100	*116*	*est.*	0.3%	0.3%
Semco Energy	11,782	244		0.7%	0.6%
Plains All American Pipeline	24,500	700		1.4%	1.8%
WPS Resources	3,000	100		0.2%	0.3%
Vectren	3,755	*102*	*est.*	0.2%	0.3%
Citizens Gas	1,225	*27*	*est.*	0.1%	0.1%
Southern Union	20,603	430		1.2%	1.1%
National Fuel Gas Supply	84,115	1,391		4.8%	3.6%
Kinder Morgan	25,000	1,270		1.4%	3.3%
Nicor, Inc.	144,300	2,800		8.2%	7.3%
Peoples Energy	28,000	920		1.6%	2.4%
NiSource	251,663	4,665		14.3%	12.2%
Dominion Resources	269,786	6,622		15.3%	17.3%
Arlington Storage Partners	6,200	60		0.4%	0.2%
Energy East Corp.	1,450	145		0.1%	0.4%
EHA LLC	6,718	*41*	*est.*	0.4%	0.1%
Stagecoach Holding LLC	13,600	500		0.8%	1.3%
Total	**1,759,994**	**38,286**			
4 Firm Concentration	**951,176**	**19,767**		**54.0%**	**51.6%**
HHI	**0.105**	**0.103**			

UNION GAS LIMITED

Undertaking of Steve Poredos
To Mr. Thompson

To provide details of Union / MHP contract regarding St. Clair Pool.

On July 25, 2002, Union Gas Limited and Market Hub Partners Canada L.P. (MHP) entered into a Storage and Operating Agreement regarding MHP's St. Clair Pool. Under the terms of the agreement, MHP appointed Union as the operator of the St. Clair Pool. As operator, Union would perform all maintenance and operational functions of the pool, with all costs and expenses being reimbursed by MHP. As well, Union would be able to sell storage services based on the capability of the pool. Union would pay MHP the average of Union's C-1 storage revenue in a year, less a marketing fee.

As a condition precedent of the Contract, MHP had to receive, from the Board, a final order designating the Pool as a Designated Storage Area and granting of an Order from the Board to inject, store and withdraw gas from the Pool by June 15th, 2003. Given these orders were not received; the Contract was terminated before it could commence.

As described at the Technical Conference (May 19, page 127) Union has no plans to purchase space or deliverability from MHP.

Witness: Mark Isherwood / Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Steve Poredos
To Ms. Campbell

To provide a range of the terms and storage volume and rank the service in terms of sales volume from highest to lowest for each of the transactional storage services.

The following table provides the actual quantities of storage and transportation services for the years 2001 to 2005.

The ranking for each year is provided in the column to the right of the year where, 1 represents the highest quantity and 6 represents the lowest quantity. Also, attached is a brief description of the service.

UNION GAS LIMITED
Actual Storage and Transportation Quantities
For the years ending December 31st

Particulars	2001	Rank	2002	Rank	2003	Rank	2004	Rank	2005	Rank
	TJ		TJ		TJ		TJ		TJ	
	(a)		(b)		(c)		(d)		(e)	
C1 Transportation (Long & Short Term Firm)	53,447	4	49,613	5	34,878	4	45,148	4	69,556	4
C1 Interruptible Transportation and Exchanges	253,974	1	279,265	1	373,436	1	400,514	1	386,443	1
C1 Long Term Peak Storage	43,824	5	56,846	4	33,168	5	117,745	2	143,839	2
C1 Peak Short Term	102,512	3	85,489	3	56,679	3	39,198	5	52,714	5
Off Peak Storage/Balancing Loan Services	151,897	2	158,218	2	99,134	2	75,947	3	72,900	3
Consumers LBA	-		-		-		-		-	
Other S&T	1,121	6	1,291	6	2,670	6	1,473	6	1,365	6
Total S&T	606,775		630,722		599,966		680,026		726,818	

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

C1 Transportation Service
C1 transportation service is a firm service that allows customers to move gas between any 2 points on Union's system. This service is sold on a short term basis (less than one year) as well as a long term basis (greater than one year).

C1 Interruptible Transportation and Exchange Service
C1 Interruptible Transportation service allows customers to move gas between any 2 points on Union's system. This service is sold on a short term basis (less than one year). Under an exchange agreement, gas is typically received by Union at a point on the Union system in exchange for gas delivered to another party outside Union's system. This service can be sold as a firm or interruptible service.

C1 Peak Short Term
Short term storage services are usually offered for a period of one year or less

C1 Off Peak Storage/Balancing/Loan Services
This service offers customers the flexibility to balance their supplies to meet short term market demands or to capitalize on existing or unexpected market conditions using off peak storage, loans or balancing.

Other S&T Revenues
Included in Other S&T revenues are Union's Name Change and Ontario Production service

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Campbell

To provide description of the GMDFS Methodology.

Please see the description of the GMDFS model in Attachment 1.

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

ENERGY AND ENVIRONMENTAL ANALYSIS, INC.

Description of
EEA's Gas Market Data and Forecasting System (GMDFS)

Submitted By:
ENERGY AND ENVIRONMENTAL ANALYSIS, INC.
1655 N. Fort Myer Drive, Suite 600
Arlington, Virginia 22209
USA
(703) 528-1900

May 31, 2006

Overview of EEA's Gas Market Data and Forecasting System

EEA's Gas Market Data and Forecasting System (GMDFS) was developed in the mid-1990s to provide forecasts of the North American natural gas market under different assumptions. In its infancy, the model was used to simulate changes in the gas market that occur when major new sources of gas supply are delivered into the marketplace. For example, much of the initial work with the model in 1996-97 focused on measuring the impact of the Alliance pipeline completed in 2000. The questions answered in the initial studies include:

- What is the price impact of gas deliveries on Alliance at Chicago?
- What is the price impact of increased takeaway pipeline capacity in Alberta?
- Does the gas market support Alliance? If not, when will demand support Alliance?
- Will supply be adequate to fill Alliance? If not, when will supply be adequate?
- What is the marginal value of gas transmission on Alliance?
- What is the impact of Alliance on other transmission and storage assets?
- How does Alliance affect gas supply (both Canadian and U.S. supply)?
- What pipe is required downstream of Alliance to take away "excess" gas?

Subsequently, EEA's model has been used to complete strategic planning studies for many private sector companies. The different studies include:

- Analyses of different pipeline expansions
- Measuring the impact of gas-fired power generation growth
- Assessing the impact of low and high gas supply
- Assessing the impact of different regulatory environments

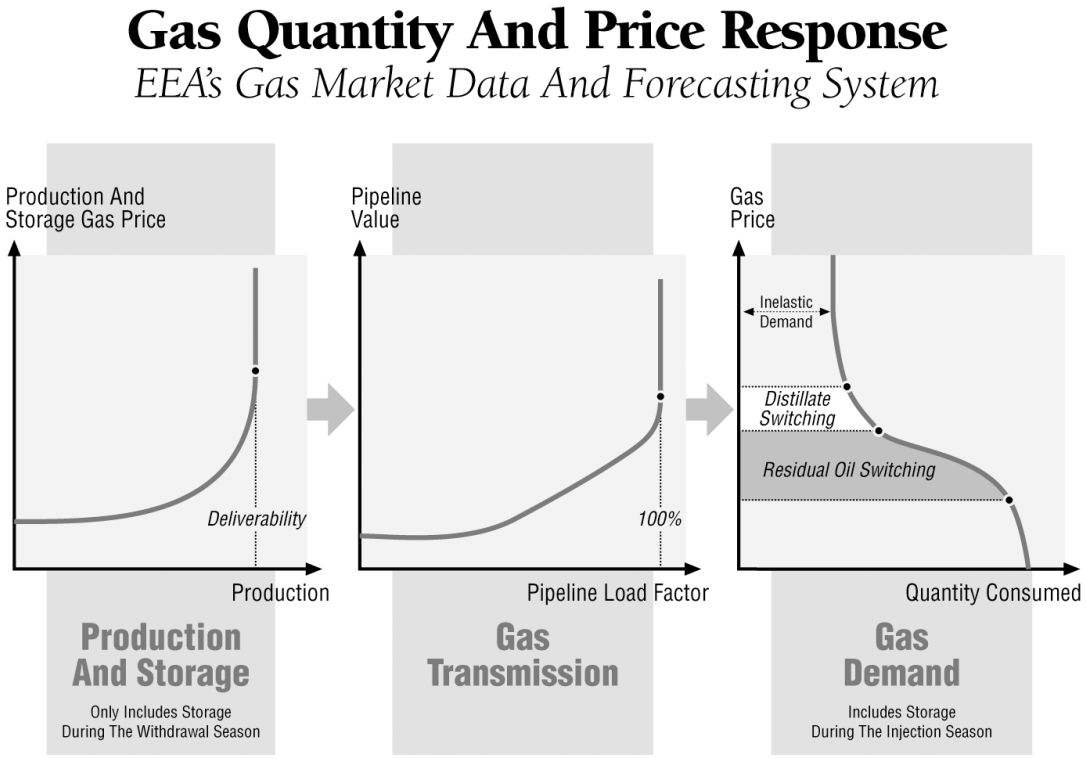
In addition to its use for strategic planning studies, the EEA model has been widely used by a number of institutional clients and advisory councils, including INGAA, who relied on the model for the 30 Tcf market analysis completed in 1998 and again in 2004. GRI has relied on the EEA model for the GRI Baseline Projection. The model was also the primary tool used to complete

the widely referenced studies on the North American Gas Market for the National Petroleum Council in 1999 and 2003.

EEA's Gas Market Data and Forecasting System is a full supply/demand equilibrium model of the North American gas market. The model solves for monthly natural gas prices throughout North America, given different supply/demand conditions, the assumptions for which are specified by the user.

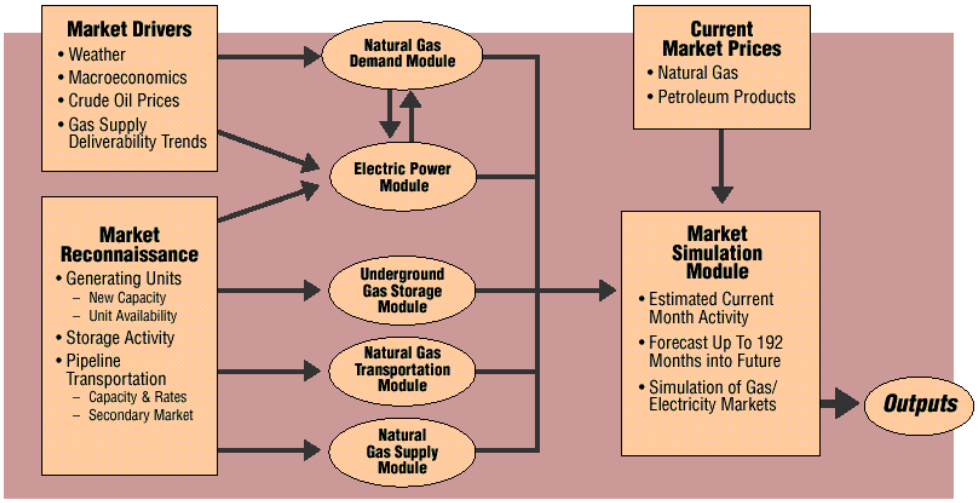
Overall, the model solves for monthly market clearing prices by considering the interaction between supply and demand curves at each of the model's nodes. On the supply-side of the equation, prices are determined by production and storage price curves that reflect prices as a function of production and storage utilization (Figure 6). Prices are also influenced by "pipeline discount" curves, which reflect the change in basis or the marginal value of gas transmission as a function of load factor. On the demand-side of the equation, prices are represented by a curve that captures the fuel-switching behavior of end-users at different price levels. The model balances supply and demand at all nodes in the model at the market clearing prices determined by the shape of the supply and curves. Unlike other commercially available models for the gas industry, EEA does significant backcasting (calibration) of the model's curves and relationships on a monthly basis to make sure that the model reliably reflects historical gas market behavior, instilling confidence in the projected results.

Figure 1
Supply/Demand Curves



There are nine different components of EEA's model, as shown in Figure 7. The user specifies input for the model in the "drivers" spreadsheet. The user provides assumptions for weather, economic growth, oil prices, and gas supply deliverability, among other variables. EEA's market reconnaissance keeps the model up to date with generating capacity, storage and pipeline expansions, and the impact of regulatory changes in gas transmission. This is important to maintaining model credibility and confidence of results.

Figure 2
GMDFS Structure



The first model routine solves for gas demand across different sectors, given economic growth, weather, and the level of price competition between gas and oil. The second model routine solves the power generation dispatch on a regional basis to determine the amount of gas used in power generation, which is allocated along with end-use gas demand to model nodes. The model nodes are tied together by a series of network links in the gas transportation module. The structure of the transmission network is shown in Figure 8 and the nodes are identified by name in Table 4. The gas supply component of the model solves for node-level natural gas deliverability or supply capability. The Hydrocarbon Supply Model (HSM), as discussed in the next section may be integrated with the GMDFS to solve for deliverability. The last routine in the model solves for gas storage injections and withdrawals at different gas prices. The components of supply (i.e., gas deliverability, storage withdrawals, supplemental gas, LNG imports, and Mexican imports) are balanced against demand (i.e., end-use demand, power generation gas demand, LNG exports, and Mexican exports) at each of the nodes and gas prices are solved for in the market simulation module. A few other charts that summarize input/output and regional breakout for the EEA Model are shown as Figures 9 through 13.

The EEA model resides on a MS-Windows PC. The model relies on easy-to-use MS-Excel and MS-Access programs developed by EEA. Contact EEA at (703) 528-1900 or at inquiries@eea-inc.com for more information about the EEA modeling system.

Figure 3
GMDFS Transmission Network

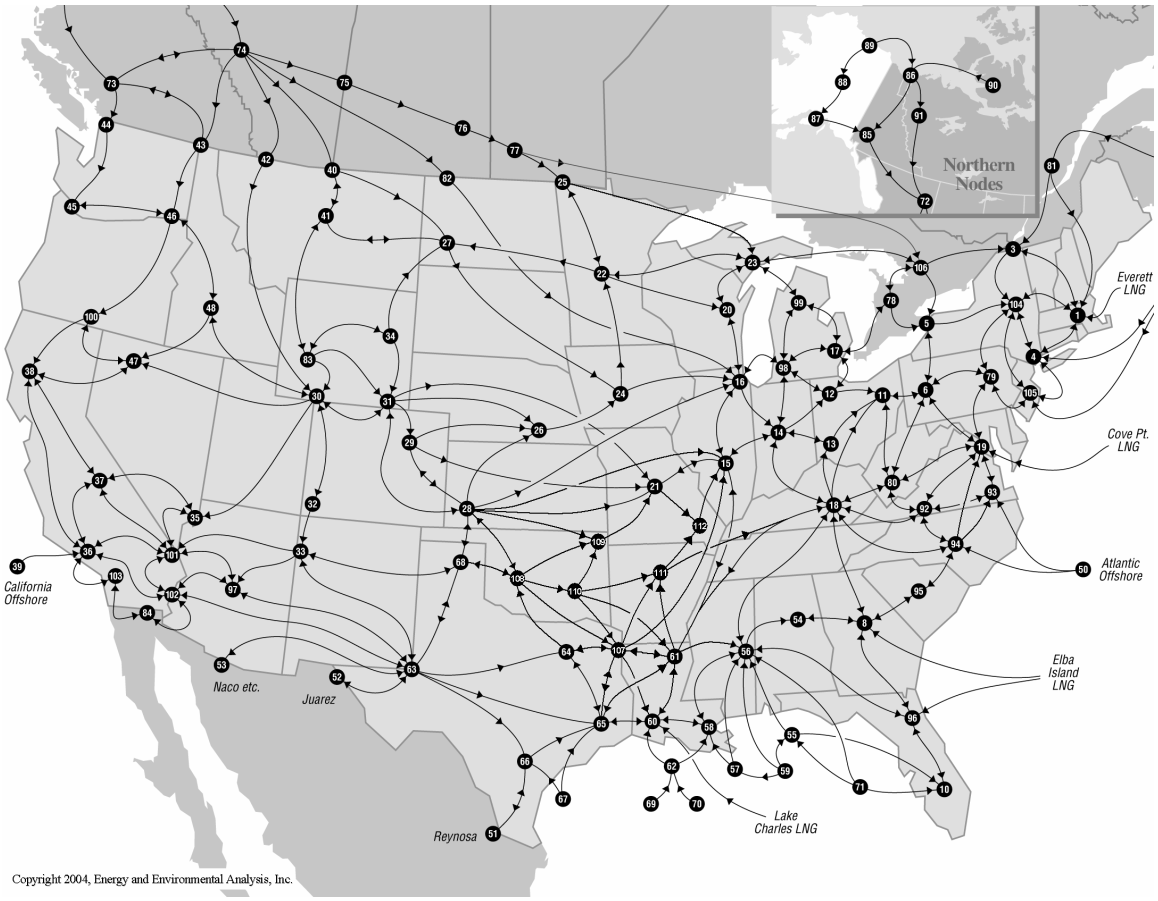


Figure 4
Model Input and Output

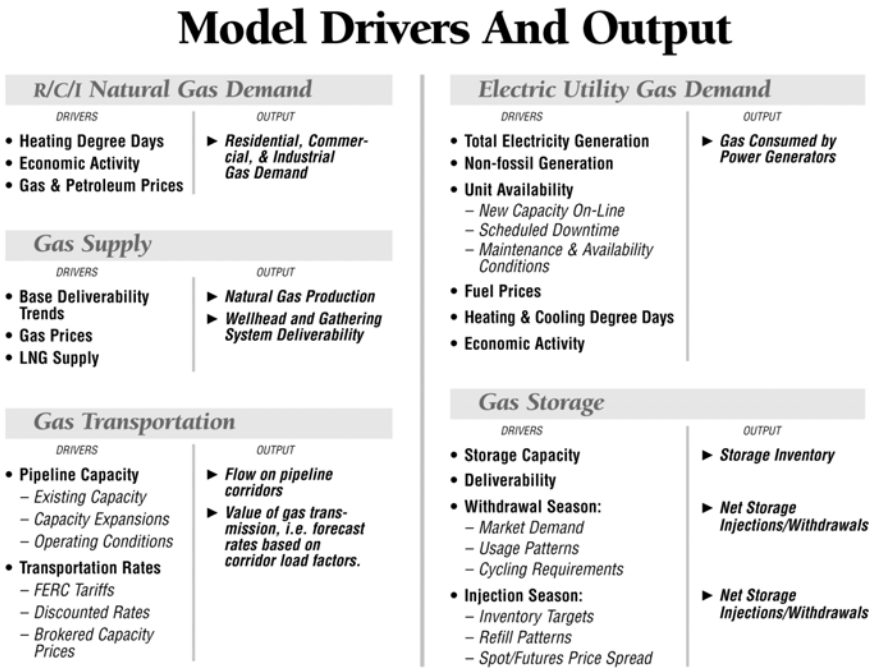


Figure 5
Model Input and Output

Outputs of the Forecasting System

MONTHLY DATA	*DATA CONTENT*	*GEOGRAPHIC DETAIL OF DATA*
Gas Pricing	Delivered to Pipeline and Citygate Prices	112 Points
Pipeline Transportation	Inter-Regional Capacity Tariffs Caps Market Value of Capacity	327 Network Corridors
Gas Storage	Working Gas Capacity Inventories Injection/Withdrawal Activity	26 Storage Regions
Natural Gas Demand	By Sector (R/C/I)	34 U.S. and 7 Canada/Alaska Regions
Natural Gas Supply	Deliverability Dry Production Gas Imports/Exports Supplemental Fuels	62 U.S. and 13 Canada/Alaska Regions
Electricity Markets (U.S. Only With Explicity Imports)	Natural Gas Demand Electricity Demand Power Generation Balance Gas-fired Generation	13 "NERC" Regions

Figure 6
Demand Regions

Figure 7
Production Regions

Figure 8
Storage Regions

Table 1
GMDFS Network Node List

Node	Name	Node	Name
1	New England	57	East Louisiana Shelf
2	Everett LNG	58	Eastern Louisiana Hub
3	Quebec	59	Viosca Knoll/Desoto/Miss Canyon
4	New York City	60	Henry Hub
5	Niagara	61	North Louisiana Hub
6	Leidy	62	Central and West Louisiana Shelf
7	Cove Point LNG	63	Southwest Texas
8	Georgia	64	Dallas/Ft Worth
9	Elba Island LNG	65	East Texas (Katy)
10	South Florida	66	South Texas
11	East Ohio	67	Offshore Texas
12	Maumee/Defiance	68	Northwest Texas
13	Lebanon	69	Garden Banks
14	Indiana	70	Green Canyon
15	South Illinois	71	Eastern Gulf
16	North Illinois	72	North British Columbia
17	Southeast Michigan	73	South British Columbia
18	Tennessee/Kentucky	74	Caroline
19	MD/DC/Northern VA	75	Empress
20	Wisconsin	76	Saskatchewan
21	Northern Missouri	77	Manitoba
22	Minnesota	78	Dawn
23	Crystal Falls	79	Philadelphia
24	Ventura	80	West Virginia
25	Emerson Imports	81	Eastern Canada Demand
26	Nebraska	82	Alliance Border Crossing
27	Great Plains	83	Wind River Basin
28	Kansas	84	California Mexican Exports
29	East Colorado	85	Whitehorse
30	Opal	86	MacKenzie Delta
31	Cheyenne	87	South Alaska
32	San Juan Basin	88	Central Alaska
33	EPNG/TW	89	North Alaska
34	North Wyoming	90	Arctic
35	South Nevada	91	Norman Wells
36	SOCAL Area	92	Southwest Virginia
37	Enhanced Oil Recovery Region	93	Southeast Virginia
38	PGE Area	94	North Carolina
39	Pacific Offshore	95	South Carolina
40	Monchy Imports	96	North Florida
41	Montana/North Dakota	97	Arizona
42	Wild Horse Imports	98	Southwest Michigan
43	Kingsgate Imports	99	Northern Michigan
44	Huntingdon Imports	100	Malin Interchange
45	Pacific Northwest	101	Topock Interchange
46	NPC/PGT Hub	102	Ehrenberg Interchange
47	North Nevada	103	SDG&E Demand
48	Idaho	104	Eastern New York
49	Eastern Canada Offshore	105	New Jersey
50	Atlantic Offshore	106	Toronto
51	Reynosa Imp/Exp	107	Carthage
52	Juarez Imp/Exp	108	Southwest Oklahoma
53	Naco Imp/Exp	109	Northeast Oklahoma
54	North Alabama	110	Southeastern Oklahoma
55	Alabama Offshore	111	Northern Arkansas
56	Mississippi/South Alabama	112	Southeast Missouri

Supporting Data for the GMDFS

The base data that go into the GMDFS comes from several sources. Some of these are discussed below.

Gas Pipeline Capacities and Flows: The capacity data EEA uses for gas pipelines come mostly from the EIA's EIAGIS system. It has been supplemented by data obtained directly from the pipelines and engineering estimates made by EEA. For the recently completed NPC study, these data were reviewed and updated.

New Gas Pipeline Projects: EEA maintains a database on new pipeline projects. It is maintained with data from industry press releases and filings at FERC and the NEB.

Existing Power Plants: The data we use to model power generation comes from a commercial database sources and the Department of Energy.

New Power Plants: EEA tracks new power generation projects and maintains a database to support modeling efforts.

Gas Consumption: The raw data for gas consumption comes from EIA/DOE for the U.S. and StatisticsCanada. Due to a variety of data problems, those data are extensively processed by EEA to arrive at the gas consumption values used in our modeling. These problems include:

- Billing cycle problem: The gas consumption values published by EIA for the U.S. and by Statistics Canada are on a billing month basis, meaning that they represent the amounts consumed in the approximately 30 days proceeding the various dates in which meters were read. For example, a bill for a meter read on the 3rd of a month mostly represents consumption from the previous month while a bill for a meter read on the 30th primarily reflects consumption in the current month. Since meters are typically read throughout the month, the billed volumes will represent a mixture of consumption in the current and previous month. EEA had developed a statistical technique to use weather data to correct for this billing lag and to transform the billed volumes into "real time" consumption values for each month. Together with production and storage information, this real time consumption data is critical for understanding the monthly flows into and out of a region.
- Sampling problem with industrial demand: In addition to the billing cycle problem, monthly consumption information from EIA suffers from a sampling problem that can

lead to erroneous findings if not understood and corrected. The problem arises from the limited sampling in EIA's monthly consumption survey which covers only about 25 percent of the LDCs and pipelines serving any given state. Because of the higher variability in month-to-month deliveries among industrial facilities within a state (compared to residential and commercial loads which, for the most part, go up and down together based on the weather) the measurement errors in the state-level monthly industrial consumption statistics are very large and the data exhibit large, inexplicable monthly swings. The problems are most severe in Texas, Louisiana and California. Aside from using other sources of data, which exist only for California, the problem must be corrected by using statistically estimated values. EEA has developed such an estimating technique and has used it to analyze monthly state-level gas use and interregional gas flows.

- Under-reported consumption and large balancing items: Because of the restructuring of gas and electricity markets, the sample frames of many of the survey forms used by EIA have shrunk as a percent of the market. This has led to an increase in the sampling error of the consumption surveys, particularly in the monthly survey. The worst problem exists in the power generation and industrial sectors where gas demand has been substantially understated, causing the "balancing item" to mushroom in some recent years. EEA has adjusted the historical data in some cases to get around these problem and, so, the outputs from GMDFS will not match some published EIA consumption estimates.

Gas Prices and Basis: The primary sources of spot gas prices are the daily and weekly surveys published by various newsletters including Gas Daily, Inside FERC and Natural Gas Intelligence. EEA uses computerized price databases from all three publications in our work on contract terms and price indices. For purposes of calibrating the GMDFS, we rely on the Gas Daily database to develop historical prices by area and the basis differential between points. These data are critical to calibrating the "discount curves" that represent the market value of pipeline capacity as a function of pipeline load factor.

EEA's Updating Process

To keep the model up to date and to maintain credibility of results, EEA updates the model at the end of every month. Each month's update includes updated historical information from recent publications. EEA also adjusts model algorithms and relationships to maintain the quality of the model's "backcast", that is the agreement of model results with actual history. This assures consistency between actual history and forecast results. The historical information that EEA updates on a monthly basis is shown below.

Table 2
Information Updated Monthly

INFORMATION UPDATED MONTHLY	
ITEM	SOURCES
Economic Activity	FRB Reports
Gas Storage Activity	EIA Storage Survey, CGA Storage Survey, DOE/EIA Natural Gas Monthly, Statistics Canada
Weather	Heating and Cooling Degree Days from NOAA, DOE/EIA Monthly Energy Review, DOE/EIA Natural Gas Monthly, Statistics Canada
Oil and Coal Prices	DOE/EIA Monthly Energy Review, Wall Street Journal
Gas Production	IHS databases, MMS, state production reports
Nuclear and Hydroelectric Generation	DOE/EIA Monthly Energy Review, NRC plant update, DOE/EIA Electric Power Monthly
Historical Gas Prices	Gas Daily

In addition, EEA periodically reviews and updates historical algorithms and relationships that are built into the model. The model relationships that are periodically reviewed and updated include:

- Residential/Commercial/Industrial Gas Demand.
- Electricity Demand.
- Power Generation Dispatch.
- Pipeline Discounting Curves/Price Benchmarking.
- Gas Storage Behavior.
- Historical Gas Deliverability.

These components are reviewed and updated when they differ significantly from recent history or at least once annually.

SUMMARY OF KEY FEATURES

Key strengths of the GMDFS model include:

- The GMDFS provides a full supply/demand balance "solution" for each month of the forecast period, rather than relying on seasonal adjustments. A month-by-month analysis of flows and prices is essential to determining the market value of gas assets.
- The GMDFS is an integrated model that captures the interrelationships between the gas and power markets. The ability to rigorously forecast gas and power demand is key given that the electric generating sector will account for over half of the growth in North American gas demand over the next 20 years.
- The gas pipeline network design is sufficiently disaggregated to accurately describe the flow of gas at the various market centers and market nodes.
- The model determines the value of pipeline transportation capacity in the marketplace based on capacity utilization and competitive transportation options – not based on tariff rates or historical basis.
- The model can represent expected behavioral changes such as changes in storage injection and withdrawal patterns.
- The model calculates wellhead (delivered to pipeline) prices based on a full market simulation incorporating deliverability utilization, storage working gas levels, competing energy prices, weather and other factors.
- The model has undergone extensive industry review through two NPC studies and interactions with other gas industry groups.
- The model is based on extensive processing and cleaning-up of supply and demand data that avoid many of the pitfalls in the raw published data series. These data are updated regularly.

UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Campbell

To produce model inputs / outputs / working papers.

As noted in our direct evidence, "EEA evaluates gas pipeline capacity and capacity utilization in great detail as part of the routine maintenance of the EEA Gas Market Data and Forecasting System" (p.31). The understanding of market relationships and pipeline basis in the region around Dawn developed during our use of the GMDFS forms one of the basis for our conclusions in the Storage Competition Study. However, we did not develop a specific model run for the Storage Competition Study. Instead, EEA's use of the GMDFS in developing the conclusions in the Storage Market Competition Study is based on an extensive body of analysis for the entirety of our clients, including government, institutional, and private sector entities.

It is not possible to produce all of the model inputs/outputs/working papers supporting our judgment on this issue. These projects include a variety of studies that have contract nondisclosure provisions, as well as commercially sensitive analysis.

EEA has conducted literally thousands of model runs that have projected pipeline basis and degree of pipeline constraints within the geographic region around Dawn without seeing basis blowout behavior or a basic disconnection within the geographic market around Dawn. We have, however, provided a representative sample. Documents provided include:

1) GMDFS Model Input Assumptions – Undertaking No 34 – Attachment 1.

2) A partial copy of EEA's GMDFS Compass Output Book for a single EEA Base Case, including information relevant to the analysis of markets around Dawn. The full document is proprietary and commercially sensitive, with a market value of $6,000 per copy. Please see Undertaking No 34 – Attachment 2

3) Copies of EEA's Monthly Gas Update from April 2005 through March 2006. Each edition of the EEA Monthly Gas Update includes a new forecast using the GMDFS, including a new monthly price forecast for Dawn, Chicago, Dominion, and other relevant market centers. The analysis used to develop each issue of the Monthly Gas Update includes one Base Case run of the EEA GMDFS model, as well as more than 70 weather sensitivity cases. EEA has produced the Monthly Gas Update since November of 2000.

Witness: EEA Consultants
Question: May 19, 2006
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The analysis over this entire time period shows a stable and connected market within the competitive market region. Please see Undertaking No34 – Attachment 3

Other publicly available documents showing results from EEA's GMDFS (but not attached to this undertaking) include:

- Balancing Natural Gas Policy – Fueling the Demands of a Growing Economy (2003), National Petroleum Council. During the preparation of the 2003 NPC Study on Natural Gas, EEA provided 32 model runs used in the final NPC report. The results of these analyses are available from the NPC at www.npc.org.

- An Updated Assessment of Pipeline and Storage Infrastructure for the North American Gas Market: Adverse Consequences of Delays in the Construction of Natural Gas Infrastructure, July 2004. Interstate Natural Gas Foundation. Available from INGAA at: www.ingaa.org/Documents/Foundation%20Studies/Final%20Capacity%20Update.pdf

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Campbell

To produce sources / information underlying viable pipeline capacity.

The conclusion that sufficient pipeline capacity exists to ensure an interconnected storage market is based on the review of a variety of data sources as well as an understanding of natural gas market transactions and behavior developed through long term relationships within the natural gas industry.

Specific data sources reviewed in the preparation of our testimony included:

1) Transportation basis between major market centers developed using daily natural gas prices reported by Platt's Gas Daily.

   As noted in our direct evidence the relationship between natural gas prices between market hubs provides direct evidence of whether or not the hubs, and by extension, the storage around the hubs is located within the same market region, or lies outside of the boundaries of the market region. As an example, we terminated our price analysis at the date that Hurricane Katrina took significant natural gas production off-line, and shut down the Henry Hub. However, a look at the natural gas price behavior after this occurrence indicates that the geographic market area designated as our "core competitive market region" remains tightly linked even during this disruptive period, while prices in other market areas diverge from the prices in the core market area.

2) Daily transactions volumes at major market centers reported by Platt's Gas Daily.

   The daily transactions volumes at Dawn and the major market hubs in the core and non-core competitive regions indicate a steady and reliable source of purchased natural gas even during peak winter periods, as well as the availability and desirability of exchange transactions between market hubs.

   Note that daily transactions volumes reported by Platt's represent the transactions volumes for fixed price transactions reported on a voluntary basis, and reflect only a fraction of the total transactions that occur at any major hub.

Witness: EEA Consultants
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3) Monthly (and daily where available) pipeline transportation flows on interstate pipelines in the competitive market area, and at border crossings. Pipelines specifically reviewed included:

a. Panhandle Eastern Pipeline
b. Vector Pipeline
c. Great Lakes Gas Transmission
d. TransCanada Pipeline

Data sources for pipeline flow data include the proprietary pipeline database from Lippman Consulting, Inc. as well as individual pipeline websites. A limited amount of pipeline flow data for major regional flow patterns is provided. Additional pipeline flow data for every major interstate pipeline is available from Lippman Consulting, Inc.

4) Publicly available data on pipeline transactions available on FERC regulated pipelines, including:

a. Index of Customer Data: Each interstate pipeline in the U.S. is required to file a quarterly summary of all pipeline and storage capacity contracts. The following data is reported for each contract. In Canada, TransCanada Pipeline files a similar report called the Contract Demand Report.

EEA reviews the index of customer data for most major interstate pipelines and TransCanada on an occasional basis, and specifically reviewed index of customer data for the following pipelines for this project:

- ANR Pipeline
- ANR Storage
- Vector Pipeline
- Great Lakes Gas Transmission
- National Fuel Gas Supply
- TransCanada Pipeline

EEA also reviewed several existing EEA studies on pipeline index of customer data prior to preparing the storage competition study. These studies are attached.

Capacity Release Data: Each interstate pipeline in the U.S. is required to report summary data on all capacity release transactions. The capacity release data includes only those transactions facilitated by the pipeline and does not include rebundling of pipeline services by parties independent of the pipeline.

Witness: EEA Consultants
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EEA also has conducted several studies evaluating the capacity release market that were relied on when preparing the storage competition study, including the EEA report "Analysis of Short-Term Natural Gas Markets" (attached) which was referenced in FERC Order 637.

5) Title Exchange Volumes at Dawn: The volumes of title exchanges at Dawn were reviewed to ensure a robust and liquid market at Dawn during both peak and off-peak periods. We used both data on title exchange volumes reported on the Union Gas website, as well as title exchange data provided to us by Union Gas.

6) EEA reviewed marketing presentations and materials provided in public forums for a variety of potential competitors to Union Gas in the competitive market area, including:

   a. National Fuel Gas Supply
   b. DTE Gas Storage
   c. ANR Pipeline and Storage Companies
   d. Dominion Energy
   e. NiSource
   f. Nexen

7) EEA regularly follows proceedings at the FERC, NEB, State and Provincial regulatory agencies and has used a variety of materials filed with these regulatory bodies when developing our opinions on the operation of natural gas markets. While we have not made a concerted effort to catalog all of the materials that we have reviewed over the years that have influenced our understanding of natural gas markets, a few examples include:

   a. TransCanada filings on the operation of the TCPL system, and the interrelationship between TransCanada Mainline and Great Lakes Gas Transmission on serving TransCanada load.

   b. Storage market competition analysis filed with FERC to support applications for market-based rates, associated FERC orders, and other documents filed with the FERC.

   c. Requests for leave to construct new storage facilities filed with FERC, associated FERC orders, and other related documents filed with the FERC.

   These filings often include informative information concerning the functioning of the natural gas market. For example, the WPS application (See response to Union Undertaking 50) indicates that at the time of the application, physical flows from the

Kimball 27 storage field were flowing into Canada even though the capacity of the storage field was fully contracted for by companies upstream of the storage field. The storage services provided by Kimball 27 to Michigan customers were provided by displacement.

8) In the normal course of business, EEA regularly communicates with a variety of gas industry participants, and receives information on market performance and structure from a variety of sources. The information enhances EEA's understanding of the natural gas market. The information on the Centra Manitoba natural gas supply plan included in EEA's reply evidence is an example of this type of information.

Attached data files include:

- Daily natural gas price and transactions volume from Platt's Natural Gas Daily. (Undertaking No 35 – Attachment 1)
- Monthly pipeline transportation flows on interstate pipelines in the competitive market area. (Undertaking No 35 – Attachment 2)
- Three editions of EEA's Pipeline Data Report are attached. (Undertaking No 35 – Attachment 3)
- "Analysis of Short-Term Natural Gas Markets", EEA, 1998. (Undertaking No 35 – Attachment 4)
- Title Exchange Data at Dawn. (Undertaking 35 – Attachment 5)

UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Campbell

To produce sources for Table 3, Page 33.

Table 3 provides a summary of major storage providers interconnected with the Union Gas storage facilities. The list is not intended to be comprehensive reference to all storage providers in the geographic area. Table 3 was prepared by EEA from a variety of data sources. The data sources included:

- Natural Gas Intelligence Storage Database and Storage Map.
- Michigan Public Service Commission database of storage fields in Michigan
- U.S. Department of Energy Energy Information Administration (EIA) assessment of natural gas storage resources.
- Storage provider websites.

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Campbell

To produce a list of expiring contracts.

During the preparation of this study, EEA reviewed a variety of documents summarizing contract expiration patterns on the FERC regulated pipeline and storage companies located in the geographic area around Dawn. These included the EEA studies on pipeline capacity contracts provided in response to Union Undertaking No 35, as well as the current index of customer files from a number of pipeline and storage companies. The attached table shows the importance of capacity contracts in the near term for several companies in the immediate geographic region around Dawn. With the exception of Stagecoach, EEA reviewed recent the Index of Customer data for all of the companies in the table, as well as for Dominion, NiSource, and TransCanada during the preparation of this study.

The table shown below summarizes the amount of capacity with expiration dates on or before April 1, 2008.

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
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Near-Term Expiration of Pipeline and Storage Contracts On U.S. Interstate Pipeline Companies Serving the Geographic Region Around Dawn

	Storage Capacity Contracts (MMcf)		Pipeline Capacity Contracts ((MMcfd)	
	Expiring by April 1, 2007	Expiring by April 1, 2008	Expiring by April 1, 2007	Expiring by April 1, 2008
ANR Pipeline				
Expiring Capacity	37,760,719	81,661,374	3,562,380	5,280,526
Total Contracted Capacity	182,383,086	182,383,086	14,458,701	14,458,701
Percent of Total	21%	45%	25%	37%
ANR Storage				
Expiring Capacity	19,253,500	23,253,500		
Total Contracted Capacity	56,790,740	56,790,740		
Percent of Total	34%	41%		
Great Lakes Gas Transmission				
Expiring Capacity			986,214	1,402,141
Total Contracted Capacity			4,425,210	4,425,210
Percent of Total			22%	32%
National Fuel Gas Supply				
Expiring Capacity	4,584,898	8,052,994	391,829	568,054
Total Contracted Capacity	70,183,085	70,183,085	2,225,246	2,225,246
Percent of Total	7%	11%	18%	26%
Stagecoach Storage Company				
Expiring Capacity	6,161,870	10,555,650		
Total Contracted Capacity	25,745,330	25,745,330		
Percent of Total	24%	41%		
Vector Pipeline				
Expiring Capacity			311,690	321,690
Total Contracted Capacity			1,479,690	1,479,690
Percent of Total			21%	22%

Expiring capacity excludes rolled-over contracts
Source: April 1, 2006 Index of Customer data for each company

Witness: EEA Consultants
Question: May 19, 2006
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UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Campbell

To clarify rationale for report change.

EEA changed the language on page 26 of our report dated October 28, 2004 due to the increased certainty of the Union Gas Trafalgar expansion program. The planned expansions provide additional confidence that storage customers located downstream of Ontario would consider Union Gas storage to be a competitive option to other storage providers downstream of Ontario such as NFGS and Dominion. Of course, the additional pipeline capacity also makes Michigan storage more competitive as well.

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
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UNION GAS LIMITED

Undertaking of Mark Isherwood
To Mr. Brown

To provide list of third-party storage and non-storage operators active at Dawn since 2000.

Please see the attachment for the list of third party storage and non-storage operators active at Dawn since 2000.

Witness: Mark Isherwood / Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

Union Gas Limited

1) List of Storage Customers

A.E. Sharp, A Division of Dynegy Marketing, Inc.
AEP Energy Services, Inc.
AllEnergy Gas & Electric Marketing Co., LLC
AllEnergy Gas Marketing Company New York, LLC
Amerada Hess Canada Gas Ltd.
Aquila, Inc. d/b/a Aquila Networks
Blackstone Energy Services Inc.
BP Canada Energy Company
Canadian Occidental Petroleum Ltd.
CanEnerco Limited
CanStates Gas Marketing
Cargill Energy Trading Canada, Inc.
Cargill Limited
Carthage Energy Services, Inc.
Cinergy Canada Inc.
Citadel Financial Products S.a.r.l.
CMS Marketing, Services and Trading Company
CMS Panhandle Eastern Pipe Line Company
Coast Energy Canada, Inc.
Coenergy Trading Company
Conoco Canada Limited
Conoco Phillips Canada Limited
Constellation Energy Commodities Group, Inc.
Constellation Power Source
Cook Inlet Energy Supply
Coral Cibola Canada Inc.
Coral Energy Canada Inc.
Crown Energy Services Inc.
Direct Energy Marketing Limited
DTE Energy Trading, Inc.
Duke Energy Marketing Canada Corp
Duke Energy Marketing Limited Partnership
Duke Energy Services Canada, Ltd.
Dynegy Canada Marketing and Trade, a division of Dynegy Canada Inc.
E prime Incorporated
El Paso Merchant Energy, L.P.
Enbridge Gas Distribution Inc.
Enbridge Gas Services Inc.
Energetix, Inc.
Energy Source Canada Inc.
Engage Energy Canada, L.P.

Enron Energy Services, Inc.
Enron North America Corp.
Enserco Energy Inc.
Gaz Metro Limited Partnership
Gaz Metropolitain Inc.
Howard Energy Marketing, L.L.C.
Husky Energy Marketing Inc.
Husky Oil Operations Limited
Louis Dreyfus Energy Canada L.P.
Metalore Resources Limited
Mirabito Gas & Electric Inc.
Mirant Canada Energy Marketing, Ltd.
Mirant Canada Energy Resources, Ltd.
National Fuel Resources, Inc.
National Steel Corporation
Nexen Canada Ltd.
Nexen Canada No. 2.
Nexen Inc.
Nexen Marketing
Niagara Mohawk Energy Marketing, Inc.
Nicor Enerchange LLC
NJR Energy Services Company
NJR Storage Company
NJR Storage Partners
North American Energy, Inc.
Northland Power Inc.
OGE Energy Resources, Inc.
ONEOK Energy Marketing and Trading Company, L.P.
ONEOK Energy Services Company, L.P.
Oxy Energy Canada, LLC
PacifiCorp Energy Canada Limited
Pecho Pipelines Inc.
PG&E Energy Trading - Gas Corporation
PG&E Energy Trading, Canada Corporation
Phibro Inc
Powerex Corp
PPM Energy Canada Ltd.
Premstar Energy Canada Limited Partnership
PremStar Energy Canada Ltd.
ProLiance Energy, LLC
Reliant Energy Services Canada Ltd.
Renaissance Energy Ltd.
Rochester Gas & Electric Corporation
Select Energy New York, Inc.
Seminole Canada Gas Company

Seminole Canada Gas Corporation
Sempra Energy Trading Corp.
Sprague Energy Corp.
Statoil Energy Trading, Inc.
Suncor Energy Marketing Inc.
Sunoco Inc.
TD Securities Inc.
Tenaska Canada, a Division of Tenaska, Inc.
Tenaska Marketing Canada, a division of TMV Corp.
Texaco Canada Petroleum Inc.
Tractebel Energy Marketing Inc.
Trading & Transportation Management Inc.
TransCanada Energy Limited
TransCanada Gas Services, a division of TransCanada Energy Ltd.
TXU Energy Trading Canada Limited
UBS Commodities Canada Ltd.
UBS Energy Canada Ltd.
UtiliCorp United Inc.
Utilities Kingston of the Corporation of the City of Kingston
Virginia Power Energy Marketing
Wascana Energy Inc.
Williams Energy Marketing & Trading Canada, Inc.
Williams Energy Marketing & Trading Company
Williams Power Company, Inc.
Wisconsin Electric Power Company
Wisconsin Gas Company
WPS Energy Services, Inc.
WPS-ESI Gas Storage, LLC
Yankee Gas Services Company

2) **List of Customers Transacting at Dawn Who Hold Storage Contracts**

A.E. Sharp, A Division of Dynegy Marketing, Inc.
AEP Energy Services, Inc.
AllEnergy Gas Marketing Company New York, LLC
Amerada Hess Canada Gas Ltd.
Blackstone Energy Services Inc.
BP Canada Energy Company
Canadian Occidental Petroleum Ltd.
CanEnerco Limited
CanStates Gas Marketing
Cargill Energy Trading Canada, Inc.
Cargill Limited
Cinergy Canada Inc.
Citadel Financial Products S.a.r.l.

CMS Marketing, Services and Trading Company
Coast Energy Canada, Inc.
Coenergy Trading Company
Conoco Canada Limited
ConocoPhillips Canada Limited
Constellation Energy Commodities Group, Inc.
Constellation Power Source
Cook Inlet Energy Supply
Coral Cibola Canada Inc.
Coral Energy Canada Inc.
Crown Energy Services Inc.
Direct Energy Marketing Limited
DTE Energy Trading Inc
Duke Energy Marketing Canada Corp
Duke Energy Marketing Limited Partnership
Duke Energy Services Canada, Ltd.
Dynegy Canada Marketing and Trade, a division of Dynegy Canada Inc.
E prime Incorporated
El Paso Energy Marketing Canada Inc.
Enbridge Gas Distribution Inc.
Enbridge Gas Services Inc.
Energetix, Inc.
Energy Source Canada Inc.
Engage Energy Canada, L.P.
Enron Energy Services, Inc.
Enron North America Corp.
Enserco Energy Inc.
Gaz Metro Limited Partnership
Gaz Metropolitain Inc.
Howard Energy Marketing, L.L.C.
Husky Energy Marketing Inc.
Husky Oil Operations Limited
Louis Dreyfus Energy Canada L.P.
Metalore Resources Limited
Mirabito Gas & Electric Inc.
Mirant Canada Energy Marketing, Ltd.
Mirant Canada Energy Resources, Ltd.
National Fuel Resources, Inc.
National Steel Corporation
Nexen Canada Ltd.
Nexen Inc.
Nexen Marketing
Nicor Enerchange LLC
NJR Energy Services Company
NJR Storage Company

NJR Storage Partners
North American Energy, Inc.
OGE Energy Resources, Inc.
ONEOK Energy Marketing and Trading Company, L.P.
Oxy Energy Canada, LLC
PacifiCorp Energy Canada Limited
Pecho Pipelines Inc.
PG&E Energy Trading - Gas Corporation
PG&E Energy Trading, Canada Corporation
Phibro Inc
Powerex Corp
PPM Energy Canada Ltd.
Premstar Energy Canada Limited Partnership
PremStar Energy Canada Ltd.
ProLiance Energy, LLC
Reliant Energy Services Canada Ltd.
Renaissance Energy Ltd.
Rochester Gas & Electric Corporation
Seminole Canada Gas Company
Seminole Canada Gas Corporation
Sempra Energy Trading Corp.
Sprague Energy Corp.
Suncor Energy Marketing Inc.
Sunoco Inc.
TD Securities Inc.
Tenaska Canada, a Division of Tenaska, Inc.
Tenaska Marketing Canada, a division of TMV Corp.
Texaco Canada Petroleum Inc.
Tractebel Energy Marketing Inc.
Trading & Transportation Management Inc.
TransCanada Energy Limited
TransCanada Gas Services, a division of TransCanada Energy Ltd.
TXU Energy Trading Canada Limited
UBS Commodities Canada Ltd.
UBS Energy Canada Ltd.
Utilities Kingston of the Corporation of the City of Kingston
Virginia Power Energy Marketing
Wascana Energy Inc.
Williams Energy Marketing & Trading Canada, Inc.
Williams Energy Marketing & Trading Company
Williams Power Company, Inc.
WPS Energy Services, Inc.
WPS-ESI Gas Storage, LLC
Yankee Gas Services Company

3) List of Customers Transacting at Dawn Who Do No Hold Storage Contracts

A.E. Sharp Limited
A.E. Sharp Ltd., a subsidiary of Seminole Canada Gas Company
Active Energy ULC
Ag Energy Co-operative Ltd.
Algoma Steel Inc.
Altrade Canada Inc.
Apollo Gas Inc.
Aquila Canada Corp.
Aquila Merchant Services - International, Limited
Astra Canada Resource Marketing Inc.
Avenue Energy Inc.
Avenue Energy L.P.
Boise Cascade Corporation
Brascan Energy Marketing Inc.
Brookfield Energy Marketing Inc.
Calpine Energy Services, L.P.
Canadian Energy Strategies Inc.
Canadian General-Tower Limited
Canadian Natural Resources Limited
Cap Reit
Casco Inc.
Cibola Canada Energy Marketing Co.
Cima Energy, L.L.C.
Clearbeach Resources Inc.
CMS Marketing, Services and Trading
Comsatec Inc.
Concord Energy LLC
Devon Canada Corporation
Direct Energy Resources
Dominion Energy Clearinghouse
DuPont Canada Inc.
Eagle Energy Marketing Canada, L.P.
ECNG Inc.
ECNG Limited Partnership
El Paso Marketing, L.P.
El Paso Merchant Energy Canada Inc.
El Paso Merchant Energy, L.P.
Emera Energy, Incorporated
EnCana Corporation
EnCana Gas Marketing, a business unit of Encana Midstream & Marketing
EnCana Gas Marketing, a business unit of EnCana Oil & Gas Partnership
Energistics Group Inc.
Energy Trust Marketing Ltd
Engage Energy America LLC

Enserch Energy Services Canada Inc.
Entergy-Koch Trading Canada, ULC
EPCOR Merchant and Capital L.P.
Ford Motor Company of Canada, Limited
Gas Ontario Inc.
Enron Canada Corp.
Gibson Energy Marketing Ltd.
Great Northern Hydroponics
Hartmann Canada Inc.
Houston Energy Services Co., L.L.C.
INVISTA (Canada) Company
J. Aron & Company
J.D. Moncrieff & Associates
Kinetic Energy Inc.
Lagasco Inc.
Lakeville Holdings
Manti Operation Company
Manti Resources, Inc.
Merrill Lynch Commodities Canada, ULC
Michigan Consolidated Gas Company
MidAmerican Energy Company
Middleton Energy Management Ltd.
Mirant Americas Energy Marketing, LP
Mirant Canada Energy Services, Ltd.
Morgan Stanley Capital Group Inc.
Natural Gas Exchange Inc.
NGX Financial Inc.
Northern Cross Energy Limited
Northern Cross Pipelines Limited
Northrock Resources Ltd.
On Energy Inc.
ONEOK Energy Services Canada, Ltd.
ONEOK Energy Services Company, L.P.
Ontario Energy Savings Corporation
PanCanadian Energy Services, a Division of PanCanadian Petroleum Limited
PanCanadian Resources
PERC Canada, Inc.
Petrocom Energy Group, Ltd.
ProGas Limited
Reliant Energy Services, Inc.
Rowe Energy Corporation
Royal Bank of Canada
Seminole Canada Energy Company
Shiningbank Energy Ltd.
Sithe Independence Power Partners, L.P.

St. Lawrence Gas Company Inc.
Star Natural Gas Company
Superior Energy Management
Talisman Energy Canada
Talisman Energy Inc.
TD Commodity & Energy Trading Inc
Terra International (Canada) Inc.
Texaco Natural Gas Inc.
The Corporation of the City of Kitchener
Toromont Industries Ltd.
Toronto Hydro Energy Services Inc.
TransAlta Energy Marketing Corp.
TransCanada Power, a Division of TransCanada Energy Ltd.
Tribute Resources Inc.
United States Gypsum Company
Utilicorp Energy Management, Inc.
Vermont Gas Systems, Inc.
W.T. Chatham Associates Ltd.
Westcoast Energy (U.S.) Inc.
Westcoast Energy Inc
Williams Energy Marketing and Trading Company
WPS Energy Services of Canada Corp.
Yankee Gas Services Co. Inc

UNION GAS LIMITED

Undertaking of Mark Isherwood
To Mr. Brown

To produce index price.

Attached is the Dawn daily spot price on the top five peak winter days for the winters commencing 2000. Peak days are defined by the days with the highest Dawn Parkway send out.

Union Gas Limited
To produce index price

Line No.	Winter	Date	Price US$/mmbtu
1	01/02	04-Feb-02	$ 2.280
2		04-Mar-02	2.525
3		25-Mar-02	3.625
4		13-Feb-02	2.490
5		05-Feb-02	2.280
6	02/03	23-Jan-03	5.920
7		22-Jan-03	5.585
8		17-Jan-03	5.500
9		16-Feb-03	6.200
10		13-Jan-03	5.180
11	03/04	09-Jan-04	6.450
12		15-Jan-04	5.845
13		10-Jan-04	6.775
14		06-Jan-04	6.600
15		16-Jan-04	5.915
16	04/05	18-Jan-05	6.550
17		27-Jan-05	6.485
18		21-Jan-05	6.280
19		22-Jan-05	6.535
20		28-Jan-05	6.515
21	05/06	18-Feb-06	7.480
22		19-Feb-06	7.480
23		27-Feb-06	7.400
24		16-Jan-06	8.695
25		09-Feb-06	7.850

Witness: Mark Isherwood / Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Steve Poredos
To Mr. Quinn

To extend table back to 1988 to when Union Gas was offering storage.

The request was to recreate the table back to 1988. Information prior to 2000 was recreated from regulatory information that was available. Information prior to 1991 was not available.

The in-franchise storage requirements are a derived from the corporate demand forecasts. The main factors that impact the storage requirement include the applicable weather methodology, declining Normalized Annual Consumption and customer growth.

Please see attachment 1 for the table.

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
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UNION GAS LIMITED

Line No.	Particulars	1991 (4)	1992 (3)	1993 (2)	1994 (2)	1995 (2)	1996 (2)	1997 (2)	1998 (1)	1999	2000	2001	2002	2003	2004	2005	2006	2007
1	Total Space	123.9	124.5	131.7	134.5	134.5	135.7	135.7	139.4	146.3	154.9	163.0	163.0	162.7	159.5	162.7	163.5	163.5
	Infranchise																	
2	Union Requirement	58.9	60.6	62.1	70.6	70.6	71.8	71.8	70.2	70.0	67.0	67.1	68.6	63.1	63.0	64.5	63.6	63.8
3	Contingency	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.3	9.7	9.7	9.7	9.7	9.7	9.7
4	Carriage	2.1	2.1	2.1	2.1	2.1	2.1	2.1	6.3	6.8	9.9	10.1	10.3	12.0	15.5	16.2	17.3	18.7
5	Total Infranchise Space	72.4	74.1	75.6	84.1	84.1	85.3	85.3	88.0	88.2	88.2	88.5	88.6	84.8	88.2	90.4	90.6	92.1
	Exfranchise																	
6	Total Exfranchise	51.5	50.4	56.1	50.4	50.4	50.4	50.4	51.5	58.1	66.7	74.5	74.4	77.9	71.3	72.3	72.9	71.4
7	Total Utilization	123.9	124.5	131.7	134.5	134.5	135.7	135.7	139.4	146.3	154.9	163.0	163.0	162.7	159.5	162.7	163.5	163.5

Notes
(1) E.B.R.O 499 September 14, 1998
(2) E.B.R.O 476-03 October 30, 1992
(3) E.B.R.O. 476 October 31, 1991
(4) E.B.R.O 470 October 31, 1990

UNION GAS LIMITED

Undertaking of Steve Poredos
To Mr. Quinn

To provide references to OEB Decisions approving aggregate excess methodology for storage allocation.

See attached documents which reference Settlement Agreement and OEB Decision approving aggregate excess methodology.

- RP-1999-0017 Settlement Agreement
- RP-1999-0017 Decision

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

Appendix D

RP-1999-0017

UNION GAS

SETTLEMENT AGREEMENT

June 7, 2000

Evidence References (1.3.1):

1. B/T1/p55, Structure of Unbundled Storage Services
2. B/T1/p56-58, Unbundled Storage Service – SSS
3. C1.42; C1.43; C5.12-14; C24.8; C24.14; C24.21
4. B/T1/p2/Supplemental (B).
5. Exhibit D5, CEED's prefiled evidence, para. 70-95.

Evidence References (1.3.2):

1. B/T1/p55, Structure of Unbundled Storage Services
2. B/T1/p58-60, Unbundled Storage Service – SPS
3. C5.15; C19.7-11; C36.8
4. Exhibit D5, CEED's prefiled evidence, para. 70 – 95.

1.3.3 Space Allocation

[Complete Settlement]

In the Southern Operations area, the allocation of storage space to customers electing the unbundled service option reflects the existing Board approved cost allocation methodology. This methodology allocates storage space and the associated costs to bundled rate classes in proportion to each rate class' "aggregate excess", or difference between winter demand and average annual demand for a 151 day winter period. In addition, Union proposes to apply a factor of 97.6% to each customer's aggregate excess in order to not "over-allocate" storage to unbundled customers. The factor recognizes that some customers have a predominately summer load which reduces the aggregate excess in total.

To simplify the determination of storage allocation for M2 customers, Union has calculated a fixed amount of SSS storage space per residential customer (i.e. 742 m*3) and a commercial/industrial SSS storage space allocation of 23.6% of the customer's normalized annual consumption. Union has indicated that it will examine, and adjust as necessary, the annual storage allocation to reflect changes in the underlying aggregate excess profile. Union also confirmed its intent to grandfather all existing T1 storage allocations subject to change only in the circumstances of material changes in customer demand.

The storage space allocation in the Northern and Eastern Operations area recognizes its unique operational characteristics. First, the space available is allocated by delivery area in relation to the peak day shortfall (i.e. peak day demand less allocated firm transportation capacity). Next, the allocation of storage by rate class within each delivery area is allocated in proportion to each rate class' peak day shortfall. The storage allocation will vary annually depending on the annual changes in the level of TCPL FT capacity underpinning the demand in each delivery area. The storage space allocation for individual customers in each rate class is as follows:

- Rate 01 (residential) – rate class space by delivery area divided by the number of customers in delivery area

- Rate 01 (commercial)/Rate 10 – rate class space by delivery area divided by annual demand/volume in delivery area
- Rate 20/100 – customer specific allocation by delivery area in proportion to the peak day shortfall

Under Union's proposals, no storage space or delivery/redelivery service was reserved or would be available to existing t-service customers that have not already contracted for storage service.

IGUA had concerns with the storage allocation methodology as proposed for the Northern and Eastern Operations Area. In particular, the concern focused on the impact of the proposed methodology on existing T-service customers currently operating with an allocation of storage capacity.

In order to facilitate the transition to the new allocation methodology, Union agrees to grandfather existing T-service customers currently operating with storage at their existing storage deliverability level, whether these customers remain as t-service or select the new unbundled service. Grandfathering the storage deliverability for existing t-service customers maintains the consistency in approach for both t-service and the new unbundled service.

The following parties agree with the settlement as outlined above: AMO; CAC; CENGAS; Comsatec; Enbridge; Energy Probe; IGUA; LPMA; MECAP; Nova; OESC; Schools; WGSPG.

The following parties take no position on this issue: the Alliance; CEED; John Fullerton; HVAC; Kitchener; OAPPA; TCPL; VECC.

Evidence References:

1. B/T1/p60-64, Unbundled Storage Space Allocation
2. C1.44-46; C7.6-16; C13.9-12; C15.1; C19.12-15; C21.75; C21.82-85; C22.1-3; C24-9-10; C26.13-15; C34.22-23; C36.9-10
3. Exhibit D21, IGUA's prefiled evidence, Tab 2, para. 54 – 57.

1.3.4 System Integrity Storage Space

[Complete Settlement]

System integrity storage space allows Union to manage weather variations, backstop supply failures and maintain the operational integrity of the delivery system. Union currently has 10.4 Bcf of system integrity storage space underpinning the existing bundled services.

Union's proposal is to maintain 9.1 Bcf of storage space (i.e. 7% of total storage capacity This space includes the following components:

- 3.3 Bcf – manage weather variance for non-daily metered customers (range of 3.0-4.0 Bcf)
- 2.3 Bcf – Backstop supply failures (range of 2.0-3.0 Bcf)

RP-1999-0017

IN THE MATTER OF the *Ontario Energy Board Act*, 1998,

AND IN THE MATTER OF an Application by Union Gas Limited for an order or orders approving or fixing just and reasonable rates and other charges for the sale, distribution, transmission and storage of gas in accordance with a performance based rate mechanism commencing January 1, 2000;

AND IN THE MATTER OF an Application by Union Gas Limited for an order approving the unbundling of certain rates charged for the sale, distribution, transmission and storage of gas.

BEFORE: George Dominy
Presiding Member and Vice Chair

Malcolm Jackson
Member

DECISION WITH REASONS

July 21, 2001

through the regulatory process existing at that time. Union made a commitment to separate the SPS service from the U2 delivery rate.

Space Allocation

6.115 The parties agreed to the methodology for the allocation of storage space to customers. Union proposed to allocate space in the Southern Operations Area according to its existing cost allocation methodology. This methodology allocates storage space and the associated costs to bundled rate classes in proportion to each rate class' "aggregate excess" or difference between winter demand and average annual demand for a 151 day winter period.

6.116 Storage space allocation for individual customers in each rate class in the Northern & Eastern Operations Area was set out in the Settlement Agreement. Union agreed to grandfather existing T-service customers currently operating with storage at their existing storage deliverability level.

System Integrity Storage Space

6.117 Union currently has 10.4 Bcf of system integrity storage space to allow it to manage weather variations, backstop supply failures, and maintain operational integrity of the delivery system for its existing bundled customers. Union proposed to maintain 9.1 Bcf of storage space.

Pricing and Annual Storage Space Reallocation/Redistribution

6.118 Union proposed to unbundle its in-franchise storage services at cost, subject to adjustment of the rates under its proposed PBR price cap plan. In response to concerns from certain intervenors about customer mobility, Union agreed to facilitate customer transfers subject to certain conditions that are outlined in the Settlement Agreement.

UNION GAS LIMITED

Undertaking of Steve Poredos
To Mr. Quinn

To produce base running the sendout model.

The requested analysis could not be completed in the time available. Union will submit the response prior to the commencement of the EB-2005-0551 Oral Hearing.

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Steve Poredos
To Mr. Quinn

To produce base running the sendout model / weather plus or minus 4 percent over and under normal.

The requested analysis could not be completed in the time available. Union will submit the response prior to the commencement of the EB-2005-0551 Oral Hearing.

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Steve Poredos
To Mr. Quinn

To review City of Kitchener methodology and provide Union's view of principles of the methodology.

Introduction

Union has reviewed Kitchener's methodology. The following describes Union's approach to planning, as well as a review of the two methods proposed by Kitchener. These methods are the March 1 control point and March 1 control point plus integrity space.

In this review Union believes that it is important to distinguish between storage allocation methodology, for example "aggregate excess", and the management of gas supply inventory to meet a 44 heating degree day design day on March 1.

Background

Union plans for normal weather for all of its heat sensitive loads which is based on the Board approved weather forecast methodology. Any incremental load during the winter would be supplied by winter spot purchases to ensure Union can meet its obligations at March 1 and March 31. Union's DP load balancing service requires that DP customers also purchase any incremental load consumed over the winter months prior to February 28. All T-Service customers manage their inventory according to the contractual parameters of customer's contract.

Kitchener receives service from Union under a T3 Carriage Contract. The T3 contract provides Kitchener with service to their city gate. It is a no-notice service, meaning that Union provides balancing to Kitchener without the need for Kitchener to nominate into or out of storage. The T3 contract allows for incremental deliveries and/or diversion of gas with prior approval from Union.

Aggregate Excess Methodology

Aggregate Excess is the methodology that is utilized to allocate physical storage space to all Union's in-franchise customers for their base load balancing needs. It is also the methodology that is utilized to provide the storage space allocations available to customers electing T-service or unbundled service in the Southern Operations Area.

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

This methodology has been used by Union since 2000 and was approved by the Board in the RP-1999-0017 Decision.

The storage allocation methodology ensures common and equitable treatment for all in-franchise customers. It also ensures that the storage allocated to each operating area or customer electing T-service or Unbundled service matches the forecasted seasonal need for storage.

The methodology calculates the seasonal storage requirement to be the difference between total winter demand (November 1 through March 31) and the average daily demand for a 151 day period.

Aggregate Excess = [Winter Demand – (Annual Demand * 151/365)]

The calculation is based solely on the demand forecast and the seasonal requirement for storage. The calculation is also not intended to meet Union's peak day demand requirements. Union may acquire assets in the market place to supplement its needs on a peak day.

The calculation ignores physical gas in inventory as that is a gas supply management issue and not a physical storage space allocation issue.

Due to the use of individual customer demand forecasts the aggregate excess methodology allocates space on an individual basis and not a "one size fits all" approach as stated by Kitchener on page 5 of its evidence.

March 1 Control Point

March 1 is one of two winter control points that Union manages for planning purposes, the other being March 31. The March 1 control point ensures that there are sufficient planned inventory levels at March 1 to meet design day requirements (i.e. the last day that Union expects a design day weather condition of a 44 heating degree day). Union plans the storage network to meet the demands placed on it by the transmission system under design day demand conditions for all of Union's customers (in-franchise and ex-franchise). Also included in the plan are the total supplies for all in-franchise and ex-franchise customers and planned March 1 inventory levels. The design day supplies and demands are then compared to ensure that the planned March 1 inventory levels are sufficient to meet planned March 1 design day requirements. Union assumes that all contract customers meet their minimum deliverability requirements on March 1.

How Union plans for in-franchise storage space and March 1

Union annually calculates the planned inventory level at November 1 utilizing the aggregate excess methodology for bundled (including sales service) in-franchise customers. The

calculation is based on the corporate demand forecast for all bundled in-franchise customers including sales service. The calculation does not include the system integrity space that Union holds as an integrated storage and transmission operator.

The gas supply plan assumes that the in-franchise storage allocation is full at November 1. Based on the forecast of winter supply and demand Union calculates the planned inventory level for in-franchise customers at March 1 (March 1 planned inventory = November 1 planned inventory + planned supplies – planned demands). If required, the Gas Supply plan will incorporate incremental supply (i.e. purchase Dawn spot) to meet the March 1 control point on a planned basis.

At no time in the Gas Supply planning process does Union utilize the March 1 control point as a storage allocation methodology.

Kitchener's Storage Allocation Methodologies

Union has reviewed the two methodologies proposed by Kitchener. This review includes the March 1 Control Point and March 1 Control Point plus Integrity space. Union does not support or agree with the premise of either of these methodologies.

March 1 Control Point

Kitchener proposes that their March 1 inventory in storage should equal 20% of their total space to ensure that the 44 DDD condition can be met. The November storage allocation space is backed into using the 20% number at March 1 as a starting point.

In Union's view, Kitchener is confusing the issue of managing gas supply inventory during the winter months to meet a design day with the issue of allocation of physical storage space based on seasonal requirement for storage.

The principle of adequate gas supply to be available in storage on March 1 is a gas supply and inventory management issue and not a storage allocation issue. Ensuring adequate supplies are available at March 1 is a function of the management of inventory levels during the winter season. As noted above, Union has and continues to plan for and allocate storage on a weather normal basis.

The equitable allocation of physical storage space is a function of the seasonal need for storage based on normalized forecasted winter and annual demands not on the amount of gas supply in inventory at a specific point in time.

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

Adequate supply in storage is required at all times to ensure that a firm customer can meet its design day requirement. Kitchener's temperature risk is addressed through their T3 carriage contract. The principle is represented in the following formula:

Deliverability = Kitchener's Contract Demand (44 DD) - Kitchener's DCQ (1/365 forecast annual demand)

Kitchener can meet its peak demand with their DCQ and storage withdrawals as long as Kitchener maintains an inventory level of at least 20%. It is Kitchener's responsibility to maintain this adequate inventory level based upon the "customer provided" deliverability option that Kitchener has contracted for in its T3 contract with Union. As per the T3 rate schedule, Kitchener has the option to contract to have Union provide the deliverability inventory if they so chose. If they choose this option, they would no longer have to maintain 20% inventory on March 1. Specifically, under the option they have chosen, if colder than normal weather is experienced, it is Kitchener's responsibility to purchase incremental gas supplies in order to maintain the 20% inventory requirement in order to access the full amount of their required deliverability to meet their peak demands.

March 1 Control Point plus Integrity Space

Kitchener also argues that in addition to the March 1 Control Point calculation, they should be entitled to some system integrity space. Union disagrees that Kitchener requires any system integrity space.

Union holds system integrity space to provide the reserve capacity and operational balancing necessary to manage all of the services that Union offers and to ensure the integrity of Union's storage, transmission and distribution systems.

The temperature risk portion of the system integrity space is held to manage the daily, (not seasonal) variations in forecasted gas nominations due to weather and its impacts on storage deliverability for those heat sensitive customers Union is responsible for. Kitchener's heat sensitive load was not included in the calculation of this requirement. If it had been included a greater amount of total integrity space would be required. The space is not held to manage consumption in excess of forecast due to colder weather during the winter months. Union manages its in-franchise customer weather risk by purchasing incremental supplies if consumption exceeds forecast during the winter months due to colder weather. It is Union's view that Kitchener should load balance and manage its franchise for weather related variances in the same manner as all other customers on Union's system.

With respect to the other components of system integrity space, it remains Union's view that Union, as the operator of the integrated storage and transmission system is required to manage

these risk and variances and as such, requires the system integrity space. No specific allocation to Kitchener is supported.

Under Kitchener's T3 contract, Kitchener enjoys a no-notice service. As long as Kitchener delivers its DCQ to Union and maintains a sufficient inventory level, their customers will be served. It is unclear to Union why Kitchener feels they require system integrity space. As such, there is, in Union's view, no rationale to support an allocation of integrity space to Kitchener.

Conclusion

Union and Kitchener's approach to storage allocation differs in several important ways:

1. Union's allocation methodology applies equally to all customers including its own sales service customers. Kitchener's proposed methodology applies only to Kitchener and results in Kitchener receiving proportionally more cost based storage than other Union customers.

2. The aggregate excess methodology addresses seasonal storage needs for customers who supply an obligated DCQ to Union. The Kitchener methodology attempts to address Kitchener's peak day requirement. Their peak day requirement is already satisfied contractually by the formula Deliverability equals Kitchener's contract Demand minus DCQ.

3. The aggregate excess allocation methodology recognizes an equal chance of colder than normal or warmer than normal weather. Kitchener's methodology assumes that colder than normal circumstances are a higher probability.

4. Union manages the integrity of the entire system. As a T3 customer, Kitchener does not have to the same responsibility.

5. The storage allocated to T1/T3 customers is made available by Union at cost to meet the seasonal load balancing needs of customers.

Union continues to support the aggregate excess methodology as the appropriate storage allocation methodology for all in-franchise customers, including Kitchener.

Witness: Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Mark Isherwood / Steve Poredos
To Mr. Quinn

To provide contracts that would show a difference between their aggregate excess number and whatever is currently in their contract, and to the extent it is grandfathering, what the reasons are they still have that.

Please see attached schedule.

Witness: Mark Isherwood / Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

Rate Class	Customer Name	Contracted Storage Space (GJ's)	Aggregate Excess Allocation (GJ's)	Variance (GJ's)	Note
		(a)	(b)	(c) = (a) - (b)	
T1	Customer A	245,310	163,340	81,970	(1)
T1	Customer B	300,000	6,911	293,089	(1)
T1	Customer C	75,480	15,174	60,306	(1)
T1	Customer D	1,434,120	139,902	1,294,218	(1)
T1	Customer E	229,135	136,166	92,969	(1)
T1	Customer F	1,509,600	566,156	943,444	(1)
T1	Customer G	37,740	21,532	16,208	(1)
T1	Customer H	30,192	11,097	19,095	(1)
T1	Customer I	1,064,268	692,136	372,132	(1)
T1	Customer J	18,183	13,546	4,637	(2)
T1	Customer K	41,514	28,991	12,523	(2)
T1	Customer L	37,740	43,107	-5,367	(2)
T1	Customer M	75,480	42,175	33,305	(1)
T1	Customer N	20,666	26,733	-6,067	(1)
T1	Customer O	13,780	11,077	2,703	(2)
T1	Customer P	29,475	30,860	-1,385	(2)
T1	Customer Q	13,964	11,612	2,352	(1)
T1	Customer R	6,469	11,178	-4,709	(2)
T1	Customer S	17,361	17,789	-428	(2)
T1	Customer T	85,104	0	85,104	(1)
T1	Customer U	42,458	25,159	17,299	(1)
T1	Customer V	38,035	59,112	-21,077	(1)
T1	Customer W	18,850	24,481	-5,631	(2)
T1	Customer X	30,037	44,172	-14,135	(2)
T1	Customer Y	18,646	1,847	16,799	(1)
T1	Customer Z	20,541	0	20,541	(1)
T1	Customer AA	37,740	22,198	15,542	(1)
T1	Customer AB	94,048	61,305	32,743	(1)
T1	Customer AC	337,773	297,228	40,545	(1)
T1	Customer AD	79,254	60,183	19,071	(1)
T1	Customer AE	641,580	333,649	307,931	(2)
T1	Customer AF	9,876	12,824	-2,948	(1)
T1	Customer AG	25,000	12,113	12,887	(2)
T1	Customer AH	1,069,100	0	1,069,100	(2)
T1	Customer AI	854,000	100,749	753,251	(2)
T1	Customer AJ	725,383	308,269	417,114	(2)
T1	Customer AK	1,100,000	937,551	162,449	(2)
T1	Customer AL	15,673	20,816	-5,143	(2)
T1	Customer AM	36,375	45,905	-9,530	(2)
T1	Customer AN	124,933	60,728	64,205	(2)
T1	Customer AO	21,631	19,222	2,409	(2)
T1	Customer AP	65,000	55,493	9,507	(2)
T1	Customer AQ	34,800	5,637	29,163	(2)
T1	Customer AR	9,173	7,610	1,563	(2)
T3	Customer AS	3,370,182	3,013,118	357,064	

Notes:

(1) Customers who were on T1 service prior to June 7th 2000 and were grandfathered as per the RP-1999-0017 ADR Ssettlement Agreement.

(2) Contracted storage space represents the aggregate excess allocation based on the consumption profile at the time the contract was established. The contracted storage space is subject to review and is adjusted appropriately if the contracted demand changes by an amount greater than +/- 5%

UNION GAS LIMITED

Undertaking of Mark Isherwood
To Mr. deVellis

To provided docket number of case where the Board ruled that Union began selling short-term storage services at market-based rates to ex-franchise customers in 1989.

The docket number is E.B.R.O. 456 dated September 26, 1989.

Witness: Mark Isherwood
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Mark Isherwood
To Mr. deVellis

To provide current list of contract holders on a percentage basis of storage customers.

Attached is a current list of long term and short term storage customers that contract with Union for peak storage services. Other storage customers inside Ontario include in-franchise industrial commercial customers, and customers purchasing off peak storage service.

Union also offers an interruptible off peak storage service through its HUB contracts that does not require a reservation of the storage space. The individual contracts are approximately 20,000 GJ's in size and can be interrupted at any time. The list of these customers is shown in Undertaking No. 39, under number 3, "List of Customers Transacting at Dawn Who Do No Hold Storage Contracts".

Union Gas Limited
Current List of Contract Holders

Customer	% of Total
Peak Storage Services	
Energy Source Canada	0.33%
Kingston Public Utilities Commission	1.31%
Enbridge Gas Distribution	26.54%
Gaz Metro Limited Partnership	28.27%
DTE Energy Trading Inc.	3.87%
Constellation Energy Commodities Group, Inc	0.66%
Enbridge Gas Services	0.42%
Husky Energy Marketing Inc.	1.87%
Cargill Limited	1.32%
Nexen Marketing	12.53%
Yankee Gas Services Company	1.10%
Conoco Phillips Canada Limited	5.27%
Nexen Inc.	2.30%
Coral Energy Canada Inc.	1.32%
UBS Commodities Canada Ltd.	1.98%
ConocoPhillips Canada Limited	0.53%
Coral Cibola Canada Inc.	1.32%
Virginia Power Energy Marketing Inc.	1.98%
Williams Power Company Inc.	2.63%
Powerex Corp	1.19%
NJR Energy Services Company	1.98%
NJR Storage Partners	1.32%
	100.00%

Witness: Mark Isherwood / Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Mark Isherwood
To Mr. deVellis

To provide a breakdown of your storage customers inside Ontario and then other jurisdictions such as Quebec, Michigan, Illinois, New York.

Attached is a current list of long term and short term storage customers that contract with Union for peak and off peak storage services. Other storage customers inside Ontario include in-franchise industrial commercial customers.

It is impossible to tell how this storage is being used and for what markets. Although the LDC's will use the storage primarily for their market it does not stop them from providing secondary market transactions.

Union Gas Limited
Current List of Contract Holders

Customer	Customer Type	Billing Location
Peak Storage Services		
Energy Source Canada	Marketer	Guelph, Ontario
Kingston Public Utilities Commission	LDC	Kingston, Ontario
Enbridge Gas Distribution	LDC	Toronto, Ontario
Gaz Metro Limited Partnership	LDC	Montreal, Quebec
DTE Energy Trading Inc.	Marketer	Ann Arbor, Michigan
Constellation Energy Commodities Group, Inc	Marketer	Baltimore, Maryland
Enbridge Gas Services	Marketer	Calgary, Alberta
Husky Energy Marketing Inc.	Marketer	Calgary, Alberta
Cargill Limited	Marketer	Calgary, Alberta
Nexen Marketing	Marketer	Calgary, Alberta
Yankee Gas Services Company	Marketer	Calgary, Alberta
Conoco Phillips Canada Limited	Marketer	Calgary, Alberta
Nexen Inc.	Marketer	Calgary, Alberta
Coral Energy Canada Inc.	Marketer	Calgary, Alberta
UBS Commodities Canada Ltd.	Marketer	Calgary, Alberta
ConocoPhillips Canada Limited	Marketer	Calgary, Alberta
Coral Cibola Canada Inc.	Marketer	Calgary, Alberta
Virginia Power Energy Marketing Inc.	Marketer	Glen Allen, Virginia
Williams Power Company Inc.	Marketer	Tulsa, Oklahoma
Powerex Corp	Marketer	Vancouver, BC
NJR Energy Services Company	Marketer	Wall, New Jersey
NJR Storage Partners	Marketer	Wall, New Jersey

Witness: Mark Isherwood / Steve Poredos
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of Mark Isherwood
To Mr. deVellis

To determine whether Board Decision first implemented sharing mechanism.

See attached documents.

- E.B.R.O. 476 - Settlement Agreement
- E.B.R.O. 476 – Decision with Reasons

Witness: Mark Isherwood
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

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Reference: 09483/03484

February 1, 1993

BY FACSIMILE

Ontario Energy Board
2300 Yonge Street, Suite 2601
Toronto, Ontario M4P 1E4

Attention: Mr. Peter O'Dell
Acting Board Secretary

Dear Mr. O'Dell:

Re: Union Gas Limited/E.B.R.O. 476

I am enclosing for filing three copies of an Agreement Between Interested Parties, which has been designated Exhibit A 29 in these proceedings.

In connection with the Agreement I am, as requested by the Board, also enclosing a list of the parties who participated actively in the settlement conferences leading up to the meeting this morning. There were a number of additional parties present at the meeting this morning when the Agreement Between Interested Parties was finalized.

I am also enclosing for the Board's consideration a proposed timetable for the proceedings.

I would appreciate it if you would bring these materials to the attention of the members of the panel hearing this case, J.C. Allen, O.J. Cook and C.W. Darling as soon as possible.

I trust this is satisfactory.

Yours very truly,

Glenn F. Leslie

GFL:lp
Encl.
cc: Board Staff/Tom Crawley/Allison Drago (w/encl.)
cc: All Intervenors (w/encl.)
bcc: R. Birmingham (w/encl.)
0693I(46)

1994 FISCAL YEAR

1. Throughput Forecasts

Sales

Union's fiscal 1994 forecast of sales to all customer classes is acceptable to the parties after providing for the following changes. Union's forecasted M2 residential volumes should be increased by 8,000 10^3m^3 to reflect a continuation of the increased use per customer forecasted for fiscal 1993. This increase results in a net revenue increase of $805,000. In addition, forecasted M7 volumes should be increased to eliminate the Sarnia market displacement forecasted and to add a further 16,200 10^3m^3 to reflect historical variances and in anticipation of increases based on those variances. These increases result in a net revenue increase of $1,135,000.

S&T

With the exceptions noted below, Union's S&T forecasts are acceptable to the parties.

With respect to Union's forecast for C1 and M12 interruptible transportation net revenues, net revenues from energy exchanges, and net revenues from M12 overrun, the parties have agreed to recommend the adoption of a deferral account to capture variances between Union's forecast and actual activity levels during fiscal 1994. The parties believe a deferral account is appropriate because of the difficulty inherent in forecasting these activities. Any balances in this account will be allocated between Union and Union's ratepayers in the ratio of 25/75. This division is intended to recognize Union's role in developing opportunities and facilitating arrangements

under the proposed account. The allocation of balances in this account between Union and its ratepayers after fiscal 1994, and the disposition of balances in the account among ratepayers, would be left for future determination by the Board.

In connection with the agreement to recommend a deferral account, Union has undertaken to file, in its next rate case, a detailed explanation of the allocation of net revenue between transportation service and storage service in those cases where transportation and storage are sold to a customer as a package. Union agrees that such allocations may be revised by the Board if the Board deems fit.

Union's fiscal 1994 forecast of gas loan net revenues should be increased by $220,000. This increase is the same increase that has been recommended for the 1993 fiscal year in the expectation that higher activity levels will continue.

Union's fiscal 1994 peak storage net revenue forecast should be increased by $525,000 to recognize historical variances and anticipated increased activity based on those variances.

2. Capital Budget/Rate Base Inclusion/Facilities Projects

Subject to the Board's decision in the facilities hearing on the Bickford to Dawn storage project which is pending, Union's capital budget proposals as they relate to storage and distribution projects are acceptable to the parties. The parties wish to note that the agreement they have reached with respect to fiscal 1993 is without prejudice to examine transmission projects that may have commenced in fiscal 1993.

REPORT OF THE BOARD

E.B.R.O. 476 - c3

IN THE MATTER OF the Ontario Energy Board Act, R.S.O. 1990, c. O.13;

AND IN THE MATTER OF an Application by Union Gas Limited to the Ontario Energy Board under Section 19 of the Ontario Energy Board Act, R.S.O. 1990, c. O.13 for an Order or Orders approving or fixing just and reasonable rates and other charges for the sale, distribution, transmission and storage of gas, and under Section 15 of the said Act for an Order or Orders approving interim rates;

BEFORE: J.C. Allan
Presiding Member

O.J. Cook
Member

C.W.W. Darling
Member

DECISION WITH REASONS

July 9, 1993

ISBN 0-7778-1585-0

6.2.27 The Board finds that ICI's obligation to deliver shall be on the same basis as the other T-service customers, i.e. for such period as ICI is willing to obligate. The Board is aware of Union's concerns about relying on the DCC on a short-term basis, as expressed in E.B.R.O. 476-01. However, the Board notes that no evidence was adduced as to why ICI should be required to commit on a more onerous basis.

Allocation of Revenue Excess

6.2.28 Union stated that revenues in fiscal 1993 were anticipated to be $2.3 million above costs under the currently-approved interim rates. Union proposed that the Board approve the interim rates currently in effect for fiscal 1993 with a one-time adjustment incorporating this revenue excess as well as Union's proposals on interruptible C1 transportation margin sharing and the disposition of deferral account balances. The revenue excess would be allocated based on the amount of rate base allocated to each rate class. For some rate classes, there would be a one-time refund. For the M2, M5A, M6, M9 and M10 rate classes, however, there would be a one-time charge. For an M2 system gas customer, this charge would be partially offset by the disposition of the PGVA balances.

Positions of the Parties

6.2.29 The positions of the parties have been noted above concerning the C1 margin sharing proposal and the disposition of the inventory adjustment allocation. Parties did not take a position on the other elements of Union's proposals for the allocation of the fiscal 1993 revenue excess and the disposition of the fiscal 1993 deferral accounts.

Board Findings

6.2.30 The Board finds Union's methodology of allocating a revenue excess to be acceptable.

methodology for recovering the approved revenue deficiency, subject to adjustment for its findings relating to the allocation of storage costs.

11.4 C1 MARGIN PROPOSAL IN ADR AGREEMENT

11.4.1 In the Agreement, the parties recommended the adoption of a deferral account to capture variances between the forecast and actual activity levels in C1 and M12 interruptible transportation and in energy exchanges. Any balance in this account for fiscal 1994 would be allocated between Union's shareholders and ratepayers in the ratio of 25:75. The allocation of balances after fiscal 1994 and the disposition of balances among the ratepayers was left for future determination by the Board.

Positions of the Parties

11.4.2 The parties to the Agreement submitted that a deferral account is appropriate because of the difficulty inherent in forecasting these activities. The 25/75 division for fiscal 1994 is intended to recognize Union's role in developing opportunities and facilitating arrangements.

Board Findings

11.4.3 The Board notes that the request at this point is for the creation of a deferral account to capture the unforecast net revenues from C1 and M12 interruptible transportation and from energy exchanges. The Board is of the view that the proposed deferral account will be useful and hereby approves it. On the question of the appropriate sharing of the balance in this deferral account for fiscal 1994, the Board notes that there is no proposal before it in this case. However, the Board notes that the question of the disposition of the forecast net revenues from these activities was discussed in this hearing. In the Board's view, it would be inconsistent for the ratemaking treatment of unforecast net revenues to differ significantly from the ratemaking treatment of forecast net revenues. The Board

expects that any future proposal for disposition of the unforecast net revenues must adequately explain any differences from the method for the ratemaking treatment of forecast net revenues approved in Section 6.2 of this Decision with Reasons.

11.5 SET-OFF POLICY

11.5.1 Union testified that its set-off policy is based on the premise that it is sound business practice to withhold all or part of payments otherwise due to a customer under a buy/sell contract when the customer has failed to pay Union for delivery of gas under the same contract. In fiscal 1994, Union forecast approximately $300,000 to $400,000 of set-off which has been subtracted from the provision for bad debts included in rates. Union's evidence was that it had never utilized the joint and several liability provision in the buy/sell contract to impose charges on direct purchase end-users grouped under one buy/sell contract.

11.5.2 Union indicated that it follows its standard collection practices before resorting to set-off, and that the amount of any security deposit is deducted before set-off. It stated that set-off usually occurs when a customer is bankrupt, since it does not withhold amounts prior to termination of an account.

Positions of the Parties

11.5.3 Board Staff submitted that it is inappropriate to recover the bad debt expense remaining after allowance for set-offs from direct purchase customers, since it is discriminatory for such customers to pay for costs that relate to system supply customers only. However, it rejected the suggestion that Union should isolate its bad debt expense and create separate rates for direct purchase customers, since that would disrupt the equilibrium established with respect to the structure of the buy/sell arrangements and related charges. It recommended that the Board direct

UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Sebalj

To provide study by ICG on market power.

Please see attached document.

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

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Exhibit B, Tab 1
Undertaking No. 20
Page 1 of 7

ORIGINAL

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

FILED
OFFICE OF THE
SECRETARY
2004 MAR 1
FEDERAL ENERGY
REGULATORY COMMISSION

WPS-ESI GAS STORAGE, LLC | **DOCKET NO. CP04-80-000**

WPS-ESI GAS STORAGE, LLC's
APPLICATION FOR
SECTION 284.224 BLANKET CERTIFICATE

WPS-ESI Gas Storage, LLC ("WPS-ESI Gas Storage" or "applicant") is a Hinshaw entity not subject to the Commission's jurisdiction by reason of section 1 (c) of the Natural Gas Act ("NGA"). 18 C.F.R. § 284.224 (a). WPS-ESI Gas Storage applies for a blanket certificate authorizing it to engage in the transportation or sale of natural gas subject to the Commission's NGA jurisdiction to the same extent and in the same manner that intrastate pipelines are authorized to engage in such activities, transactions and services under Part 284, subparts C and D of the Commission's regulations ("blanket certificate").

1. Applicant's exact legal name is WPS-ESI Gas Storage, LLC and its principal place of business is 1088 Springhurst Drive, Green Bay, Wisconsin 54304-5495. 18 C.F.R. § 284.224 (c)(1). WPS-ESI Gas Storage is a limited liability company organized and existing under the laws of the State of Wisconsin, and was formed to acquire and own real and personal property and rights in property for the Kimball 27 Gas Storage Field ("Kimball 27"), located in Kimball Township, St. Clair County, Michigan. WPS-ESI Gas Storage today owns and operates the Kimball 27 Niagaran gas reservoir. The agency having jurisdiction over WPS-ESI Gas Storage's rates and

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tariffs for Michigan intrastate services is the Michigan Public Service Commission ("MPSC"), which WPS-ESI Gas Storage serves with a copy of this Application. WPS-ESI Gas Storage received a MPSC certificate of public convenience and necessity to acquire, construct, own and operate Kimball 27 by February 22, 2000, Order at Case No. U-12209. *See* attached Exhibit Z-1. The name, title and mailing address of the persons to whom communications concerning this application are to be addressed are:

Daniel J. Verbanac
Vice President
WPS-ESI Gas Storage, LLC
1088 Springhurst Drive
Green Bay, Wisconsin 54304-5495
Telephone: 920/617-6058

J. Michel Marcoux
Bruder, Gentile & Marcoux, L.L.P.
1701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20006-5805
Telephone: 202/296-1500
Facsimile: 202/296-0627
E-Mail: jmmarcoux@brudergentile.com

WPS-ESI Gas Storage also asks for such service on corporate counsel (Rules 101 (e), 203 (b)(3), 2010) thus:

Terrence O'Reilly
General Counsel
WPS Energy Services, Inc.
173 Parkland Plaza, Suite B
Ann Arbor, Michigan 48103-6299
Telephone: 734/997-0500

2. Since it began operations in October 2001, WPS-ESI Gas Storage has had only one customer, WPS Energy Services, Inc. ("WPS-ESI"), which is an affiliated, non-jurisdictional marketing company serving customers in Michigan, other northern

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States and Canadian Provinces. The volumes of natural gas WPS-ESI Gas Storage received within or at the boundary of Michigan for WPS-ESI's account during the 12 months ended February 29, 2004, are indicated on the schedule attached as Exhibit Z-2, page 1. 18 C.F.R. § 284.224 (c)(2) & (3). All those 2,958,325 Dekatherms were exempt from Commission jurisdiction by reason of NGA section 1 (c) because WPS-ESI used those WPS-ESI Gas Storage volumes to provide gas via displacement for ultimate consumption in Michigan. 18 C.F.R. §§ 152.1 (a), 284.1 (a). While Exhibit Z-2 shows that the physical flow of deliveries from WPS-ESI Gas Storage was to Canada, WPS-ESI replaced those volumes with gas received in Michigan, including Michigan production, available for peak or design day delivery to Michigan consumers,[1] facilitating its ability to deliver by displacement substantially greater volumes of gas to Michigan end-users. WPS-ESI uses WPS-ESI Gas Storage to support WPS-ESI's transportation, balancing and related gas delivery service to Michigan end users. Subsequent to MPSC approval of the WPS-ESI Gas Storage project, WPS-ESI has increased its annual deliveries for Michigan ultimate consumption from 10 Bcf in 1999 to 25 Bcf in 2003. WPS-ESI's use of Kimball 27 storage, including use as a seasonal hedge, to support WPS-ESI's activities relates integrally to such increased provision of gas for Michigan ultimate consumption. The 1,724,560 Dekatherms of gas that flowed in foreign commerce to Canada (*see* Exhibit Z-2, page 1) reflect Kimball 27's

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1 In December 2001 WPS-ESI delivered 14,479 Dekatherms from WPS-ESI Gas Storage directly to a Michigan local distribution company, Michigan Consolidated Gas Company ("Mich Con"). Since WPS-ESI Gas Storage began Kimball 27 storage operations (it has no other operations) in October 2001, there have been no deliveries from WPS-ESI Gas Storage other than deliveries to Canada or those December 2001 deliveries to Mich Con.

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geographical location near the Canadian border and abutting the ANR Pipeline Company ("ANR") Link pipeline, which flows physically toward Canadian markets (*see* Exhibit Z-4 maps *infra*). Those Canadian flows are fully consistent with WPS-ESI's use of Kimball 27 to provide increased gas deliveries for Michigan ultimate consumption. Exhibit Z-2, page 1, also shows WPS-ESI's 12,194,161 Dekatherms delivered contemporaneously in Michigan in those same Canadian flow months. Nor has that relationship of relatively small WPS-ESI storage deliveries from WPS-ESI Gas Storage to Canada and relatively large, contemporaneous WPS-ESI deliveries for Michigan ultimate consumption changed over time. Exhibit Z-2, page 2, charts WPS-ESI's Michigan heating season deliveries from WPS-ESI Gas Storage's October 2001 start-up to the present, compared to storage deliveries from Kimball 27 to Canada for the same periods. The chart shows all gas volumes finding their best use in highest value markets, with nearly all WPS-ESI Gas Storage deliveries flowing in foreign commerce, enabling WPS-ESI by displacement to provide gas for Michigan ultimate consumption.[2]

3. WPS-ESI Gas Storage will comply with the general conditions in Section 284.224 (e) stating that, except as provided in such section (e)(2), any transaction authorized under a blanket certificate is subject to the same rates and charges, terms and conditions, and reporting requirements that apply to a transaction authorized for an intrastate pipeline under Part 284, subparts C and D of the regulations. 18 C.F.R. § 284.224 (c)(5).

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[2] The Commission previously has not issued a declaration of exemption to WPS-ESI Gas Storage under NGA section 1 (c). 18 C.F.R. § 284.224 (c)(4).

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4. WPS-ESI Gas Storage elects to apply for market-based rates for the firm and interruptible storage activities, transactions and services it will engage in under this blanket certificate. 18 C.F.R. § 284.224 (c)(7) & (e)(2). WPS-ESI Gas Storage will provide its blanket certificate interstate services in addition to the Michigan intrastate services it presently provides subject to regulation by the MPSC. WPS-ESI Gas Storage, as noted above, is affiliated with WPS-ESI, which is a Wisconsin corporation engaged actively in the business of marketing and transporting natural gas to customers in Michigan, other northern States and Canadian Provinces. WPS-ESI has approximately 180 employees engaged in the marketing, supply and delivery of natural gas. WPS-ESI has a regional office in Port Huron, Michigan, a few miles from Kimball 27, along with regional offices in Ann Arbor, Michigan, and Traverse City, Michigan. Both WPS-ESI Gas Storage and WPS-ESI are subsidiaries of WPS Resources Corporation, headquartered in Green Bay, Wisconsin, and their corporate structure is shown in the attached Exhibit Z-3.

5. The Kimball 27 facilities are located approximately three miles west of the City of Marysville, Michigan, which, in turn, is located near the St. Clair River that divides Michigan from the Province of Ontario, Canada. Kimball 27 was a small, pre-existing gas field and WPS-ESI Gas Storage used those existing wells and made necessary improvements several years ago. The reservoir is a Niagaran pinnacle reef approximately 127 acres in size, at an average depth of 2,900 feet subsurface, and existing primarily in Sections 27 and 34 (with small portions in Sections 28 and 33) of Kimball Township. Significant Michigan gas storage service competition has developed due to the geological presence of such Niagaran reefs, which are capable of being

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converted to storage facilities to meet growing demand. Kimball 27 is capable of storing 3.514 Bcf of gas at 1,897 pounds per square inch gauge (psig) and to cycle 3.049 Bcf of working gas, allowing for 300 psig of base gas. Kimball 27 functions as a peaking gas storage field, providing 30-day service and some base load service. Kimball 27 is connected to an eight-inch pipeline that runs south and connects to the Kimball 27 compressor station located in Section 27, Kimball Township. That eight-inch pipeline then runs in a southerly direction approximately three miles to the ANR Link 24-inch diameter interstate pipeline in Section 21, St. Clair Township. Deliveries into storage and redeliveries from storage take place at the interconnection between Kimball 27's eight-inch pipeline and the ANR Link 24-inch interstate pipeline, which is used to transport gas to and from Kimball 27. Because all gas entering Kimball 27 is commingled in ANR Link's interstate stream, WPS-ESI Gas Storage is a Hinshaw entity engaged in the transportation of gas that is not subject to Commission jurisdiction solely by reason of NGA section 1(c). 18 C.F.R. § 284.224 (h)(1). All of Kimball 27's storage and related pipeline facilities are found in Kimball or St. Clair Townships, St. Clair County, Michigan and are subject to MPSC regulation. WPS-ESI Gas Storage retains an independent contractor for Kimball 27 who employs two people as operating and field staff. As explained above, the facility is used to meet the increasing demand for the storage of gas consumed in Michigan. Additionally, the interstate services proposed here would be subject to this Commission's blanket certificate regulation under 18 C.F.R § 284.224. WPS-ESI Gas Storage's Kimball 27 facility and its location are shown more particularly on the maps attached as Exhibit Z-4.

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6. WPS-ESI is an 82.5 percent owner of WPS-ESI Gas Storage with two individual investors making up the remainder of the ownership. As the only WPS-ESI Gas Storage customer, WPS-ESI uses its Kimball 27 capacity to help provide a reliable gas supply for Michigan consumers. WPS-ESI delivered more than 25 Bcf of gas to Michigan retail customers in 2003 (and delivered 23 Bcf in 2002). Much of that Michigan customer load is seasonal demand, requiring WPS-ESI to own or lease storage services to meet customer requirements. As WPS-ESI Gas Storage's 1999 application to the MPSC showed (Exh. No. A-1, Natural Gas Infrastructure, Kimball 27 Field Area, St. Clair County, MI; *see* Exhibit Z-4 here), Kimball 27 operates in close proximity to several interstate and intrastate pipelines. They include ANR, Consumers Energy, Great Lakes Gas Transmission Company LP, Mich Con, Southeastern Michigan Company, Union Gas Company, Ltd. and Vector Pipeline LP.

7. WPS-ESI Gas Storage will offer, for blanket certificate purposes, and on a non-discriminatory basis, that portion of its 3.049 Bcf of working gas storage capacity that is not already subscribed. WPS-ESI Gas Storage will contact potential customers for such blanket certificate activities, transactions and services. WPS-ESI Gas Storage's blanket certificate storage services will be determined by the nature of such services demanded in the marketplace and by individual negotiations between WPS-ESI Gas Storage and such customers. WPS-ESI Gas Storage does not propose to have any maximum or minimum rate established for any generic purpose. To support this market-based rate proposal for its Kimball 27 blanket certificate activities, transactions and services, WPS-ESI Gas Storage engaged International Gas Consulting, Inc. ("IGC") of Houston, Texas, whose analysis concluding that WPS-ESI

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Gas Storage lacks market power is attached as Exhibit Z-5. In assembling and analyzing its data for Exhibit Z-5, IGC uses the relevant product market, relevant geographic market area, market concentration and market share methodologies, and the approach to evaluating ease of market entry and other relevant factors recognized in the Commission's January 31, 1996, Policy Statement on *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines*. 74 FERC ¶ 61,076.

8. Because WPS-ESI Gas Storage lacks the necessary market power in performing storage services to be able to charge rates in excess of amounts that its competitors charge for comparable storage services in the relevant market (or which that market would pay for alternatives for storage) for a significant period of time, the Commission should accept the market-based, firm and interruptible storage rates proposed here that will be agreed on between WPS-ESI Gas Storage and its blanket certificate customers. 18 C.F.R. § 284.224 (c)(7). Such market-based rates are proposed to be effective immediately, subject to refund insofar as WPS-ESI Gas Storage engages in such blanket certificate activities, transactions and services and to continue to be effective following an Order approving this application. Also, WPS-ESI Gas Storage's blanket certificate storage activities, transactions and services will be performed in accordance both (i) with WPS-ESI Gas Storage's proposed Statement of Operating Conditions (ii) with service agreements that incorporate related, proposed General Terms and Conditions to that Statement. Because the blanket certificate authorization sought here is to the same extent that and in the same manner that intrastate pipelines are authorized to engage in such activities under Part 284, subparts C and D of the regulations, WPS-ESI Gas Storage's Statement of Operating Conditions

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and General Terms and Conditions will be filed to comply with 18 C.F.R. § 284.123 (e). WPS-ESI Gas Storage will offer these blanket certificate storage activities, transactions and services on a non-discriminatory basis. 18 C.F.R. §§ 284.7, 284.9. Nevertheless, WPS-ESI Gas Storage will not be obligated to accept any proposal for such activities, transactions and services that it determines to be below market rates.

9. This application is accompanied by the prescribed $1,000.00 filing fee. 18 C.F.R. §381.207. A form of notice suitable for publication in the *Federal Register* is attached as Exhibit Z-6. 18 C.F.R. § 284.224 (c)(6).

WHEREFORE, WPS-ESI Gas Storage, LLC requests Commission approval of the blanket certificate interstate natural gas storage activities, transactions and services, and related market-based rates, proposed here.

Respectfully submitted,

BRUDER, GENTILE & MARCOUX, L.L.P.

Terrence O'Reilly
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March 11, 2004
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WPS ENERGY SERVICES, INC.

1088 Springhurst Drive Green Bay, Wisconsin 54304 Telephone: 920-617-6100 Fax: 920-617-6070

STATE OF WISCONSIN)
)
COUNTY OF BROWN COUNTY)

Daniel J. Verbanac, being first duly sworn, deposes and says that he is Vice President of WPS-ESI Gas Storage, LLC, that he has been duly authorized to execute, verify and file with the Federal Energy Regulatory Commission the foregoing "WPS-ESI Gas Storage, LLC's Application For Section 284.222 Blanket Certificate," that he has read the contents of same, and that the statements contained therein are true and correct to his best information, knowledge and belief. I am making this verification, rather than my attorney who is signing the Application, because I have more complete knowledge of the matters set forth in the Application. Rule 2005.

Daniel J. Verbanac

Subscribed and sworn to before me this 12th day of February, 2004.

Notary Public

My Commission expires: 2/12/04

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EXHIBIT Z-1
(7 pages attached)

Michigan Public Service Commission Order

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of **WPS-ESI GAS STORAGE, LLC,** for a certificate of public convenience and necessity to acquire, construct, own, and operate a natural gas storage facility in Kimball Township, St. Clair County, and for approval of natural gas storage rates.	)))))))	Case No. U-12209

At the February 22, 2000 meeting of the Michigan Public Service Commission in Lansing, Michigan.

PRESENT: Hon. John G. Strand, Chairman
Hon. David A. Svanda, Commissioner
Hon. Robert B. Nelson, Commissioner

ORDER APPROVING SETTLEMENT AGREEMENT

On November 19, 1999, WPS-ESI Gas Storage, LLC, (WPS-ESI) a Wisconsin limited liability company, filed an application, pursuant to the provisions of 1923 PA 238, as amended, MCL 486.251 et seq.; MSA 22.1671 et seq., (Act 238) for a certificate of public convenience and necessity to acquire, construct, own, and operate the proposed Kimball 27 Gas Storage Field (Kimball 27 field) located in Kimball Township, St. Clair County, and for approval of storage service rates. WPS-ESI made a supplemental filing on November 24, 1999 revising various aspects of the supporting testimony and exhibits that were submitted with its initial filing.

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Pursuant to due notice, a prehearing conference was held on January 5, 2000 before Administrative Law Judge George Schankler. WPS-ESI and the Commission Staff participated in the proceedings.

In its application, WPS-ESI proposes to convert the depleted Kimball 27 Niagaran gas reservoir, by using existing wells and making necessary improvements, to operate as a small gas storage facility. The reservoir is a Niagaran pinnacle reef approximately 127 acres in size at an average depth of 2,900 feet subsurface, located primarily in Sections 27 and 34, but with small portions in Sections 28 and 33, Kimball Township, St. Clair County. The location is approximately 3 miles west of the City of Marysville.

According to WPS-ESI, improvements necessary to complete and operate the storage field include upgrading the site's two existing wells, connecting existing lines on the site, and constructing a new pipeline (approximately three miles in length) extending south from the field to a point of interconnection with existing gas transmission lines. WPS-ESI asserts that it will make a separate filing for a certificate of public convenience and necessity to construct the connecting pipeline and any facilities outside of the storage boundary.

WPS-ESI further represents that the proposed storage field will be capable of storing 3.514 billion cubic feet (Bcf) of gas at 1,897 pounds per square inch gauge (psig) and to cycle 3.049 Bcf of gas, allowing for 300 psig of base gas. WPS-ESI expects that the field would function well as a peaking gas storage field, providing 30 day service and some base load service using the existing wells. Accordingly, WPS-ESI proposes to provide intrastate storage service subject to Act 238 and other applicable state laws and regulations.

According to WPS-ESI, the proposed storage field boundary covers approximately 230 acres in the SW/4 of Section 27, the NW/4 of Section 34, the SE/4 of Section 28, and the NE/4 of

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Section 33, T6N, R16E, Kimball Township, St. Clair County, as shown on the maps accompanying the application. WPS-ESI represents that it has acquired most of the necessary storage and mineral rights within the storage field boundary and that additional rights may be acquired through condemnation if necessary.

WPS-ESI further states that the equipment and pipelines used for the storage project will be constructed and operated in a safe manner to meet or exceed applicable requirements of the Michigan Gas Safety Standards, and it provided testimony and plans detailing additional safety and monitoring measures. The application also included (1) testimony on public benefits and need for the proposed facility, (2) WPS-ESI's proposed storage service rates, and (3) a specific request for rate approval under the Commission's ratemaking authority.

According to the settlement agreement, the Staff has inspected the site and concludes that, based on the inspection and information provided by WPS-ESI, the Commission should grant the application and approve the proposed rates. In reaching that conclusion, the settlement continues, the Staff agrees that WPS-ESI's proposed safety measures and monitoring programs will make the Kimball 27 field safe for operation as a gas storage field.

After reviewing the application, WPS-ESI's supporting testimony and exhibits, and the settlement agreement, the Commission finds that the Kimball 27 field will serve the public convenience and necessity and that the proposed rates are reasonable, subject to the terms and conditions proposed in the application and included in the settlement agreement.

The Commission FINDS that;

a. Jurisdiction is pursuant to Section 2 of 1923 PA 238, as amended, MCL 486.252; MSA 22.1671; 1919 PA 419, as amended, MCL 460.51 et seq.; MSA 22.1 et seq.; 1939 PA 3, as

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amended, MCL 460.1 et seq.; MSA 22.13(1) et seq.; 1969 PA 306, as amended, MCL 24.201 et seq.; MSA 3.560(101) et seq.; and the Commission's Rules of Practice and Procedure, as amended, 199 AACS, R 460.17101 et seq.;

b. The settlement agreement is reasonable and in the public interest, and should be approved.

c. The public convenience and necessity require the acquisition of property or interests in the Kimball 27 field for use as a natural gas storage facility.

d. If developed and operated as proposed in the application and settlement agreement, the Kimball 27 field will be safe for use as a gas storage facility.

e. The proposed storage rate tariff, attached to the settlement agreement and designated as Rate Schedule No. 1, is reasonable and should be approved.

THEREFORE, IT IS ORDERED that:

A. The settlement agreement, attached as Exhibit A, is approved. Due to the length of the attachments referred to in the settlement agreement, they are contained in the docket file and are made a part of this order by reference.

B. WPS-ESI Gas Storage, LLC, is granted a certificate of public convenience and necessity to acquire, construct, own, and operate a natural gas storage facility in Kimball Township, St. Clair County, as proposed in the application and subject to the terms and conditions of the settlement agreement.

C. WPS-ESI Gas Storage, LLC's proposed natural gas storage rates are approved.

The Commission reserves jurisdiction and may issue further orders as necessary.

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Any party desiring to appeal this order must do so in the appropriate court within 30 days after issuance and notice of this order, pursuant to MCL 462.26; MSA 22.45.

MICHIGAN PUBLIC SERVICE COMMISSION

/s/ John G. Strand
Chairman

(SEAL)

/s/ David A. Svanda
Commissioner

/s/ Robert B. Nelson
Commissioner

By its action of February 22, 2000.

/s/ Dorothy Wideman
Its Executive Secretary

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Any party desiring to appeal this order must do so in the appropriate court within 30 days after issuance and notice of this order, pursuant to MCL 462.26; MSA 22.45.

MICHIGAN PUBLIC SERVICE COMMISSION

_____
Chairman

_____
Commissioner

_____
Commissioner

By its action of February 22, 2000.

_____
Its Executive Secretary

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In the matter of the application of	)	
WPS-ESI GAS STORAGE, LLC, for a certificate	)	
of public convenience and necessity to acquire,	)	Case No. U-12209
construct, own, and operate a natural gas storage	)	
facility in Kimball Township, St. Clair County,	)	
and for approval of natural gas storage rates.	)	
	)	

Suggested Minute:

"Adopt and issue order dated February 22, 2000 approving the settlement agreement and granting WPS-ESI Gas Storage, LLC, a certificate of public convenience and necessity to develop and operate the proposed Kimball 27 Gas Storage Field in St. Clair County, as set forth in the order."

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EXHIBIT Z-2
(2 pages attached)

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	Dekatherms received by WPS-ESI Gas Storage within/at boundary of Michigan	Total dekatherms received by WPS-ESI Gas Storage from all sources	Dekatherms delivered by WPS-ESI Gas Storage to Canada	Dekatherms delivered in Michigan by WPS-ESI in months of WPS-ESI Gas Storage deliveries to Canada
Mar 03	0	0	217,000	2,784,739
Apr 03	0	0	0	*
May 03	918,530	918,530	0	*
Jun 03	889,020	889,020	0	*
Jul 03	459,327	459,327	0	*
Aug 03	0	0	0	*
Sep 03	385,230	385,230	0	*
Oct 03	306,218	306,218	0	*
Nov 03	0	0	0	*
Dec 03	0	0	0	*
Jan 04	0	0	778,906	4,891,304
Feb 04	0	0	728,654	4,518,118
Total	**2,958,325**	**2,958,325**	**1,724,560**	**12,194,161**

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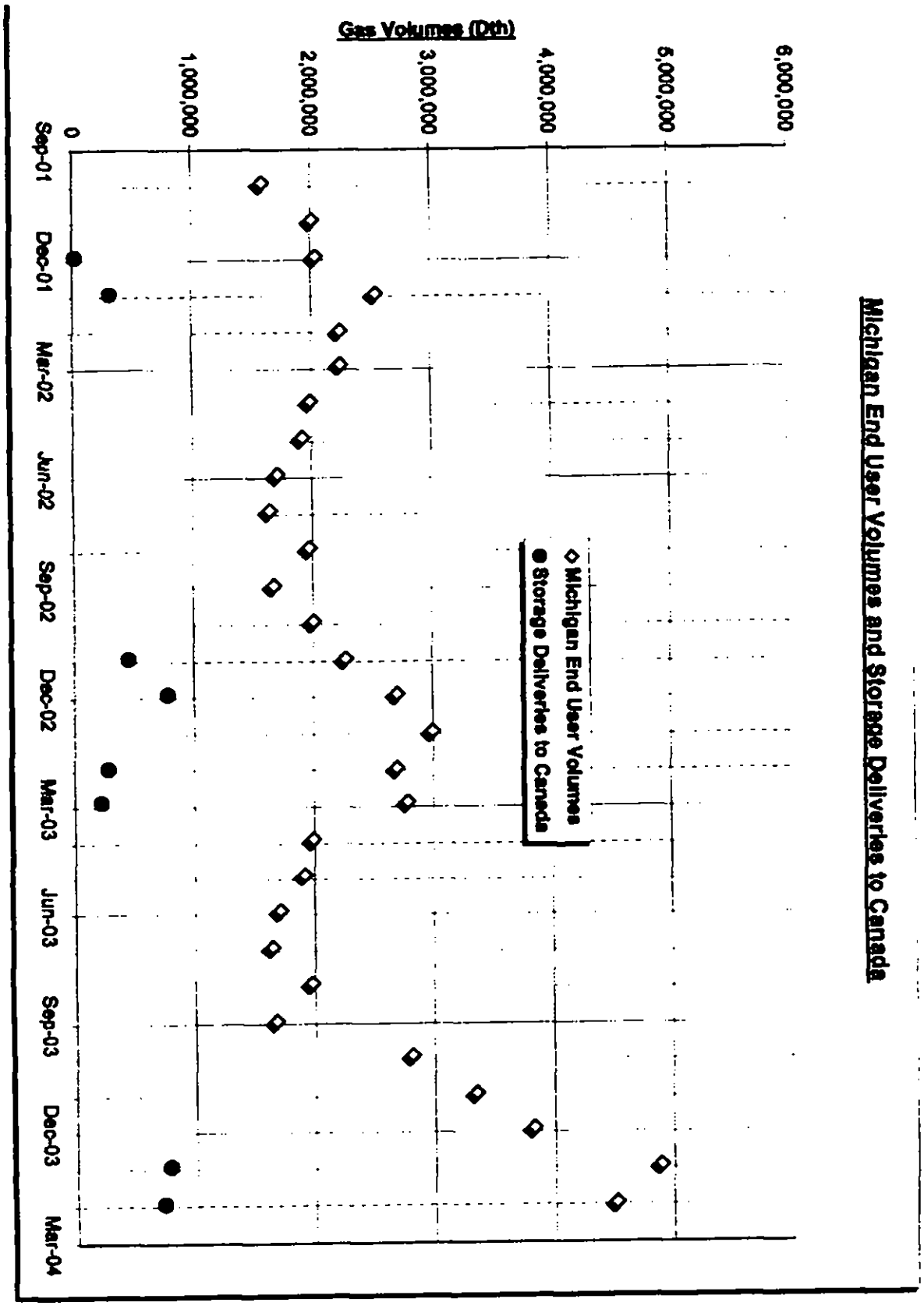

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EXHIBIT Z-3
(8 pages attached)

Corporate Structure

PS Resources Corp

WPS Resources Corp. *(WPSR)*

- Headquartered in Green Bay, WI
- Ticker symbol (NYSE: WPS)
- A North American corporation
- Corp. assets of $ 3.208 billion
- Superior credit ratings (A/Aa3)
- Have increased dividends for 44 consecutive years
- Website:
- Our Mission: ***Provide Customers with the Best Value in Energy and Related Services.***

WPS ENERGY SERVICES, INC.

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ES CORP.

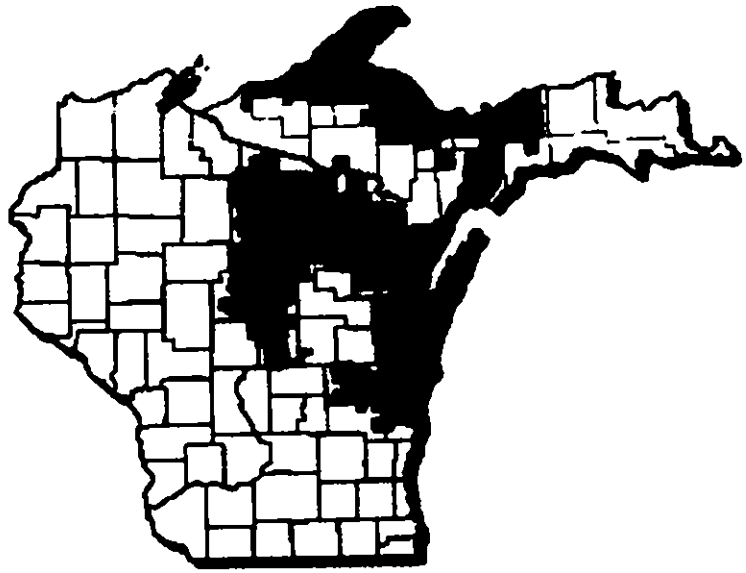
Operations

Wisconsin Public Service Corp.

- Established in 1883
- Serves NE/Central WI & UP of MI
- Serve 400,000 electric customers
- Serve 300,000 gas customers
- Service area: 11,000 square miles
- 2,410 employees
- Website:

Upper Peninsula Power Co.

- Established in 1884
- Serves Upper Peninsula of Michigan
- Serve 50,000 electric customers
- Service area: 4,500 square miles
- 169 employees
- Website:



Upper Peninsula Power Company Service Territory

Wisconsin Public Service Corporation Service Territory

WPS ENERGY SERVICES INC

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ES CORP.

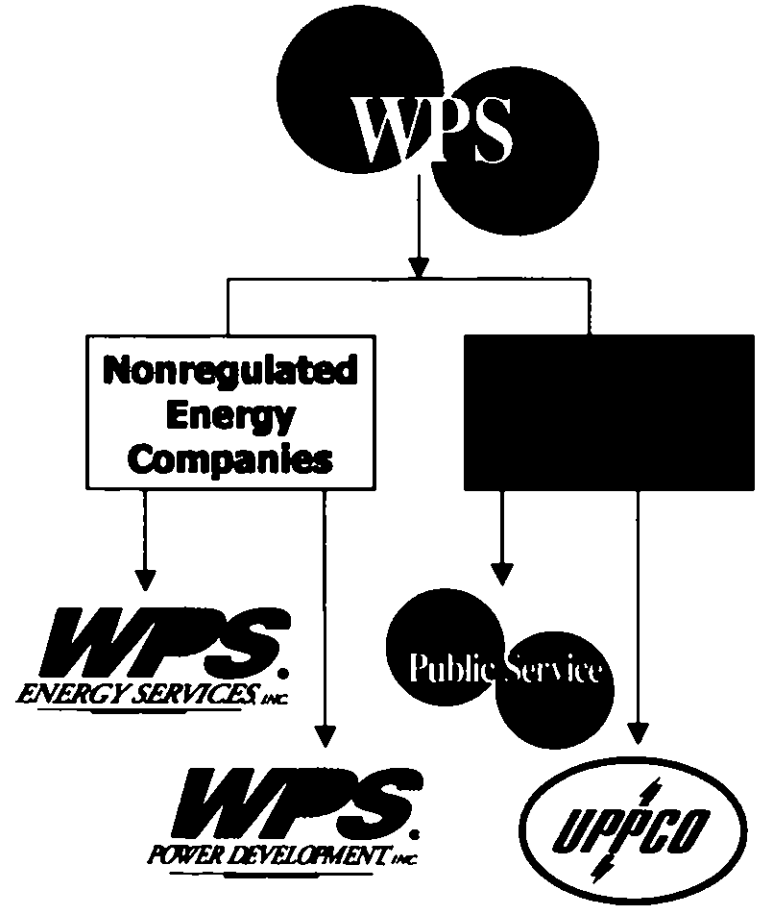
Energy Companies

WPS Power Development, Inc.

- Established in 1995
- Concrete & steel subsidiary
- 930-MW of generation assets
- Sale of 491-MW Sunbury assets expected to close in summer 2004
- 175 employees
- Website:

WPS Energy Services, Inc.

- Established in 1994
- Nonregulated energy supply and services subsidiary
- 140 employees
- Website:



WPS ENERGY SERVICES INC

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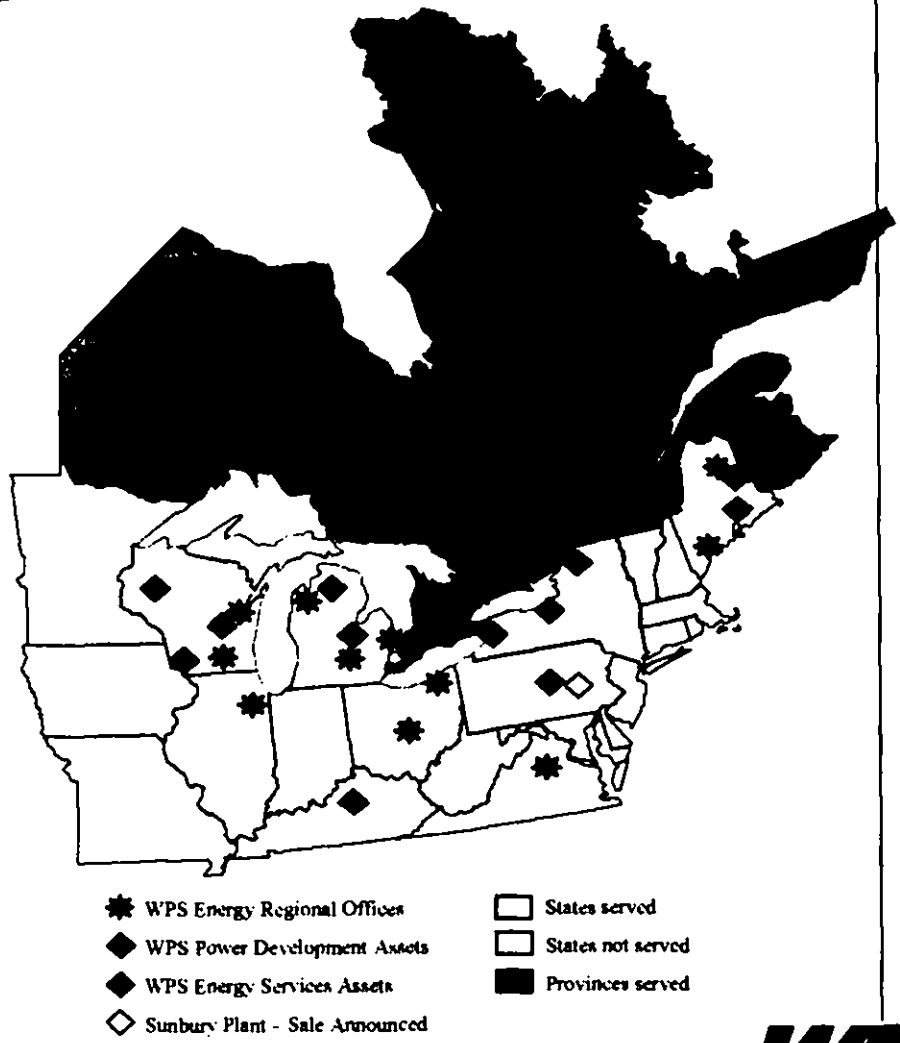
SERVICES, INC.

Background Information

- Competitive energy supplier
- Serve 225,000 customers
  - 20 states & 3 Canadian provinces
  - 16 pipelines & 5 electric markets
- Service center locations
  - US: IL, ME, MI, OH, VA & WI
  - Canada: AB, NB, ON & QC
- 2002 Annual Sales Data
  - Revenue: $1.495 billion
  - Gas Sales: 360 BCF, 1.4% of North American consumption
  - Electric Sales: 6,953 GWHr
    - *2.5% of U.S. nonregulated sales*
    - *6.2% of customers served*



WPS ENERGY SERVICES INC

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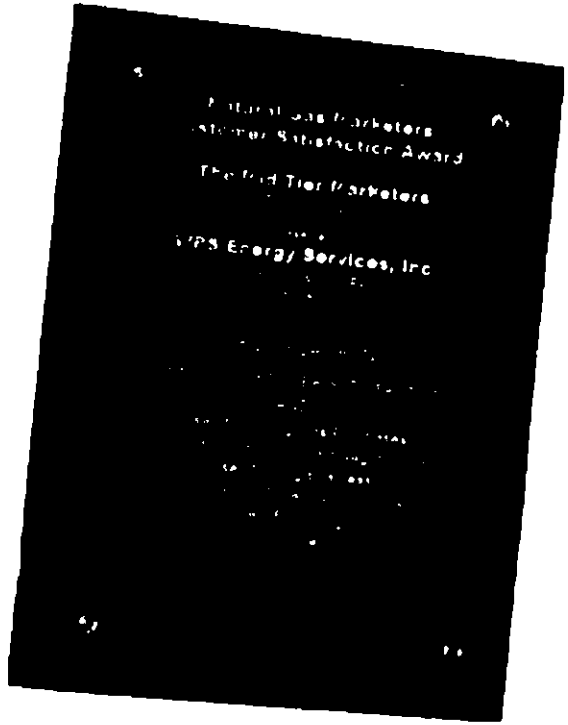
SERVICES, INC.

Our Markets, Expertise & Focus

- Serve Retail & Wholesale Markets
- Core Competencies
  - Gas Marketing & Trading
  - Risk Management
  - Power Marketing & Trading
  - Energy Consulting
  - Energy Delivery Management
- Our Focus: *"Putting Power in Your Hands"*
  - *Reliability*: Dependable Supplies & Agreements
  - *Value*: Competitive Prices
  - *Service*: Top Notch Service
  - *Convenience*: "Easy-to-do" Business Relationship
  - *Technology*: Innovative Solutions



WPS Energy Services has consistently rated as one of North America's top gas marketers in Mastio & Company's industry-wide customer satisfaction, benchmarking and image report.

WPS ENERGY SERVICES, INC.

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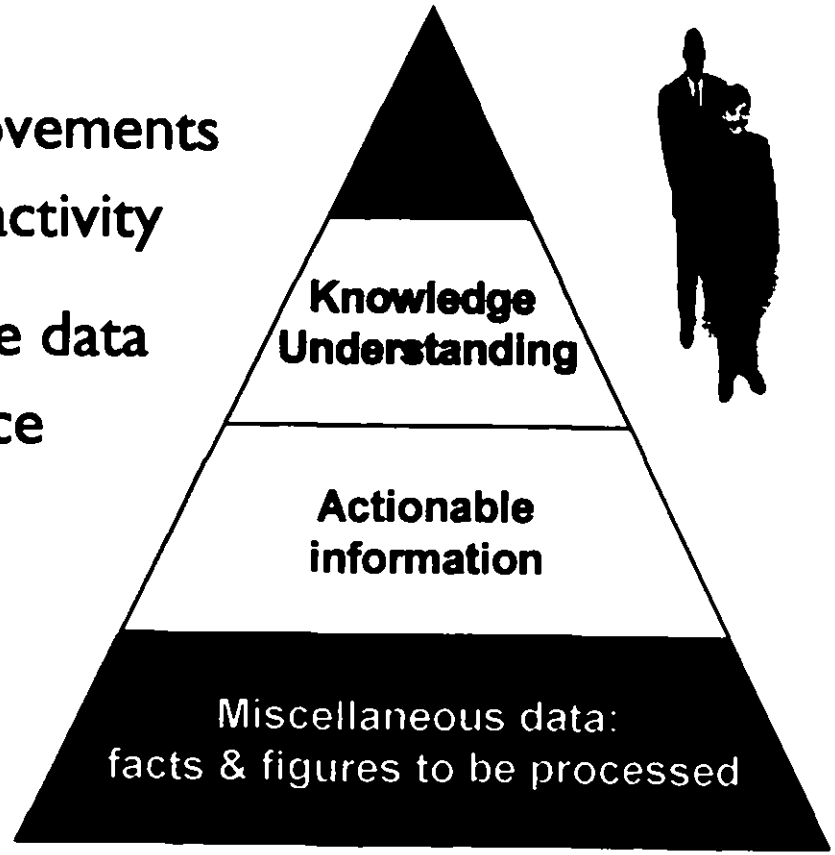
nology Solutio

- Internal infrastructure improvements track company & customer activity
- Innovative technologies share data and improve customer service
  - DENEt®
  - Energy Manager℠
  - Utility Director℠
- Enhance communications
- ***Better data, Better decisions***



WPS ENERGY SERVICES INC.

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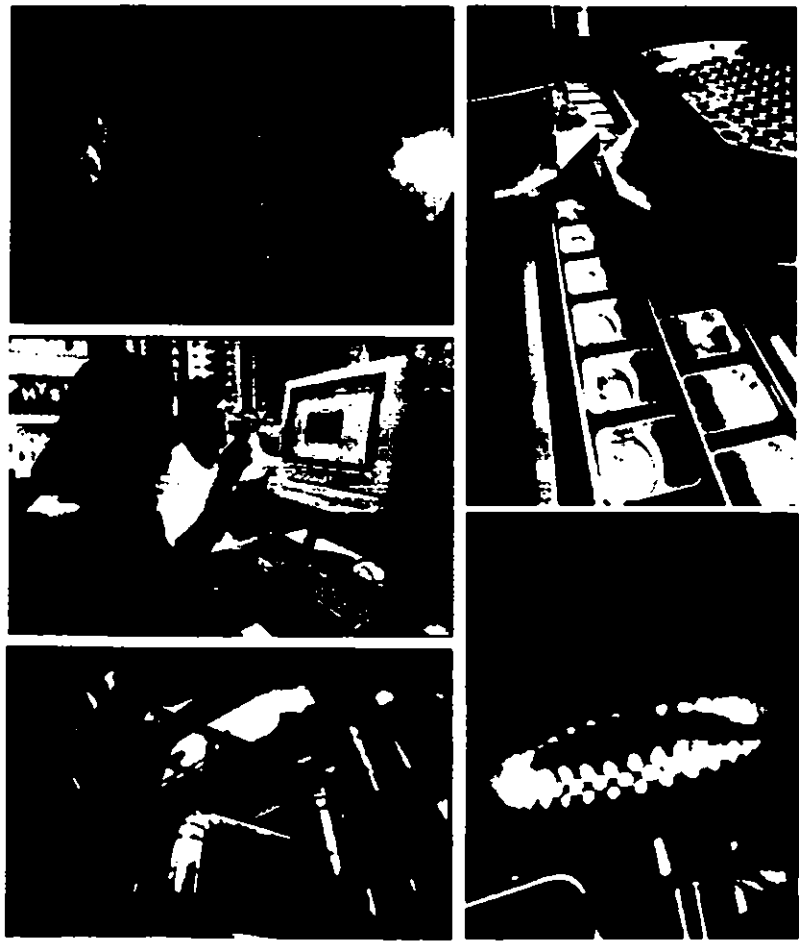
arket



- US Market
  - Retail Sales = 127.7 BCF
  - Wholesale Sales = 211.9 BCF
- Canadian Market
  - Retail Sales: ≅ 100.0 BCF
  - Wholesale -- Ramping Up

WPS ENERGY SERVICES INC.

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WPS Resources Corporation Organizational Chart

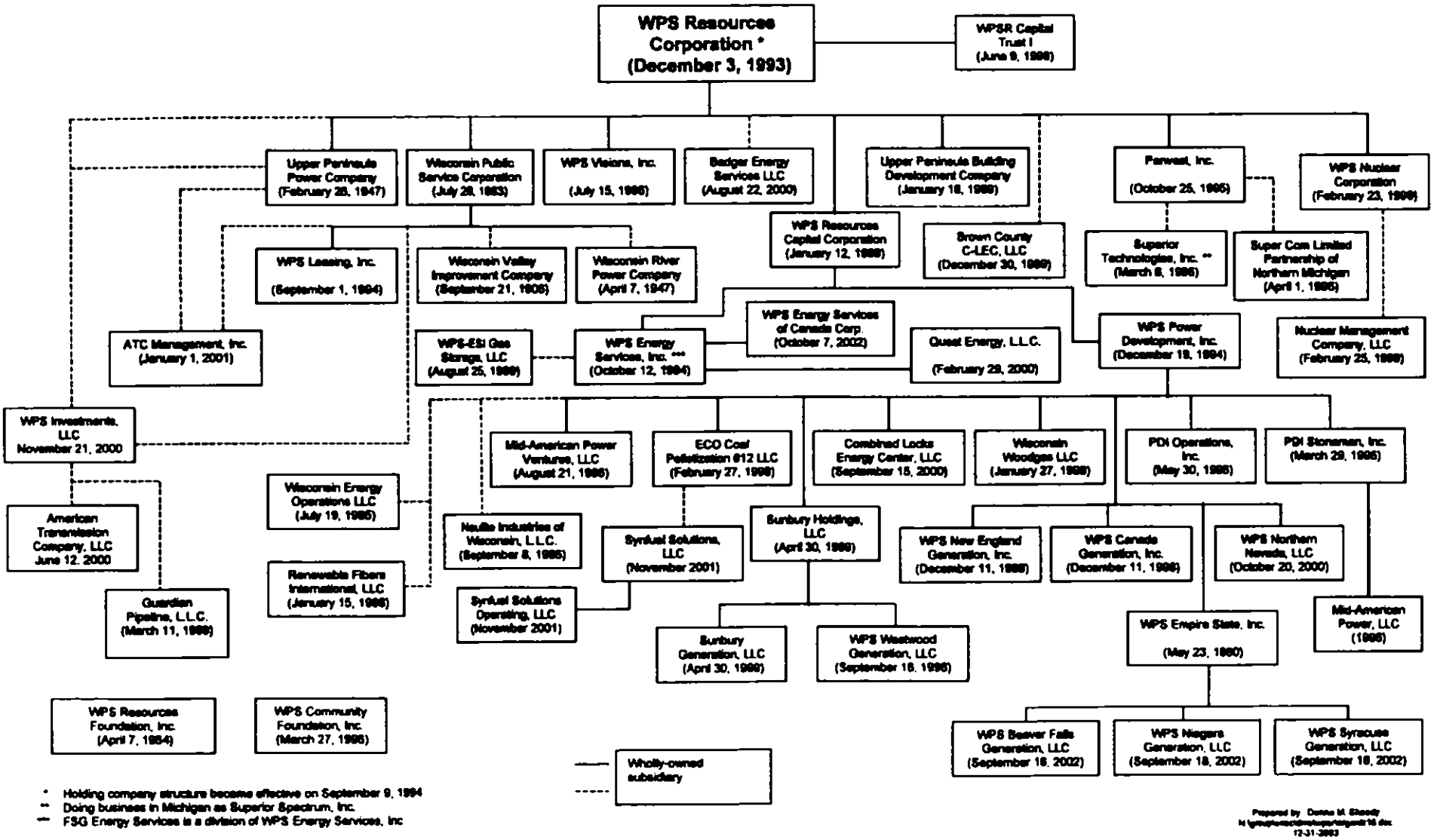

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EXHIBIT Z-4
(9 pages attached)

Description of WPS-ESI Gas Storage Facilities
And System Operations
(Including Natural Gas Infrastructure,
Kimball 27 Field Area,
St. Clair County, Michigan)

Unofficial FERC-Generated PDF of 20040315-0076 Received by FERC OSEC 03/11/2004 in Docket#: CP04-80-000

MICHIGAN PUBLIC SERVICE COMMISSION

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the Matter of the Application of **WPS - ESI GAS STORAGE, LLC**, a Wisconsin limited liability company, for a Certificate of Public Convenience and Necessity to acquire, construct, own and operate a natural gas storage facility in Kimball Township, St. Clair County, Michigan and for approval of natural gas storage rates.	Case No. U-12209

APPLICANT'S PROPOSED EXHIBITS

James R. Neal (P-24265)
Loomis, Ewert, Parsley, Davis & Gotting, P.C.
232 South Capitol Ave, Suite 1000
Lansing, MI 48933
(517) 482-2400

James A. Ault (P-30201)
636 Michigan National Tower
Lansing MI 48933
(517) 484-7730

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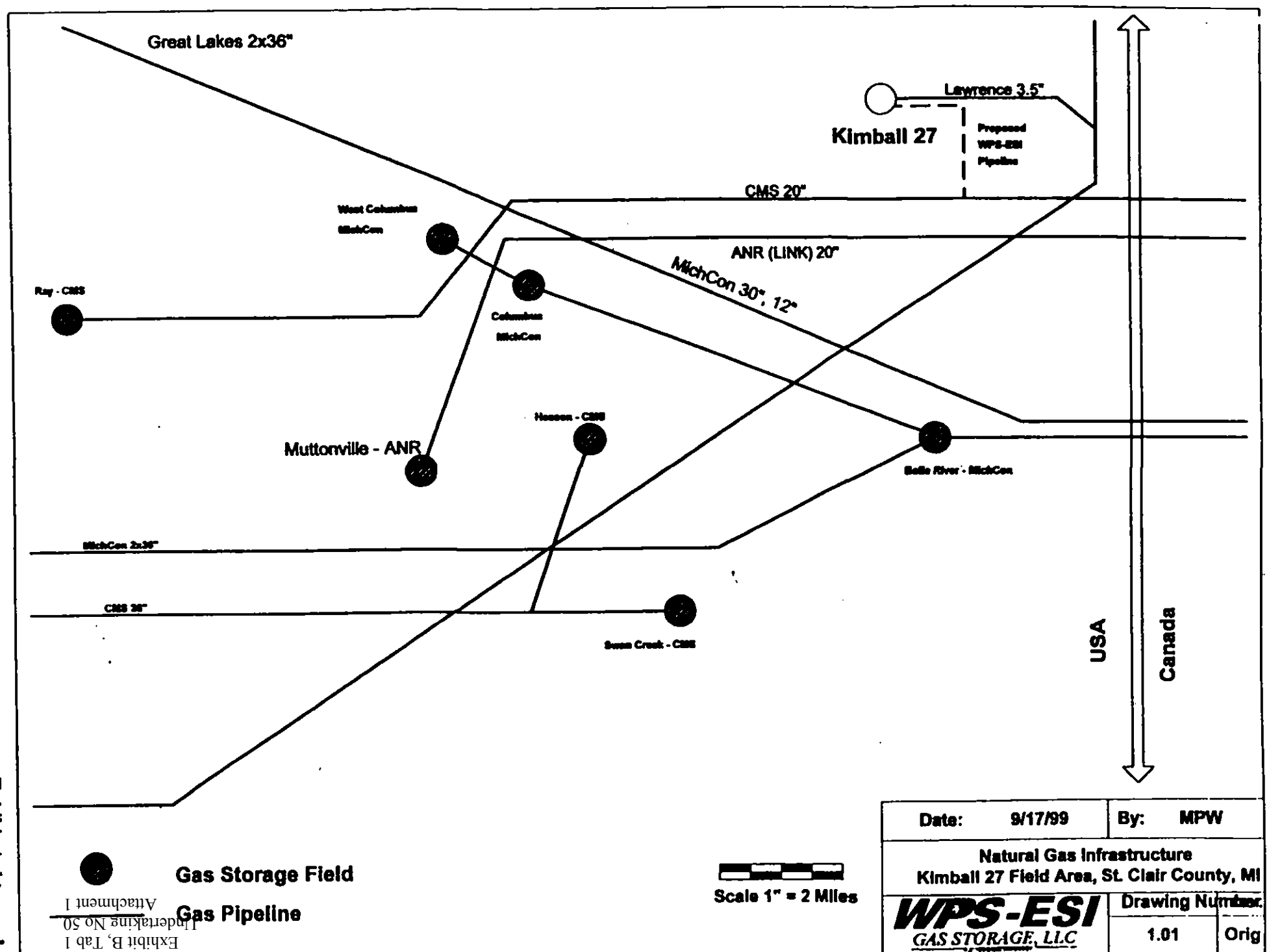
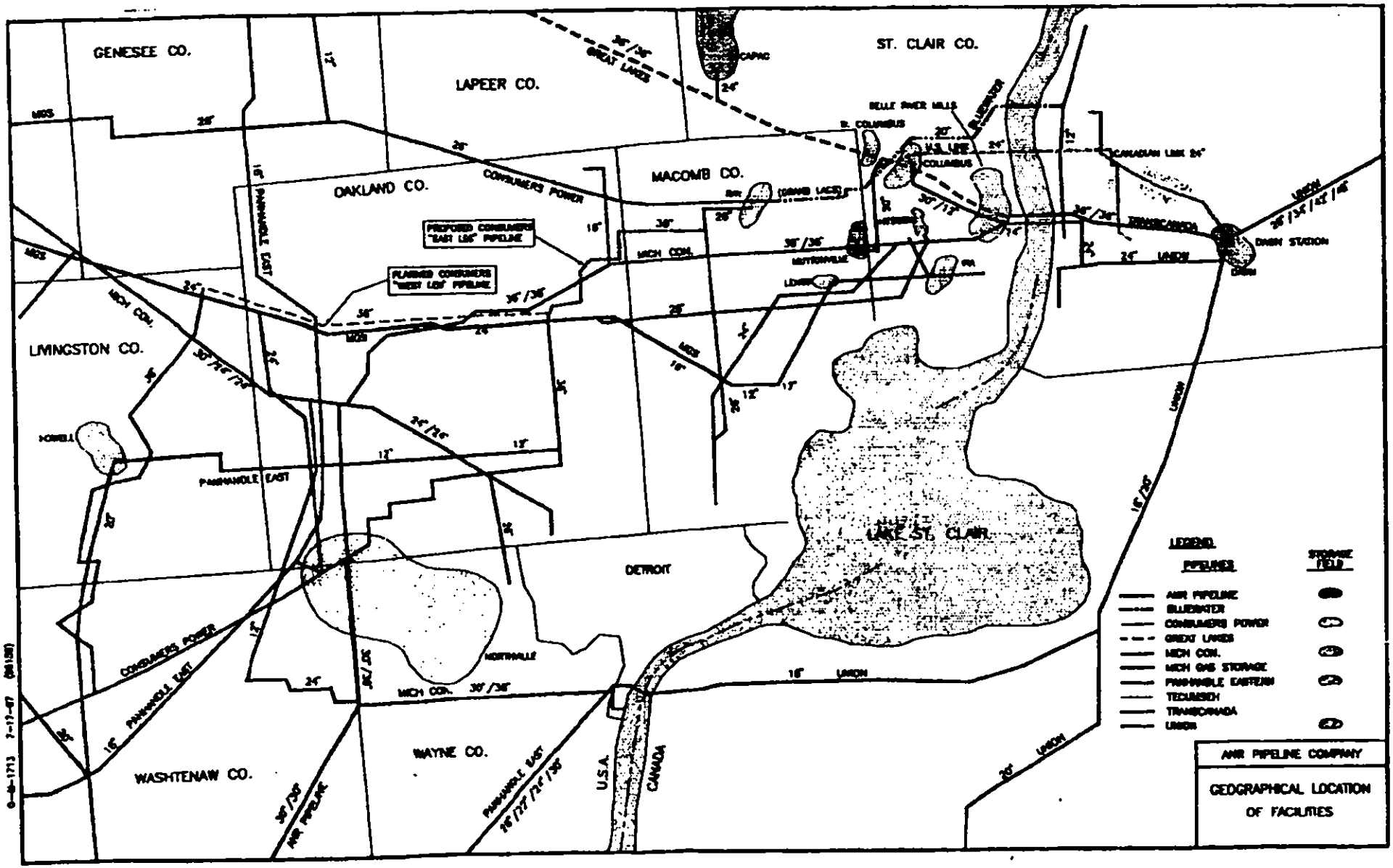


Exhibit A-1

Exhibit B, Tab 1
Undertaking No. 50
Attachment 1



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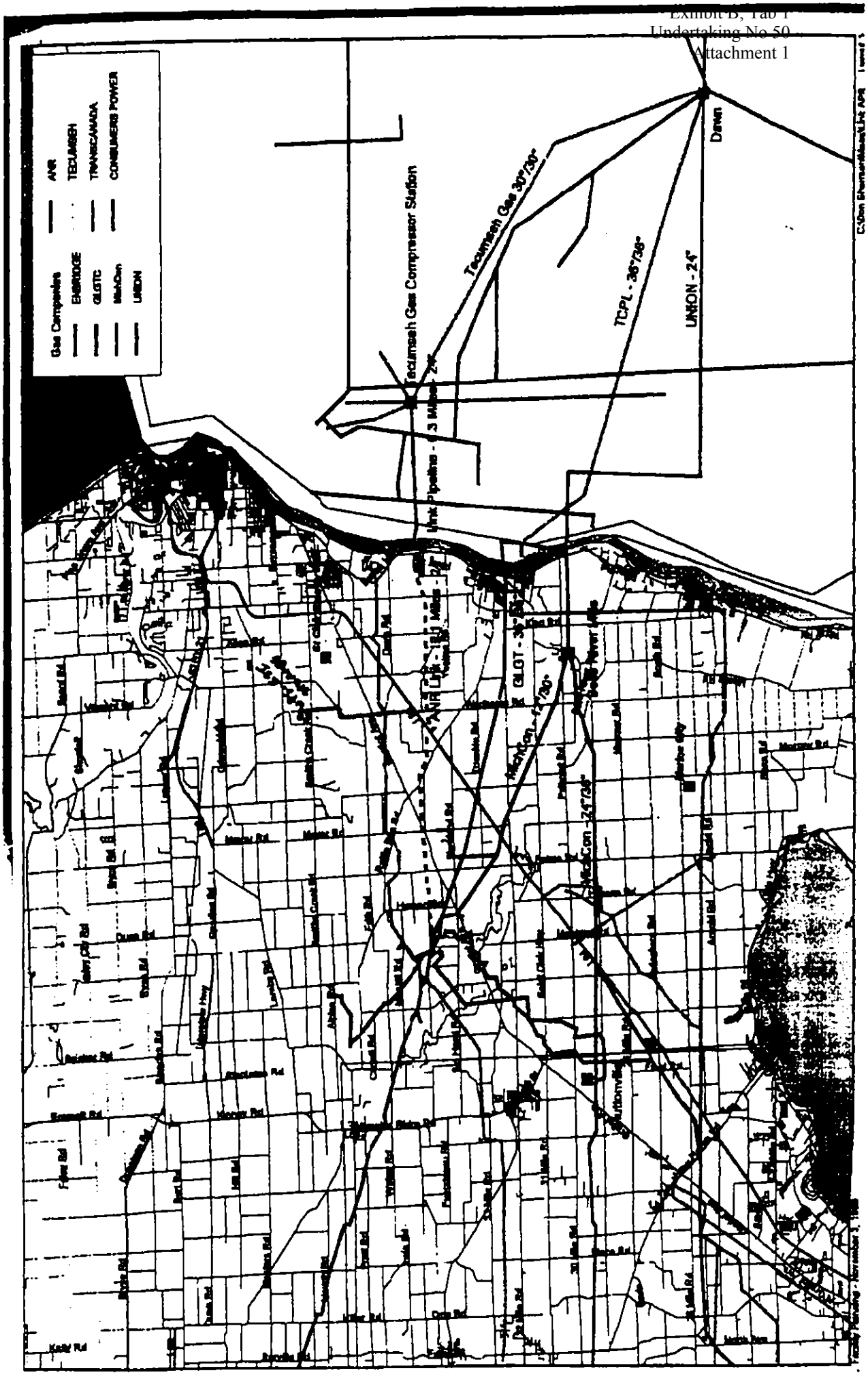

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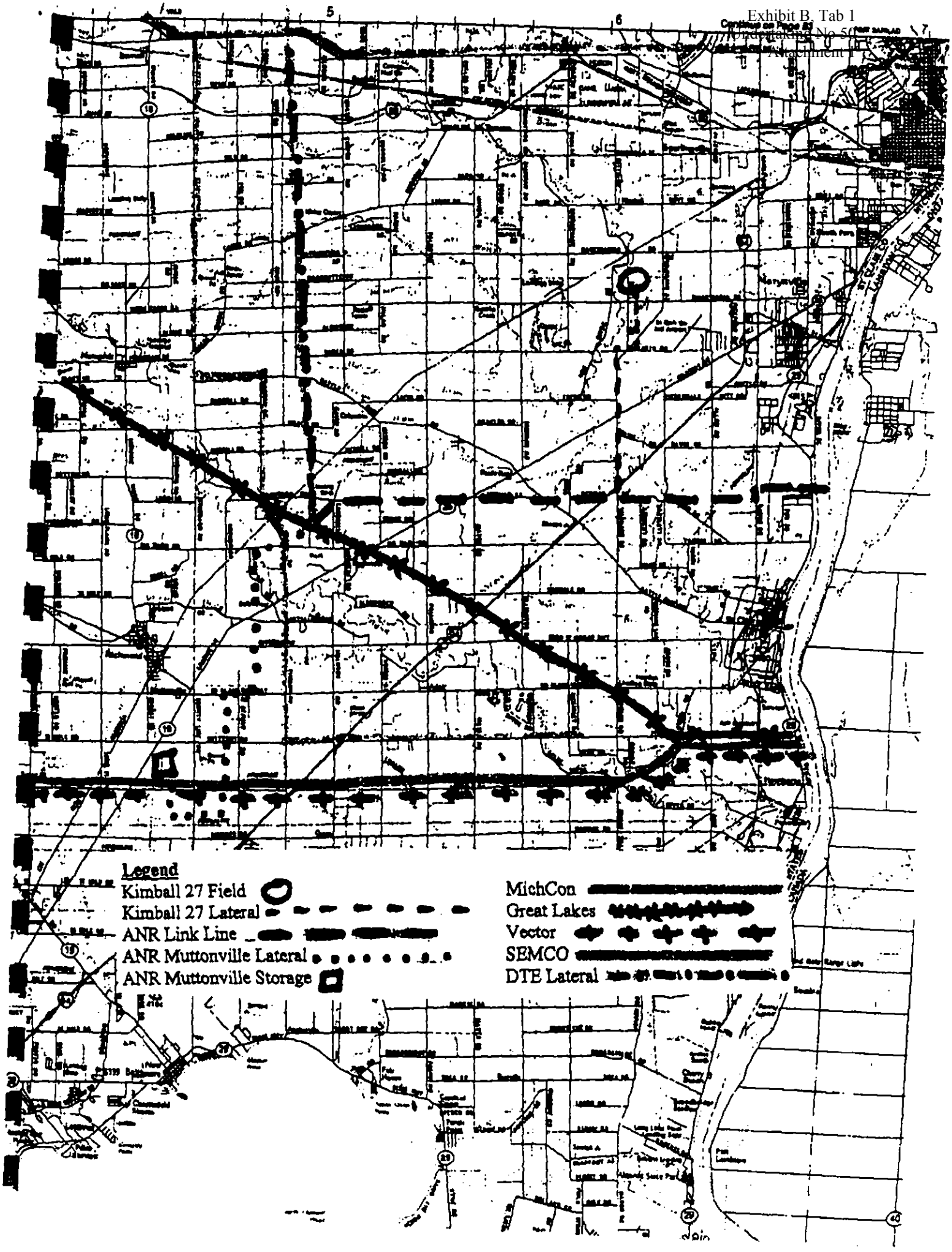

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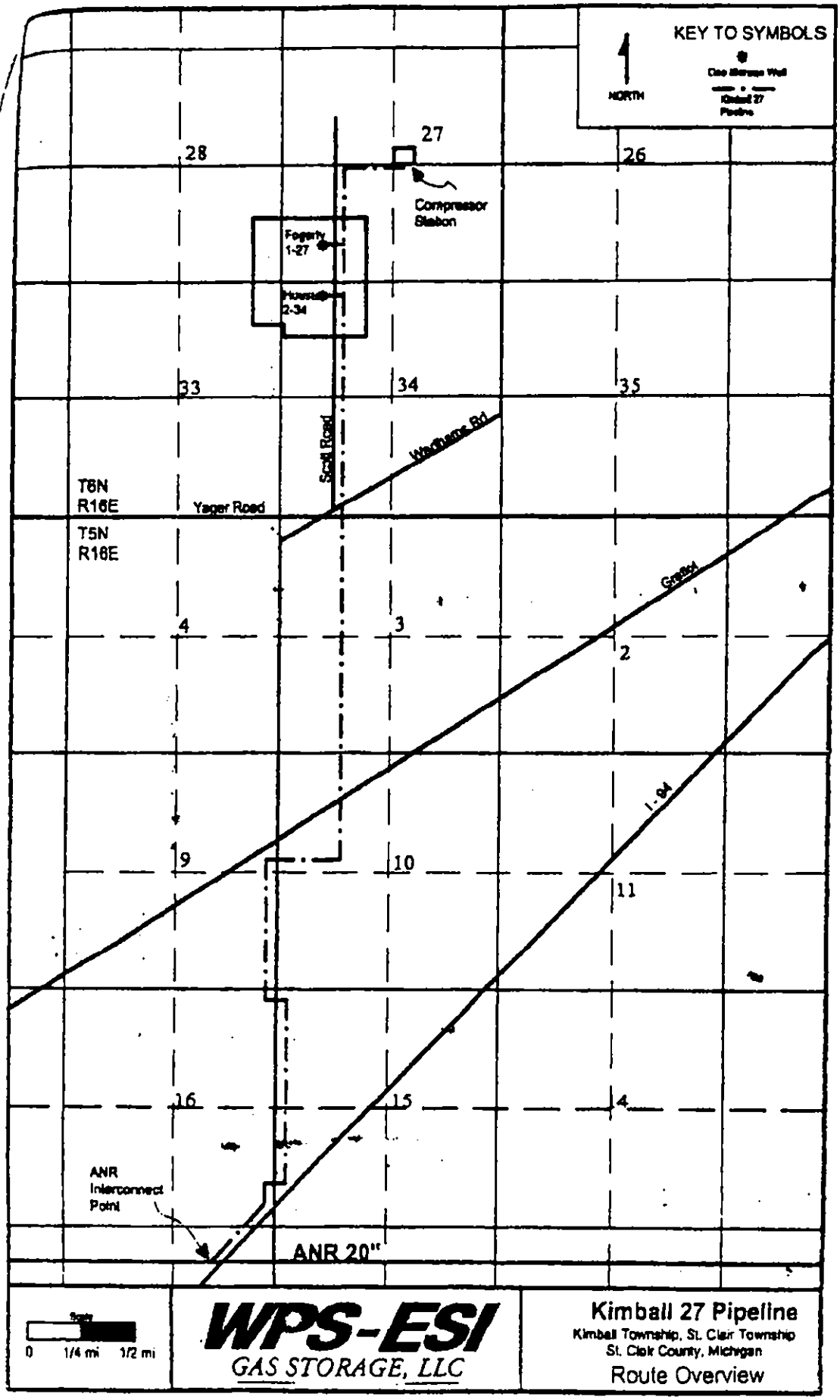

Exhibit B, Tab 1
Undertaking No 50
Attachment 1

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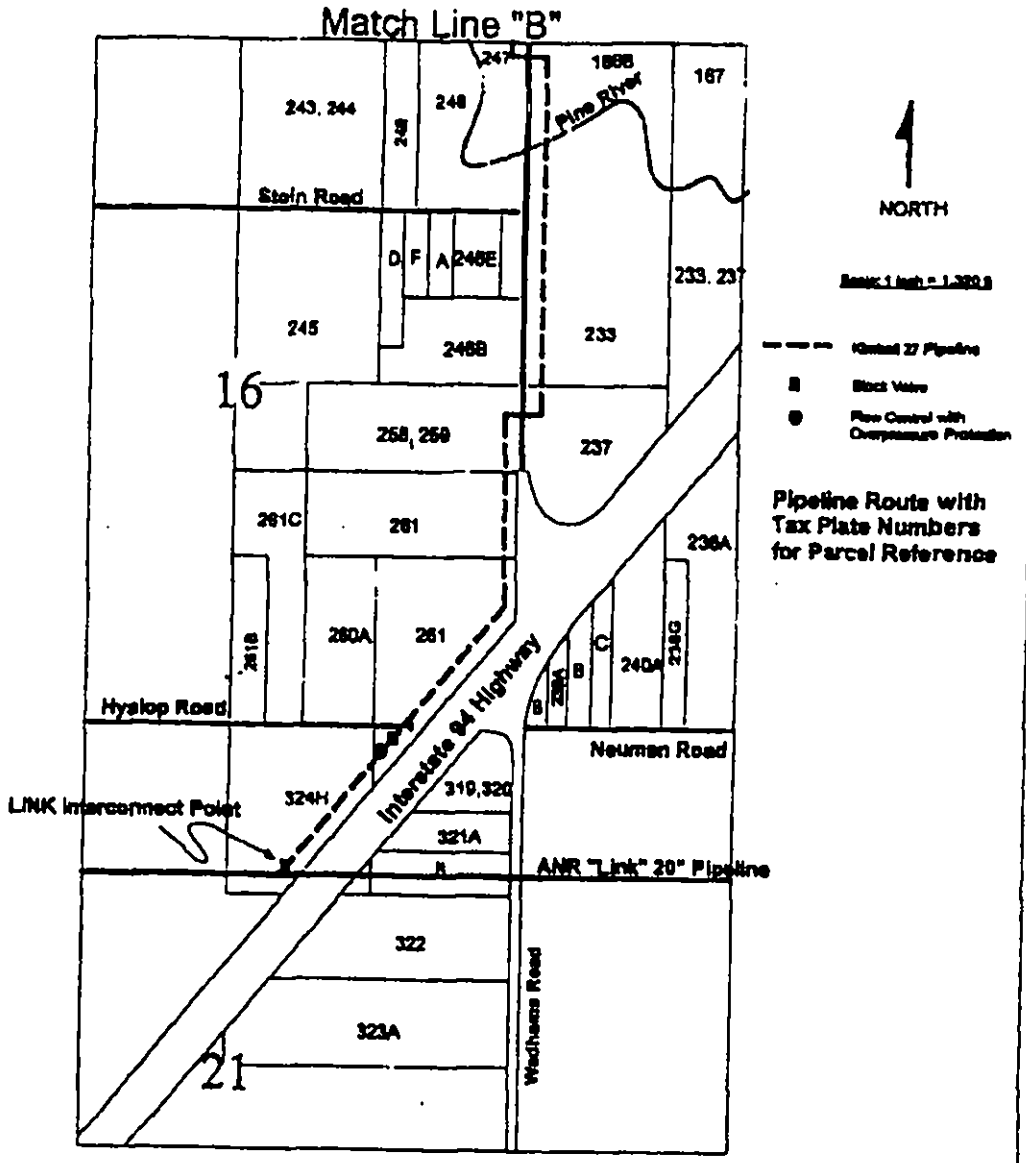
Kimball 27 Pipeline - Southern Section



Part of St. Clair Township, T5N-R16E
St. Clair County, Michigan

WPS-ESI GAS STORAGE, LLC

Kimball 27 Pipeline

Southern Section

Drawing No. 4

Date: 8/20/01

Rev: 2

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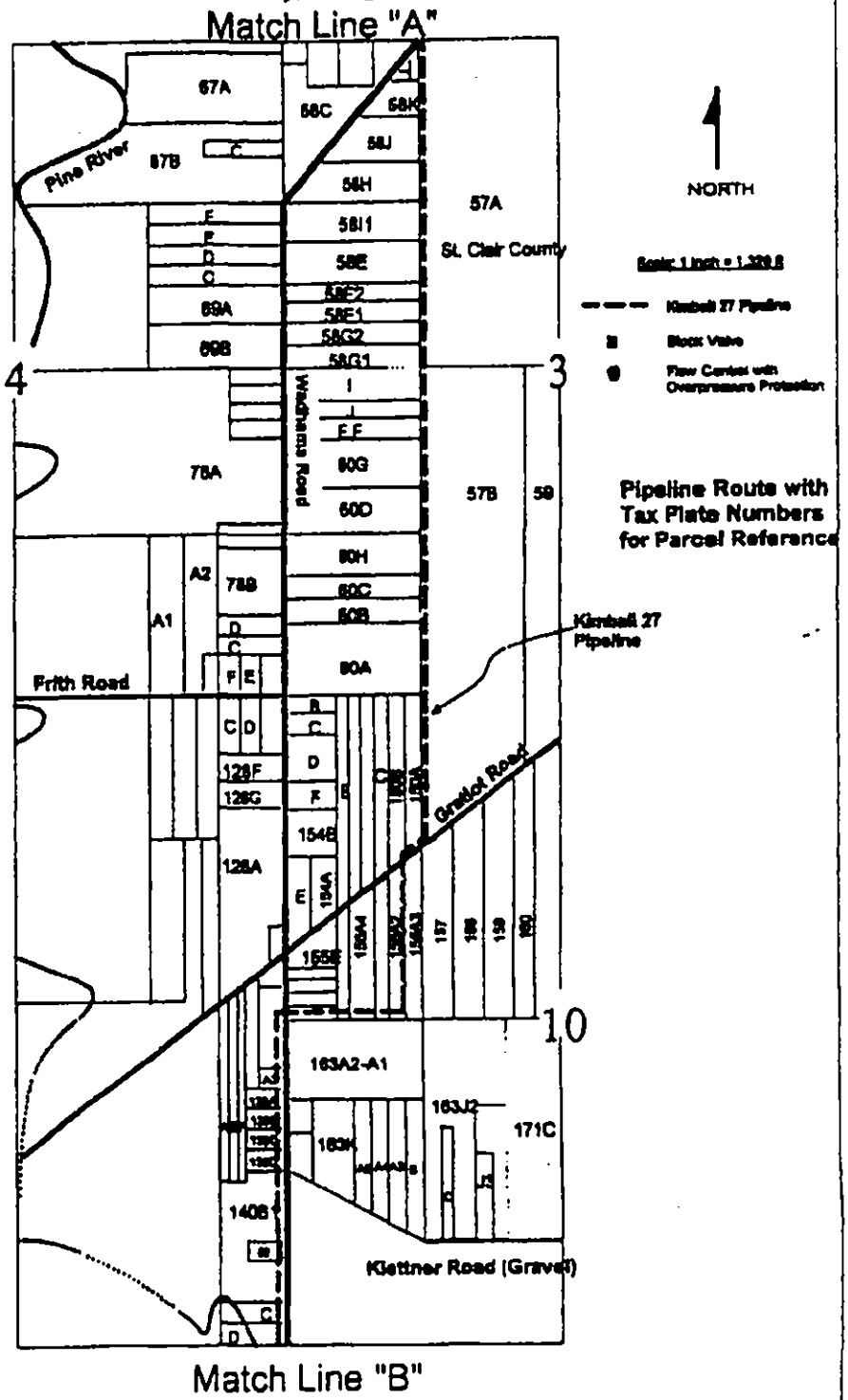
Kimball 27 Pipeline - Center Section

Part of St. Clair Township, T5N-R16E
St. Clair County, Michigan



WPS-ESI GAS STORAGE, LLC	Kimball 27 Pipeline	
	Center Section	Drawing No. 3
		Date: 8/20/01 Rev: 4

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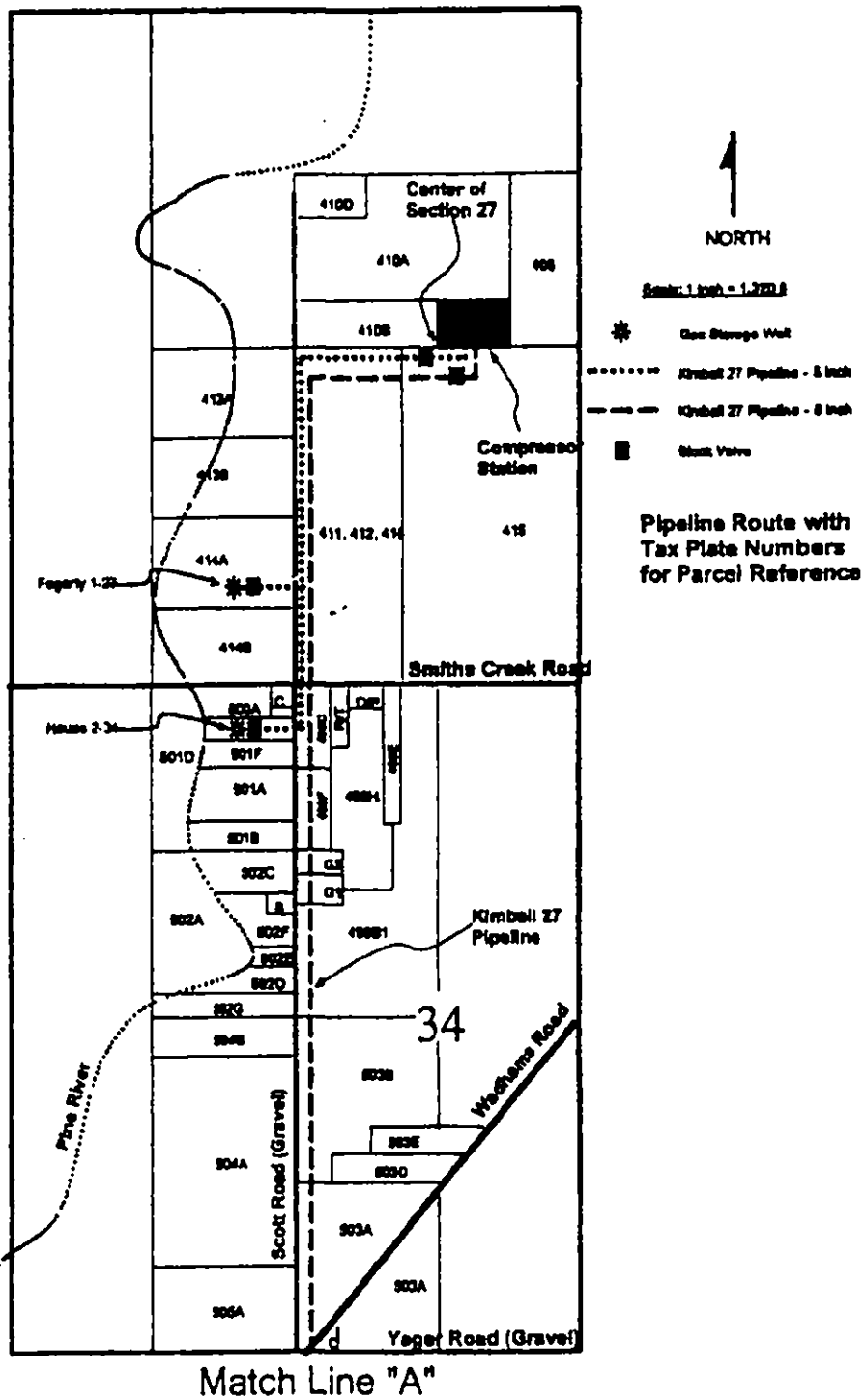
Kimball 27 Pipeline - Northern Section

Part of Kimball Township, T6N-R16E
St. Clair County, Michigan



WPS-ESI GAS STORAGE, LLC	Kimball 27 Pipeline	
	Northern Section	Drawing No. 2
		Date: 8/20/01 Rev: 3

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EXHIBIT Z-5
(35 pages attached)

International Gas Consulting, Inc.
Market Power Study

Unofficial FERC-Generated PDF of 20040315-0076 Received by FERC OSEC 03/11/2004 in Docket#: CP04-80-000

WPS-ESI Gas Storage, LLC

Market Power Analysis

Submitted to:

WPS-ESI Gas Storage, LLC
Mr. Daniel J. Verbanac
Vice President
1088 Springhurst Drive
Green Bay, Wisconsin 54304-5495

Submitted by:

International Gas Consulting, Inc.
3200 Wilcrest Drive, Suite 450
Houston, Texas 77042-6019
Tel. No. (713) 782-4782
Fax No. (713) 782-9594
E-mail: igc@intlgas.com

February, 2004

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Attachments

Unofficial FERC-Generated PDF of 20040315-0076 Received by FERC OSEC 03/11/2004 in Docket#: CP04-80-000

I. Purpose

International Gas Consulting, Inc. (IGC) was requested to perform a market power study for WPS-ESI Gas Storage, LLC's (WPS-ESI Gas Storage) Kimball 27 Storage facility (Kimball 27) located in Kimball Township, St. Clair County, Michigan. WPS-ESI Gas Storage is affiliated with WPS Energy Services, Inc., a Wisconsin corporation engaged in the business of marketing and transporting natural gas to customers in Michigan and elsewhere.

WPS-ESI Gas Storage was certificated by the Michigan Public Service Commission to acquire, construct, own, and operate the Kimball 27 Storage facility by order issued February 22, 2000.[1] Subsequently, WPS-ESI Gas Storage received authorization to construct and operate an approximate 5-mile, 8-inch and 6-inch pipeline to connect with storage wells, a compressor station and the ANR Pipeline Company's Link Pipeline.[2] WPS Energy Services entered into a 10-year contract with WPS-ESI Gas Storage to store up to 1.5 MMDth.

The Kimball 27 facility has excess storage capacity from time to time that WPS-ESI Gas Storage is proposing to offer to the interstate markets via a direct connection with ANR Pipeline Company, an interstate pipeline. WPS-ESI Gas Storage is targeting ANR's northern zone market area in the upper Midwest, which encompasses the states of Michigan and Wisconsin and parts of Indiana, Illinois, and Iowa.

IGC was asked to evaluate whether the Kimball 27 Storage facility could exercise significant market power in the markets in which WPS-ESI intends to offer storage service. Our analysis was conducted using the Federal Energy Regulatory Commission (FERC) guidelines established in its Policy Statement entitled, "Alternatives to Traditional Cost-of-Service Ratemaking", issued January 31, 1996,[3] and the analytical approach enunciated by the Commission in subsequent orders granting market-based pricing authority to underground storage and market hub operators.

As a source document for the storage study, IGC utilized the American Gas Association's 2001 Survey of Underground Natural Gas Storage, as well as Natural Gas Intelligence's Natural Gas Storage Facilities in the United States and Canada publication dated March

[1] Case No. U-12209.
[2] Case No. U-12357, order issued September 18, 2000.
[3] 74 FERC ¶61,076.

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2000. Additionally, IGC enhanced these databases with information extracted from FERC filings, direct company contact, and other public data concerning gas storage facilities.

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II. Pipeline Connections and Project Design

The Kimball 27 Storage facility is located three miles west of the city of Marysville, Michigan, and near the St. Clair River dividing Michigan from the Province of Ontario, Canada, about 30 miles north of the city of Detroit. The storage facility is connected through a five mile 8-inch header to ANR Pipeline Company's 24-inch Link Pipeline and certificated to connect with a 20-inch CMS Gas Transmission Company Pipeline. The ANR Link Pipeline connects, via the Muttonville lateral, with Great Lakes Gas Transmission on the west and Enbridge's pipeline at the international boundary between Michigan and Ontario. The Enbridge pipeline connects to the Union Gas Company, Ltd.'s storage at Dawn and to Consumers Gas Company's storage, both in Ontario, Canada. All of these facilities are within ten miles of Kimball 27. The Great Lakes pipeline also connects with ANR's northern zone system near the Winfield storage complex in Claire County, Michigan.

Kimball 27 storage is a conversion of a depleted Niagaran gas reservoir containing 3.514 Bcf of total capacity at 1,897 psig and a working gas capacity of 3.049 Bcf. Maximum deliverability is 100,000 Mcf/d and maximum injection capacity is 45,000 Mcf/d. Approximately one-half of the capacity and associated injection and withdrawal capabilities have been contracted to WPS Energy Services Inc., a marketing company serving Michigan gas consumers and others. WPS Energy Services is an affiliated company of WPS-ESI Gas Storage.

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III. Market-Based Rates for Storage Service

Definition

The FERC has established the framework for evaluating market-based rates in its Policy Statement, "Alternatives to Traditional Cost-of-Service Ratemaking", which was issued January 31, 1996. Id. The underlying purpose of the evaluation focuses on two principal criteria:

Whether the applicant can withhold or restrict services and, as a result, increase price by a significant amount for a significant period of time;

Whether the applicant can discriminate unduly in price, terms and conditions.

In applying this Policy Statement, the FERC has allowed market-based rates if an applicant demonstrates that there is a lack of market power because there are sufficiently good alternatives or that market power can be mitigated. This would be the case, for example, in a market served by numerous suppliers or where the market has comparable substitutes to the product and services offered. The Policy Statement defines market power as the "ability of a pipeline to profitably maintain prices above competitive levels for a significant period of time." Id. at 61,230.

To comply with the FERC's generally accepted procedure for evaluating requests for market-based rates, the following analysis adopts the recommended approach:

- Defining relevant product and geographic markets,
- Measuring market concentration and market share, and
- Evaluating ease of entry into the market and other relevant factors.

Precedents for Allowing Market-Based Rates for Storage Services

Koch-Bistineau Storage

Starting in 1991, with Koch Gateway Pipeline Company's (now Gulf South Pipeline Company, formerly United Gas Pipe Line Company) Bistineau storage facility,[4] the Commission has granted a number of storage service applicants market-based rate

[4] 57 FERC ¶ 61,086 (1991).

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authority when the applicants showed that they lacked market power in the relevant markets. The Commission granted Koch authority to charge market-based rates on an experimental auction basis for a period of eighteen (18) months using 32 Bcf (or nearly 30%) of Koch's total storage capacity of 112 Bcf.

The Commission's finding in this case was influenced by the experimental posture of the case, a settlement that Koch had reached with its customers, and the "price cap" protections embodied in the settlement. Since its approval, the Bistineau experiment has supported the Commission's finding of lack of market power. Koch was able to fully subscribe the Bistineau facility for only 12 of the 18 months of service, and the market-based rates charged did not recover the cost allocated to the service or even approach the "price cap" set by the Commission to protect against the exercise of market power by Koch.

Richfield Gas Storage System

The Richfield case[5] involved a new entrant to the storage market with 3.4 Bcf of working gas capacity at its facility located in western Kansas. The storage facility is connected to Northern Natural Gas Company, Panhandle Eastern Pipeline Company, and Colorado Interstate Gas Company. Four Midwestern local distribution companies (LDCs) had contracted for the storage service as a result of active solicitation by the storage operator. In deciding the case, the Commission noted that it was relying heavily on the record in the case as opposed to any set formula for determining the existence of market power. In comparing the storage available to the pipelines operating in Richfield's geographic area, the Commission concluded that the potential size of the Richfield storage was insignificant by comparison to the LDCs' available options and that Richfield would not be able to exercise market power. The Commission, again, placed some emphasis on the negotiation process itself as supporting a finding of lack of market power.

Transok, Inc.

Transok filed a petition pursuant to Section 311 (a)(2) of the Natural Gas Policy Act of 1978 on October 19, 1992 to offer, initially, 4.0 Bcf of storage service to the interstate markets from its state regulated Greasy Creek reservoir storage facility located in Hughes County, Oklahoma.[6] Transok claimed that such capacity was excess to its immediate

[5] Richfield Gas Storage System, 59 FERC ¶ 61,316 (1991).
[6] Transok, Inc. 64 FERC ¶ 61,095 (1993).

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intrastate requirements and wanted to serve its interstate customers' need for storage capacity. By order dated July 20, 1993, the Commission found Transok's offering was a "sufficiently small part of the storage market" and "was unlikely to exercise market power over non-affiliated customers in arms-length negotiations".

Other Production Area Storage Facilities

Since those initial cases, the Commission has approved market-based rates for a host of production area storage facilities. Examples include Petal Gas Storage Company (64 FERC 61,190 (1993)), Bay Gas Storage Company, Ltd. (66 FERC ¶ 61,354 (1994)), Enron Storage Company (73 FERC ¶ 61,206, (1995)); and Manchester Pipeline Corp., ((76 FERC ¶ 61,007 (1996)). Ouachita River Gas Storage L.L.C. received approval for market-based rates at its gas storage facility in northeastern Louisiana,[7] but surrendered its certificate when it decided to focus on the Louisiana intrastate markets. In 1996 and 1997, two production area salt dome storage projects developed by Market Hub Partners (now Duke Energy) were granted market-based rates. (Moss Bluff Hub Partners, LP in Texas and Egan Hub Partners, LP in Louisiana).[8]

Market-based rates offering excess storage capacity to the interstate markets recently have been authorized for three Texas facilities, EPGT Texas Pipeline, LP (103 FERC ¶ 61,181 (2003)), Hill-Lake Gas Storage, L.P (99 FERC ¶ 61,037 (2002)) and Unocal Keystone Gas Storage, LLC (106 FERC ¶ 61,033 (2004)).

Market Area Storage Facilities

Several market area storage projects also have received market-based rate treatment. The Avoca bedded-salt cavern project in New York State was granted market-based rate authority in 1994 (68 FERC ¶ 61,045) and the Steuben Gas Storage Company, also located in New York, was authorized in 1995 (72 FERC ¶ 61,102) to market storage services in the northeast and the mid-Atlantic area. In 1997, New York State Electric and Gas Corporation (NYSEG), a Hinshaw pipeline under Section 1(c) of the Natural Gas Act and a local distribution company operating pursuant to regulations of the New York Public Service Commission, received authorization from the FERC to offer firm and interruptible open access storage service to the interstate markets at market-based rates (81 FERC ¶ 61,020). In this case, NYSEG had excess working gas storage and

[7] Ouachita River Gas Storage L.L.C., 68 FERC ¶ 61,402 (1994).

[8] Egan Hub Partners, 77 FERC ¶ 61,016 (1996); Moss Bluff Hub Partners, L.P., 80 FERC ¶ 61,181 (1997).

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deliverability capacity available at its Seneca Lake bedded-salt facility and desired to market this capacity in the interstate markets until its core market needs increased. In authorizing this service, the Commission found that competition would be increased in the relevant market area and that the intrastate facilities would be better used. In yet another case of market area storage facilities receiving market-based rates, the Commission granted Market Hub Partners authorization in 1998 to offer market-based storage services from its Tioga, Pennsylvania salt cavern facility in the north central area of the State (83 FERC ¶ 61,403). More recently, the Commission authorized the use of market base pricing for two New York reservoir storage facilities, the Central NY Oil & Gas (Stagecoach) in Tioga County, 94 FERC ¶ 61,194 (2001) and Honeoye Storage Corp., in Ontario County, 91 FERC ¶ 62,165 (2000). In all of these cases, the Commission determined that the relevant market was concentrated but that the applicant did not possess market power.

Conclusion

In summary, the Commission has not deviated from its policy of granting market-based rate authorization in either the production or the market area where it was shown that the applicant could not control the storage markets in its defined area of interest.

Relevant Product and Geographic Markets

The relevant product market for this analysis is natural gas storage. WPS-ESI Gas Storage's principal customer base could include industrial, electric generators, LDCs (through regional and interstate pipelines), gas marketers and various end users that would utilize the facility for either cyclical, or seasonal, and/or short-term storage. The relevant geographic markets for the storage facility are those areas readily accessible to the ANR interstate pipelines in their Northern zone market area, traversing the states of Michigan, Ohio, Indiana, Illinois, eastern Iowa and Wisconsin. See ANR Pipeline Company's Northern Zone Market Area Map included as Attachment 1. IGC has determined that the storage facilities providing "good alternatives" to the Kimball 27 facility lie in the broad geographic area traversed by the ANR northern zone pipeline. See Attachment 2 showing location of storage facilities in Michigan, northern Indiana, northern Illinois, eastern Iowa and western Ontario.

IGC is aware of the Commission's approach of reviewing the narrowest market area possible. Such an approach is based on the reasoning that if a firm does not have market

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power in the narrowest market, it cannot exercise market power in the broader market. Thus, IGC has elected to evaluate this upper midwest area bordering the Great Lakes rather than the entire ANR pipeline system.

Measuring Market Share and Market Concentration

The next step in evaluating market power is to measure a firm's market share and market concentration, with respect to the relevant product and geographic markets. In previous analyses of market power, the Commission has used market share as one indicator of an applicant's ability to exercise market power. In such instances, the Commission has recognized that a relatively small market share indicates that sellers of the services cannot adversely influence the markets, and that customers easily can replace the applicant's services. In these circumstances, as the applicant is unable profitably to maintain prices above competitive levels for a significant period of time, it does not have market power.

Market share and market concentration are measured here consistent with Commission policy. Market share is measured with respect to total working gas capacity and maximum daily deliverability as a percentage share of the total of those storage capabilities in the relevant markets. Market concentration is measured using the Herfindahl-Hirschman Index (HHI). The HHI of a market is calculated by summing the squares of the individual market shares of all participants. This index is a good indicator of market concentration because it gives proportionately greater weight to the market shares of larger entities.[9] The DOJ and FTC have defined an unconcentrated market as one with an HHI of less than 1000, a moderately concentrated market with an HHI between 1000 and 1800 and a concentrated market as one with an HHI of over 1800. The FERC has determined that an HHI level in excess of 1800 as a market requiring closer examination.

Due to the proliferation of mergers and acquisitions in the natural gas industry over the last few years, the Commission has required that storage fields be grouped at the corporate level rather than at the individual pipeline or storage company level. This grouping of the companies at the corporate level concentrates the market share more than would be the case if the subsidiaries were viewed as independent entities. This practice

[9] The Department of Justice (DOJ) and Federal Trade Commission (FTC) have set forth some guidelines for the evaluation of market power with relation to market concentration. See Special Supplement, Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, Bureau of National Affairs Antitrust and Trade Regulations Report, Vol. 62, No. 1559, April 2, 1992, pp. 5-8.

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results in an increased market influence and market power, which can be quantified by a higher HHI.[10] The resulting increase in the market concentration measure may, in some cases, result in the FERC denying market-based rate authorization where it otherwise may not have done so.

Market Share and HHI Analysis

The Kimball 27 facility is WPS-ESI Gas Storage's only storage facility in this or any other market region. Consolidation of affiliated companies is therefore not an issue. The parent company, WPS Resources Corporation (WPSR), has several other subsidiaries including Wisconsin Public Service Corporation, (WPSC) which provides natural gas and electric power service to consumers in many parts of Wisconsin and the Upper Peninsula Power Co. (UPPC) which distributes electric service in northern Michigan. Both WPSC and UPPC are subject to cost based regulation of their respective State commissions. There are no other storage facilities owned or controlled by WPSR or its subsidiaries that would need to be grouped with Kimball 27 as part of this analysis.

The natural gas storage capabilities (total working gas and maximum daily deliverability) of the existing gas storage facilities in the relevant geographic market are shown in Attachment 3. Location of these facilities are in or near ANR's Northern Zone Market Area, see Attachments 1 and 2. Two large storage facilities, Union Gas and Consumers Gas Company's in western Ontario also were included in our analysis. IGC understands that the National Energy Board of Canada and the Ontario Energy Board both have adopted open access, non-discriminating rules for gas utilities in Canada similar to FERC Regulations.[11]

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[10] United States Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, 4 Trade Reg. Rep. (CCH) ¶ 13,104 at 20,570-571 (1992).

[11] Canada has been operating under open access unbundled natural gas transportation tariffs since 1985. Canada's federal pipelines (extending beyond the borders of a province) are regulated by the National Energy Board (the "N.E.B."). the N.E.B. stated the following with respect to its review of open access in 1996:

"A number of developments have combined to form a more integrated Canada/U.S. natural gas market. Regulatory approaches to rate structures on pipelines were harmonized when the U.S. Federal Energy Regulatory Commission ordered U.S. pipelines to adopt a straight-fixed variable toll methodology, which was already the norm in Canada. Simplification of export and import approval procedures on both sides of the border have worked to lessen the distinction between domestic and export markets. The unbundling of sales and merchant functions on both sides of the border, the increase in the numbers of buyers and sellers, the rise of an open spot market and the increasing use of futures markets all have contributed to an increasing harmonization of gas sales practices. These developments have also contributed to the creation of a highly-competitive continental gas market." (National Energy Board, Natural Gas Market Assessment: Canadian Natural Gas Ten Years After Deregulation (November, 1996) at p. viii).

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To summarize the results, Kimball 27's market share is under 1% and the area's HHI calculations are well below the 1,800 market concentration benchmark at 1,379 and 1,393 for working gas and deliverability, respectively. Thus the market share and HHI calculations demonstrates a lack of potential for market power abuse by the Kimball 27 storage facility.

At the provincial level, the Ontario Energy Board ("O.E.B.") regulates the two major local distribution companies (LDCs). All consumers in Ontario may choose their natural gas supplier who has access to the LDCs' delivery and load balancing services in accordance with tariffs and rates regulated by the OEB. The OEB has allowed the LDCs to sell storage services to ex-franchise customers at "market rates". In marking this, the OEB reviewed evidence indicating that the geographic market of potential competitive suppliers of storage services included storage operators in the United States, including the State of Michigan (see: O.E.B. Decision with Reasons in E.B.R.O. 495 (August, 1997)).

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Kimball 27 Market Share and HHI Analysis
Upper Midwest
Summary

Category	Working Gas (MMcf)	Daily Deliverability (MMcf/d)
Total Region		
Volume	1,115,324	24,608
HHI	1379	1393
Portion of Total Region		
Volume	3,049	100
Market Share	0.3%	0.4%

Table 1

Ease of Market Entry and Other Relevant Factors

The Commission has recognized that markets that are open to new entrants remain competitive, as any attempt to charge above-market rates necessarily will lure additional entrants into that market. The new entrants will need to charge rates lower than the existing above-market rates to entice customers away from the competing services within the market. With such lower rates, competition is only enhanced. The Commission has sought to bolster competition in the natural gas markets with Order No. 636 and similar orders that foster non-discriminatory access for storage service providers to these markets. This ease of entry into the applicable storage markets is evidenced by the numerous storage projects that have been approved within the last few years, as well as the numerous storage developments that have been announced in the Midwest region. Kimball 27 is located in an area where substantial gas production is occurring. The latest EIA monthly reports show Michigan monthly production has averaged 23.0 Mmcf over the past 5 years, see Attachment 4. Attachment 5 identifies new storage projects or expansions of existing storage facilities in this production region.

Another factor that further diminishes Kimball 27's potential market power is the natural gas capacity release market for storage that exists in the areas of interest. Due to the unbundling and the capacity release arrangements ushered in by Order No. 636 and the Commission's open access policies, Kimball 27 would be unable to control a storage

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market or obtain non-competitive prices by restricting the amount of storage in a particular market.

A final and probably the most significant factor that will limit any potential ability of Kimball 27 to exercise market power is the direct competition of other storage facilities in the relevant markets. As can be seen from Attachment 3, there are almost 100 storage facilities that currently exist in the region. Again, such competition will mitigate any possible market power that Kimball 27 might otherwise develop.

In sum, these factors make it virtually impossible for WPS-ESI Gas Storage to exercise market power at its Kimball facility in upper Midwest geographic markets.

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IV. Alternatives to Conventional Underground Storage

Traditionally, the primary function of gas storage has been to provide an additional supply of gas during periods of increased need. These periods of increased need might be for extended time periods, such as the winter period, and may be serviced by seasonal storage. They also could be for relatively brief periods, such as a day, and be serviced by a peaking storage service. Regardless of the period of time considered, there are now alternatives to conventional underground storage. As discussed below, the existence of these alternatives further limits WPS-ESI Gas Storage's ability to exercise market power through the Kimball Facility.

LNG Peaking Facilities

LNG Peaking facilities are the most common and cost-effective alternatives to conventional underground natural gas storage. A few of these facilities are located in Kimball's relevant market areas. (See Attachment 6.) Those facilities in aggregate offer approximately 9,201 MMcf of storage capacity and 46,759 MMcf/d of withdrawal capacity.

In the past, these types of facilities have been used primarily by LDCs to manage their peak day requirements. Propane must be vaporized and mixed with air prior to being injected into the supply system. These alternatives usually are stored in above-ground tanks, can be switched on almost instantaneously, have a high deliverability, frequently do not require any pipeline nominations, and can be located within the city-gate pipeline connection of an LDC. Based on these parameters, synthetic gas plants and propane-air facilities can compete directly with the conventional underground storage deliverability in the highest cost portion (or lowest load factor) of a weather sensitive gas supply portfolio. They, therefore, become viable alternatives to conventional underground storage for this portion of the storage market.

The presence of these alternatives limits the value of underground natural gas storage as it limits the rates that the underground storage providers can charge. This ultimately limits the market power of underground conventional natural gas storage facilities.

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Seasonal and Swing Gas Supply Contracts

Seasonal and swing gas supply contracts are two more alternatives to conventional underground storage. A seasonal gas supply contract is one that requires the buyer to purchase a specific amount of gas for an extended period of time, typically during the winter season. This type of contract would compete directly with the seasonal withdrawal pattern required of many depleted-reservoir type storage facilities. The swing gas supply contracts allow the buyer to purchase gas in varying amounts within some limitations. These types of contracts frequently give the buyer some specific options of varying the amount purchased during any month, week, day, or hour. Typically, the more flexibility the buyer is allowed, the higher the premium paid to the gas supplier. By carefully creating a diversified portfolio of several different seasonal and swing gas supply contracts, an end-user can mitigate, or even totally eliminate, its need for conventional storage during a particular season. The availability of these options, as a substitute for underground storage, prevents the development of market power by conventional underground storage facilities such as the Kimball facility.

Balancing and No-Notice Service

Balancing and no-notice services offered by pipelines are additional alternatives to conventional underground storage. With the advent of Order No. 636, pipelines have found that line-pack, in excess of any no-notice requirements, can be sold as balancing services. Since conventional storage service historically has been used as insurance against any operational imbalance penalties, the amount of conventional storage service can be reduced proportionately to the amount of balancing service obtained. Also, since these balancing and no-notice services use line-pack, as well as other sources of gas, they are able to respond to daily, and even hourly, variations of gas takes. This service competes directly with Kimball and those of other high deliverability storage facilities. Such direct competition serves to reduce further the market power of conventional underground storage facilities such as the Kimball 27 facility.

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V. Affiliate/Cross Subsidization Issues

WPS Resources Corporation is a holding company with several operating affiliates:

Wisconsin Public Service Corp. regulated Wisconsin electric and gas utility

Upper Peninsula Power Co. regulated Michigan electric power provider

WPS Resources Capital Corp.:

WPS Energy Services, Inc.

WPS Power Development, Inc.

IGC believes that the existing regulatory frame work provides sufficient protection against revenue shifting between WPS Resources Corporation's regulated utilities and WPS-ESI Gas Storage. The FERC's goal to prevent unduly discriminatory behavior reflects the Commissions statutory responsibility under the NGA and FPA. Both gas and electric standards of conduct rely on similar mechanisms to prevent undue preferential or discriminatory actions. See for example, for gas, the series of orders issued in Docket RM 87-5 issued June 14, 1988 (Order 497)[12], also see order 566 issued June 15, 1994 at Docket RM94-6[13] and order 599 issued August 10, 1998 at Docket RM98-7. For the Electric Power industry, see order No.889[14], FR21737 (1996) and Order No. 888, FR61 FR 21540 (1996).

[12] 53 FR 22139;
[13] 59 FR 32885
[14] 63 FR 43075

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VI. Conclusions

This analysis shows that WPS-ESI Gas Storage's Kimball Storage facility would not be able to exert market power in the relevant market regions in which it intends to provide storage services. The Kimball 27 facility has been providing intrastate storage service since 2000, and is extremely small in relation to other storage service providers in the relevant market area. The storage markets evaluated herein are unconcentrated.

Most of the potential competing storage operators are subject to either federal or state jurisdiction. In order to compete, Kimball 27 would have to offer service at rates equal to or less than the cost of service rates.

It is plain that Kimball 27, with its minor market share in an unconcentrated market, will be unable to increase prices for its storage service by a significant amount for any significant period of time. Kimball 27 also will not be able to withhold or restrict services without otherwise losing customers to existing or future storage operators.

For all of these reasons, IGC respectfully submits that WPS-ESI Gas Storage, LLC should be eligible for Commission authorized market-based rate contracting under the NGA to the same extent and in the same matter that intrastate pipelines are authorized to engage in such activities, transactions and services under Part 284, subparts C and D of the Commission's regulations.

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VII. Qualifications

General Qualifications

International Gas Consulting, Inc. (IGC) specializes in the economic and technical evaluation, design, and project management of natural gas processing, compression, liquefaction, transportation, distribution, and storage facilities. IGC has worked with a wide variety of clients in the United States, Canada, England and other European countries. The company offers a full range of services for the planning, engineering, design, project management, commissioning, and operation of projects of varying magnitude and complexity.

Underground Gas Storage

IGC is especially experienced in the design, development, and operation of underground gas storage, including preliminary feasibility and economic evaluation studies and regulatory analysis. IGC's professional staff has worked with depleted oil and gas fields, salt caverns, aquifers, and LNG plant operations. IGC can assist clients in locating, evaluating, or leasing existing or available storage in relation to the client's present or future requirements. IGC has worked on over 80% of the salt caverns and nearly 66% of all underground natural gas storage facilities currently in operation in the U.S. IGC also has extensive experience in economically evaluating and technically supporting scores of proposed underground gas and LNG storage projects worldwide.

IGC's experience not only involves development and conversion of conventional natural gas storage caverns in domal salt formations, but also includes the study and development of natural gas storage in bedded salt formations. IGC constructed the first bedded salt cavern storage facility in operation in the U.S. designed specifically for natural gas storage.

IGC also has performed technical feasibility studies for the proposed development and conversion of similar facilities in Oklahoma, Kansas, Michigan, Pennsylvania, New York, and Virginia. For these purposes, IGC utilizes computer simulation technology and recently developed techniques and proprietary equipment for such projects.

IGC's most recent international experience includes projects in Central and South America, Canada, Australia and the Middle East. In addition, IGC has assisted in the re-

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commissioning of salt cavern natural gas storage in Armenia and a gas transmission system in the Republic of Georgia.

Management Consulting

IGC is a recognized industry leader in management consulting services to support companies in properly utilizing storage and market planning in today's regulatory environment. IGC assists companies in evaluating the economic costs and benefits of storage along with identifying potential gas storage sites and market opportunities to meet the client's objectives. IGC's professional gas industry consultants specialize in gas supply planning, financial, market and strategic analysis, and regulatory filing assistance.

Gas Supply Planning

IGC assists LDCs, electric generators, and gas suppliers with their gas supply planning needs by developing user-friendly microcomputer based models to demonstrate the impact of utilizing storage as a supply tool. For its gas supplier clients, IGC takes baseline data provided by the client and determines how variables such as firm contracts, interruptible contracts, arbitrage, and swing sales interact with storage to create value-added services and maximize revenue/profit potential. For its LDC and UEG clients, IGC analyzes existing contracts and transportation protocols to fully optimize the daily gas send out and minimize gas supply costs.

Financial Analysis

In today's market environment, it is important to understand the financial implications of a proposed project or strategy. IGC maintains a staff of financial analysts that specialize in developing pro-forma income statements, detailed project budgets, and cash flow projections. These analysts not only provide financial analysis, but also have a thorough understanding of the nuances in the natural gas industry, particularly storage. They provide the insight necessary to allow clients to make sound and informed economic decisions.

Regulatory Consulting

IGC's professional regulatory consultants are well versed in both state and federal regulations relating to the natural gas industry. IGC constantly updates its regulatory information and performs ongoing regulatory research. This information is provided to

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its clients to assist in the submission of various Federal Regulatory Commission (Commission) filings such as Section 7(c) filings; Section 7 and Section 311 Blanket Applications; tariffs and Precedent Agreements; and Cost of Service studies. IGC is also experienced in State Utility Commission filings, having assisted numerous clients in various states in the preparation of service applications, cost of service analyses, and tariffs.

IGC's Staff and Experience

IGC maintains a staff of professionals that have extensive experience in the evaluation, study, design, construction, project management, operation, and maintenance of pipelines, compressor stations, measurement facilities, gas dehydration plants, gas, gas liquids, and LPG processing facilities, LNG processing and storage facilities, and underground gas storage reservoirs. IGC makes extensive use of computer systems and maintains both commercial and internally-written software programs for gas reserve evaluations, for the analysis of underground gas storage reservoirs and gas supply systems, and for the design and project management of gas processing, supply, compression, transportation, and storage projects. Because of the company's historical association with operating companies, IGC has experience with the practical operating and maintenance aspects of gas, gas liquids, and LNG processing facilities.

Staff Participation in Industry

IGC's staff are active in industry forums, regularly speak at technical conferences, and have written numerous papers related to gas supply planning, peak shaving, and storage. Three members of IGC's staff have acted as the chairman of the American Gas Association's ("AGA") Underground Storage Committee and two of these personnel were co-founders of this Committee. Two members of IGC's staff also have served on the Pipeline Research Institute's Underground Storage Research Committee with one of these personnel having served as the Vice Chairman while the other represented the United States on the International Gas Union's Production, Treatment, and Underground Storage of Natural Gas Committee.

Company's History

The company was founded in 1984 by the Texas Gas Transmission Corporation as a non-regulated affiliate and was later sold in 1989. Originally called TXG Engineering, the

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company changed its name to International Gas Consulting, Inc. in early 1991 to better reflect the primarily consulting nature of the company's work.

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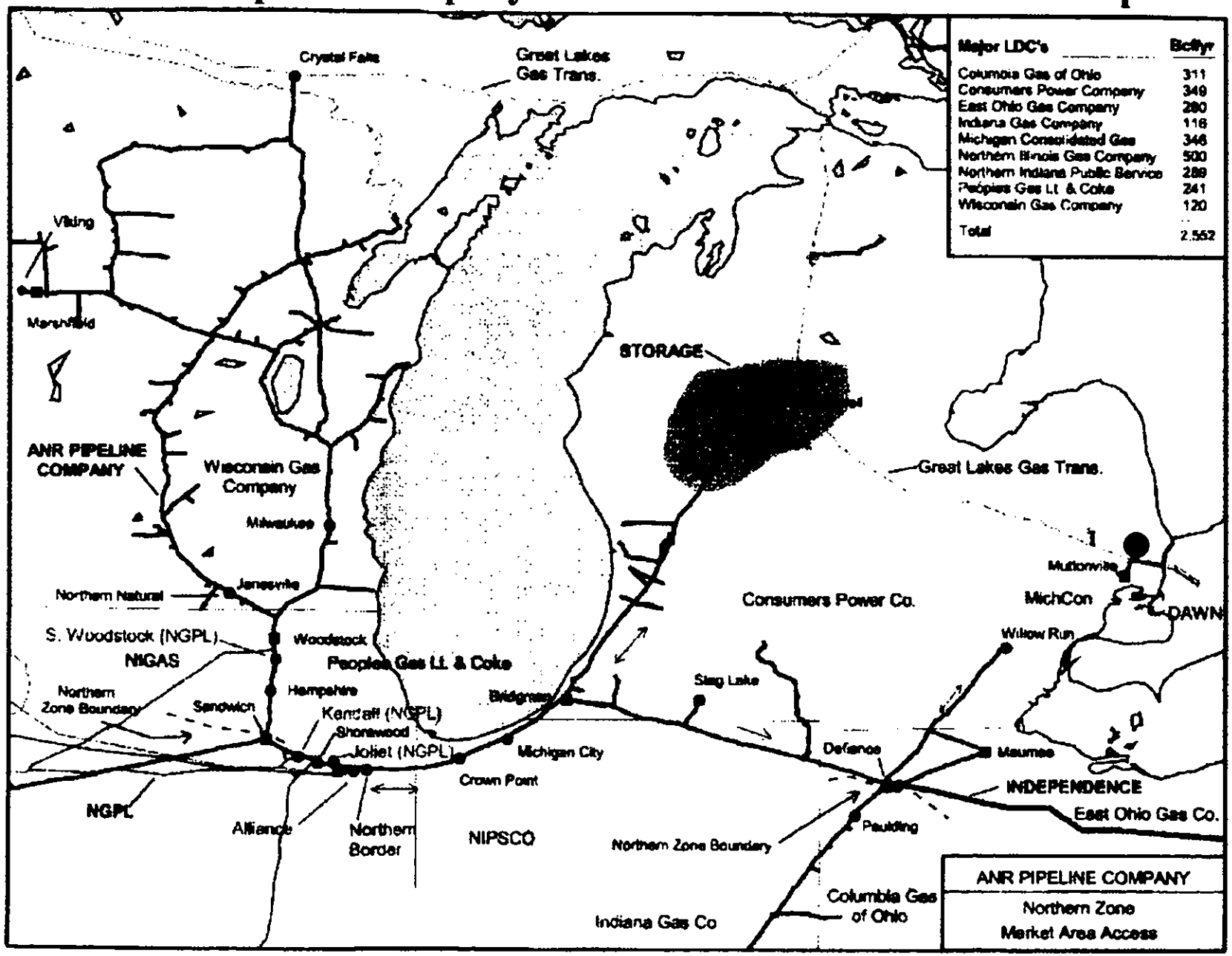
Attachments

Attachment 1

ANR Pipeline Company's Northern Zone Market Area Map



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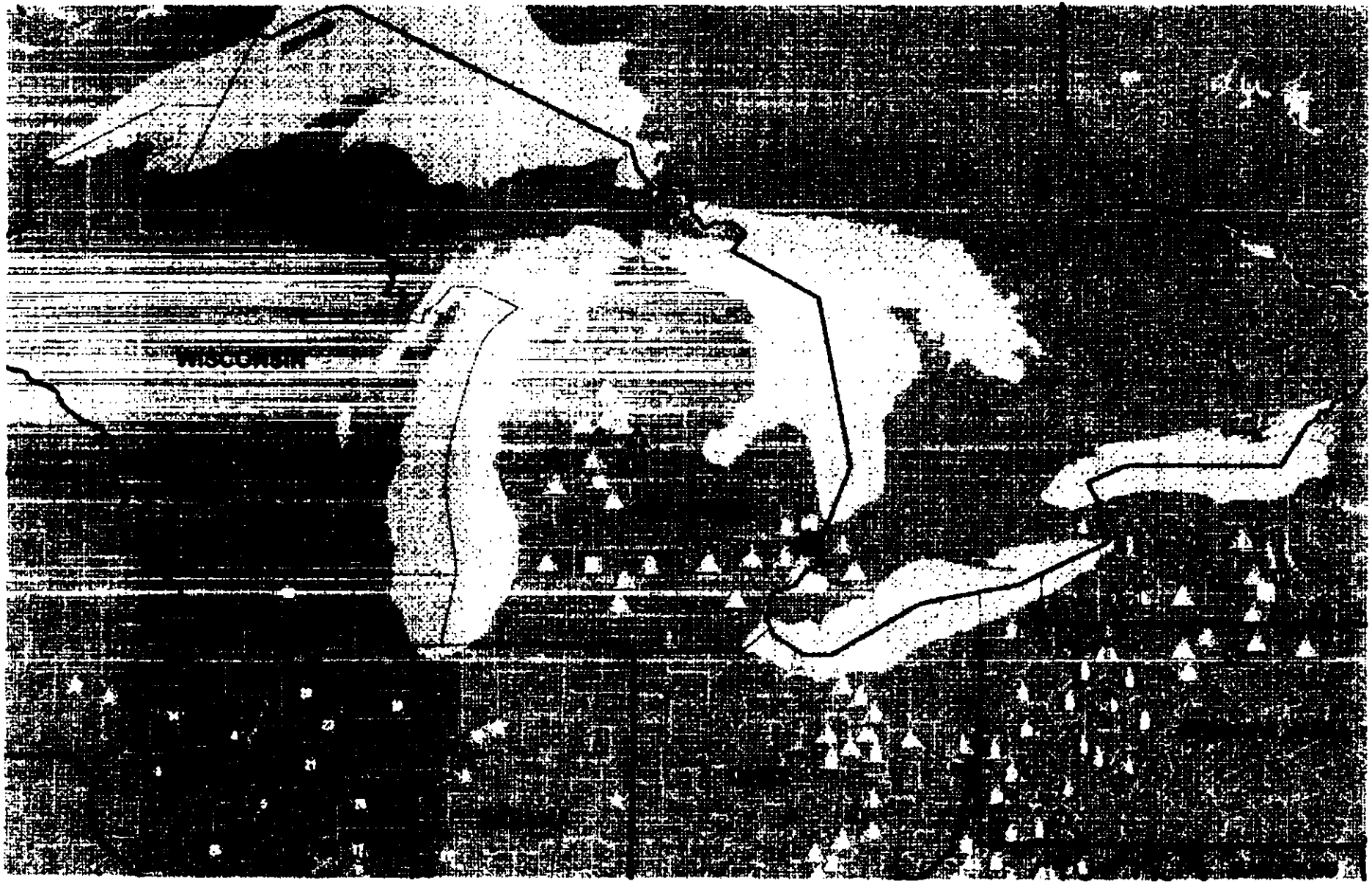
Attachment 2

Natural Gas Storage Fields in the Upper Midwest



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WPS-ESI Gas Storage, LLC/Kimball 27 Market Share and HHI Analysis
Storage Fields in Operation in the Relevant Market Area
As of 2004

State	Corporate	Company	Field	Year Activate	Stor Type	Total Working Gas (MMcf)	Market Share	HHI	Max Deliv. (MMcf/d)	Market Share	HHI
MI	Aquila	Michigan Gas Utilities Co.	Cortright	1976	Dep Res	600			30		
MI	Aquila	Michigan Gas Utilities Co.	Lee 3	1992	Dep Res	1,500			30		
MI	Aquila	Michigan Gas Utilities Co.	Lee 8	1995	Dep Res	1,700			38		
MI	Aquila	Michigan Gas Utilities Co.	Partello/Anderson	1971	Dep Res	1,600			25		
		TOTAL AQUILA				**5,400**	**0.5%**	**0**	**123**	**0.5%**	**0**
MI	CMS Energy	Consumers Power Company	Cranberry Lake	1948	Dep Res	9,700			120		
MI	CMS Energy	Consumers Power Company	Four Corners	1972	Dep Res Reef	2,390			60		
MI	CMS Energy	Consumers Power Company	Hessen	1976	Dep Res Reef	10,070			260		
MI	CMS Energy	Consumers Power Company	Ira	1961	Dep Res Reef	3,250			360		
MI	CMS Energy	Consumers Power Company	Lenox	1965	Dep Res Reef	1,500			160		
MI	CMS Energy	Consumers Power Company	Lyon 34	1992	Dep Res Reef	700			85		
MI	CMS Energy	Consumers Power Company	Northville Reef	1968	Dep Res Reef	700			195		
MI	CMS Energy	Consumers Power Company	Northville-Trenton	1968	Dep Res	0			0		
MI	CMS Energy	Consumers Power Company	Overisel	1960	Dep Res	22,000			260		
MI	CMS Energy	Consumers Power Company	Puttygut	1971	Dep Res Reef	7,020			250		
MI	CMS Energy	Consumers Power Company	Ray	1966	Dep Res Reef	42,500			1,350		
MI	CMS Energy	Consumers Power Company	Riverside	1952	Dep Res	1,500			5		
MI	CMS Energy	Consumers Power Company	Salem	1963	Dep Res	12,000			130		
MI	CMS Energy	Consumers Power Company	Swan Creek	1972	Dep Res Reef	420			10		
MI	CMS Energy	Consumers Power Company	Winterfield	1947	Dep Res	22,800			260		
		TOTAL CMS ENERGY				**136,550**	**12.2%**	**150**	**3,505**	**14.2%**	**203**
MI	DTE Energy	Michigan Consolidated Gas Co.	Belle River Mills	1965	Dep Res Reef	46,944			1,700		
MI	DTE Energy	Michigan Consolidated Gas Co.	Columbus	1972	Dep Res Reef	15,000			450		
MI	DTE Energy	Michigan Consolidated Gas Co.	New Haven	1961	Dep Res	0			0		
MI	DTE Energy	Michigan Consolidated Gas Co.	Six Lakes	1953	Dep Res	40,000			500		

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Attachment 3

WPS-ESI Gas Storage, LLC/Kimball 27 Market Share and HHI Analysis
Storage Fields in Operation in the Relevant Market Area
As of 2004

State	Corporate	Company	Field	Year Activate	Stor Type	Total Working Gas (MMcf)	Market Share	HHI	Max Deliv. (MMcf/d)	Market Share	HHI
MI	DTE Energy	Michigan Consolidated Gas Co.	W. Columbus	1973	Dep Res Reef	22,000			650		
MI	DTE Energy	Michigan Consolidated Gas Co.	Washington 28	1990	Dep Res Reef	9,725			275		
MI	El Paso/DTE Energy	Blue Lake Gas Storage (ANR/DTE Energy)	Blue Lake	1993	Dep Res Reef	0 (1)			0 (1)		
MI	DTE Energy	Washington 10 Storage Co	Washington 10	1999	Dep Res	42,500			450		
		TOTAL DTE ENERGY				**176,169**	**15.8%**	**249**	**4,025**	**16.4%**	**268**
Ontario	Duke	Union Gas Co., Ltd.	Bentpath	1974	Dep Res	4,419			67		
Ontario	Duke	Union Gas Co., Ltd.	Bentpath, East	1999	Dep Res	4,723			nr		
Ontario	Duke	Union Gas Co., Ltd.	Bickford	1972	Dep Res	20,309			286		
Ontario	Duke	Union Gas Co., Ltd.	Bluewater	2000	Dep Res	1,828			nr		
Ontario	Duke	Union Gas Co., Ltd.	Booth Creek	1999	Dep Res	1,839			nr		
Ontario	Duke	Union Gas Co., Ltd.	Dawn 156	1962	Dep Res	26,599			371		
Ontario	Duke	Union Gas Co., Ltd.	Dawn 167	1976	Dep Res	4,677			57		
Ontario	Duke	Union Gas Co., Ltd.	Dawn 47-49	1942	Dep Res	3,908			59		
Ontario	Duke	Union Gas Co., Ltd.	Dawn 59-85	1943	Dep Res	5,602			750		
Ontario	Duke	Union Gas Co., Ltd.	Dow Sarnia Block	1992	Dep Res	6,143			70		
Ontario	Duke	Union Gas Co., Ltd.	Edys Mills	1993	Dep Res	2,065			26		
Ontario	Duke	Union Gas Co., Ltd.	Enniskillen	1989	Dep Res	3,357			50		
Ontario	Duke	Union Gas Co., Ltd.	Mandaumin	2000	Dep Res	4,201			nr		
Ontario	Duke	Union Gas Co., Ltd.	Oil City	2000	Dep Res	1,723			nr		
Ontario	Duke	Union Gas Co., Ltd.	Oil Springs East	1990	Dep Res	3,502			62		
Ontario	Duke	Union Gas Co., Ltd.	Payne	1957	Dep Res	22,437			337		
Ontario	Duke	Union Gas Co., Ltd.	Rosedale	1975	Dep Res	2,652			40		
Ontario	Duke	Union Gas Co., Ltd.	Sombra	1990	Dep Res	2,372			35		
Ontario	Duke	Union Gas Co., Ltd.	Terminus	1975	Dep Res	10,498			147		
Ontario	Duke	Union Gas Co., Ltd.	Waubuno	1960	Dep Res	8,662			130		
		TOTAL DUKE				**141,516**	**12.7%**	**161**	**2,487**	**10.1%**	**102**
MI	El Paso	ANR Pipeline Co.	Austin	1941	Dep Res	7,000			800		
MI	El Paso	ANR Pipeline Co.	Capac	1978	Dep Res	13,600			270		
MI	El Paso	ANR Pipeline Co.	Central Charlton	1982	Dep Res Reef	12,400			220		
MI	El Paso	ANR Pipeline Co.	Muttonville	1975	Dep Res Reef	8,200			400		

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WPS-ESI Gas Storage, LLC/Kimball 27 Market Share and HHI Analysis
Storage Fields in Operation in the Relevant Market Area
As of 2004

State	Corporate	Company	Field	Year Activate	Stor Type	Total Working Gas (MMcf)	Market Share	HHI	Max Deliv. (MMcf/d)	Market Share	HHI
MI	El Paso	ANR Pipeline Co.	South Chester 15	1980	Dep Res Reef	12,800			212		
MI	El Paso	ANR Pipeline Co.	Winfield	1951	Dep Res	5,800			92		
MI	El Paso	ANR Pipeline Co. (Mid-Michigan)	Goodwell	1948	Dep Res	19,300			480		
MI	El Paso	ANR Pipeline Co. (Mid-Michigan)	Lincoln, Freeman	1950	Dep Res	13,000			385		
MI	El Paso	ANR Pipeline Co. (Mid-Michigan)	Loreed	1963	Dep Res	22,000			500		
MI	El Paso	ANR Pipeline Co. (Mid-Michigan)	Reed City	1947	Dep Res	12,200			330		
MI	El Paso	ANR Storage Company	Coldsprings 12	1980	Dep Res Reef	25,257			300		
MI	El Paso	ANR Storage Company	Coldsprings 31	1981	Dep Res Reef	4,555			250		
MI	El Paso	ANR Storage Company	Excelsior 6	1981	Dep Res Reef	10,810			250		
MI	El Paso	ANR Storage Company	Rapid River 35	1980	Dep Res Reef	15,051			250		
MI	El Paso	Mid Michigan	Coldwater	1970	Dep Res	0			0		
MI	El Paso	Mid Michigan	Croton	1957	Dep Res	0			0		
MI	El Paso	Mid Michigan	North Hamilton	1960	Dep Res	0			0		
MI	El Paso	Mid Michigan	Norwich	1951	Dep Res	0			0		
MI	El Paso	Mid Michigan	Orient	1951	Dep Res	0			0		
MI	El Paso/DTE Energy	Blue Lake Gas Storage (ANR/DTE Energy)	Blue Lake	1993	Dep Res Reef	47,086 (1)			700 (1)		
MI	El Paso/SEMCO	Eaton Rapids Gas Storage (ANR/SEMCO)	Eaton Rapids 36	1990	Dep Res Reef	13,534 (2)			160 (2)		
		TOTAL EL PASO				**242,593**	**21.8%**	**473**	**5,599**	**22.8%**	**518**
Ontario	Enbridge	Consumers Gas	Black Creek	1997	Dep Res	911			11 (3)		
Ontario	Enbridge	Consumers Gas	Corunna	1964	Dep Res	4,469			55 (3)		
Ontario	Enbridge	Consumers Gas	Coventy	1997	Dep Res	3,480			1		
Ontario	Enbridge	Consumers Gas	Crowland	1962	Dep Res	290			35		
Ontario	Enbridge	Consumers Gas	Dow Moore	1988	Dep Res	26,424			285		
Ontario	Enbridge	Consumers Gas	Ladysmith	1999	Dep Res	6,496			80 (3)		
Ontario	Enbridge	Consumers Gas	Mid-Kimball-Colvi	1965	Dep Res	20,820			635		
Ontario	Enbridge	Consumers Gas	Seckerton	1964	Dep Res	11,198			120		
Ontario	Enbridge	Consumers Gas	South-Kimball-Col	1965	Dep Res	14,424			178 (3)		
Ontario	Enbridge	Consumers Gas	Wilkesport	1978	Dep Res	7,804			100		
		TOTAL ENBRIDGE				**96,316**	**8.6%**	**75**	**1,500**	**6.1%**	**37**

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WPS-ESI Gas Storage, LLC/Kimball 27 Market Share and HHI Analysis
Storage Fields in Operation in the Relevant Market Area
As of 2004

State	Corporate	Company	Field	Year Activate	Stor Type	Total Working Gas (MMcf)	Market Share	HHI	Max Deliv. (MMcf/d)	Market Share	HHI
IA	Kinder Morgan	Natural Gas Pipeline Co. of America	Cairo Galesville	1974	Aquifer	4,400			60		
IA	Kinder Morgan	Natural Gas Pipeline Co. of America	Cairo Mt. Simon	1970	Aquifer	12,200			170		
IA	Kinder Morgan	Natural Gas Pipeline Co. of America	Cairo St. Peter	1962	Aquifer	8,800			150		
IA	Kinder Morgan	Natural Gas Pipeline Co. of America	Columbus City Mt. Simon	1971	Aquifer	10,400			120		
IA	Kinder Morgan	Natural Gas Pipeline Co. of America	Columbus City St. Peter	1969	Aquifer	2,900			50		
IA	Kinder Morgan	Natural Gas Pipeline Co. of America	Keota	1963	Aquifer	2,750			50		
IL	Kinder Morgan	Natural Gas Pipeline Co. of America	Cooks Mills	1957	Dep Res	3,400			150		
IL	Kinder Morgan	Natural Gas Pipeline Co. of America	Herscher	1953	Aquifer	10,750			1,100		
IL	Kinder Morgan	Natural Gas Pipeline Co. of America	Herscher Mt. Simon	1957	Aquifer	12,000			240		
IL	Kinder Morgan	Natural Gas Pipeline Co. of America	Herscher Northwest	1959	Aquifer	2,000			65		
IL	Kinder Morgan	Natural Gas Pipeline Co. of America	Loudon	1968	Dep Res	40,000			510		
		TOTAL KINDER MORGAN				**109,680**	**9.8%**	**97**	**2,665**	**10.8%**	**117**
IL	Nicor	Northern Illinois Gas Co.	Ancona-Garfield	1963	Aquifer	59,100			850		
IL	Nicor	Northern Illinois Gas Co.	Hudson	1970	Aquifer	10,700			175		
IL	Nicor	Northern Illinois Gas Co.	Lake Bloomington	1969	Aquifer	7,900			150		
IL	Nicor	Northern Illinois Gas Co.	Lexington	1971	Aquifer	7,500			150		
IL	Nicor	Northern Illinois Gas Co.	Pecatonica	1967	Aquifer	1,350			75		
IL	Nicor	Northern Illinois Gas Co.	Pontiac	1976	Aquifer	8,200			200		
IL	Nicor	Northern Illinois Gas Co.	Pontiac-Mt. Simon	1966	Aquifer	5,100			100		
IL	Nicor	Northern Illinois Gas Co.	Troy Grove	1958	Aquifer	43,100			1,100		
		TOTAL NICOR				**142,950**	**12.8%**	**164**	**2,800**	**11.4%**	**129**
IN	NiSource	Northern Indiana Public Service	Royal Center (Mt. Simon)	1968	Aquifer	2,188			100		
IN	NiSource	Northern Indiana Public Service	Royal Center (Trenton)	1962	Aquifer	4,475			120		
		TOTAL NISOURCE				**6,663**	**0.6%**	**0**	**220**	**0.9%**	**1**
IL	People's Energy	The People Gas Light and Coke Co.	Manlove	1964	Aquifer	28,000	**2.5%**	**6**	920	**3.7%**	**14**

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WPS-ESI Gas Storage, LLC/Kimball 27 Market Share and HHI Analysis
Storage Fields in Operation in the Relevant Market Area
As of 2004

State	Corporate	Company	Field	Year Activate	Star Type	Total Working Gas (MMcf)	Market Share	HHI	Max Deliv. (MMcf/d)	Market Share	HHI
MI	El Paso/SEMCO	Eaton Rapids Gas Storage (ANR/SEMCO)	Eaton Rapids 36	1990	Dep Res Reef	0 (2)			0 (2)		
MI	SEMCO	Southeastern Michigan Gas Co.	Collins	1981	Dep Res Reef	1,381			25		
MI	SEMCO	Southeastern Michigan Gas Co.	Lacey	1973	Bed Salt	208			25		
MI	SEMCO	Southeastern Michigan Gas Co.	Lee 11 Field	1988	Dep Res Reef	560			7		
MI	SEMCO	Southeastern Michigan Gas Co.	Lee 2 Field	1981	Dep Res Reef	516			7		
MI	SEMCO	Southeastern Michigan Gas Co.	Morton (17-21A)	1961	Bed Salt	2,165			60		
MI	SEMCO	Southeastern Michigan Gas Co.	Morton 16	1960	Bed Salt	185			60		
		TOTAL SEMCO				**5,015**	**0.4%**	**0**	**184**	**0.7%**	**1**
IL	Southern Union	Southwest Gas Storage Co. (PEPL)	Waverly	1954	Aquifer	4,139			70		
MI	Southern Union	Southwest Gas Storage Co. (PEPL)	Howell	1962	Dep Res	16,464			360		
		TOTAL SOUTHERN UNION				**20,603**	**1.8%**	**3**	**430**	**1.7%**	**3**
IN	U.S. Energy Systems	Midwest Gas Storage	Carbon	1990	Aquifer	900	0.1%	0	50	0.2%	0
MI	WPS	WPS Energy Services	Kimball 27	2001	Dep Res	3,049	0.3%	0	100	0.4%	0
		GRAND TOTAL				**1,115,324**	**100.0%**	**1,379**	**24,608**	**100.0%**	**1,393**

(1) Blue Lake 18A: although the ownership % is ANR=75%, DTE=25%, Blue Lake Storage has only one customer--ANR Pipeline Co--so all of the capacity has been allocated to ANR

(2) Eaton Rapids 36: although the ownership % is ANR=50%, SEMCO=50%, the field appears to be controlled by ANR Pipeline so all of the capacity has been allocated to ANR

(3) Originally listed as "nr"; adjusted on a pro-rated basis to match the total capacity listed by Enbridge on their website.

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WPS-ESI Gas Storage LLC/Kimball 27 Market Power Analysis Attachment 4
Michigan Gas Production 1998-2003

Date	Michigan Natural Gas Marketed Production (MMcf)	U.S. Natural Gas Marketed Production (MMcf)	Michigan's % of Total U.S. Marketed Production
Jan-1998	28,460	1,740,662	1.6%
Feb-1998	8,278	1,549,369	0.5%
Mar-1998	30,780	1,729,596	1.8%
Apr-1998	17,823	1,670,166	1.1%
May-1998	29,198	1,731,903	1.7%
Jun-1998	26,958	1,660,137	1.6%
Jul-1998	26,171	1,690,820	1.5%
Aug-1998	18,896	1,702,581	1.1%
Sep-1998	28,491	1,545,614	1.8%
Oct-1998	21,816	1,667,795	1.3%
Nov-1998	12,013	1,615,892	0.7%
Dec-1998	29,193	1,656,813	1.8%
Jan-1999	20,743	1,709,279	1.2%
Feb-1999	8,426	1,540,789	0.5%
Mar-1999	40,112	1,705,658	2.4%
Apr-1999	22,574	1,629,521	1.4%
May-1999	25,240	1,660,154	1.5%
Jun-1999	25,084	1,620,577	1.5%
Jul-1999	23,988	1,667,637	1.4%
Aug-1999	19,154	1,664,085	1.2%
Sep-1999	24,652	1,610,663	1.5%
Oct-1999	13,540	1,669,079	0.8%
Nov-1999	21,676	1,640,813	1.3%
Dec-1999	32,175	1,686,596	1.9%
Jan-2000	22,586	1,708,636	1.3%
Feb-2000	15,849	1,573,807	1.0%
Mar-2000	33,893	1,722,304	2.0%
Apr-2000	12,551	1,628,474	0.8%
May-2000	26,709	1,691,817	1.6%
Jun-2000	17,328	1,651,376	1.0%
Jul-2000	30,404	1,705,843	1.8%
Aug-2000	33,002	1,718,738	1.9%
Sep-2000	24,743	1,663,224	1.5%
Oct-2000	38,453	1,749,979	2.2%
Nov-2000	25,882	1,664,842	1.6%
Dec-2000	15,156	1,718,470	0.9%
Jan-2001	27,356	1,766,240	1.5%
Feb-2001	13,501	1,588,190	0.9%
Mar-2001	29,663	1,797,070	1.7%
Apr-2001	20,073	1,705,270	1.2%
May-2001	35,940	1,762,339	2.0%
Jun-2001	17,781	1,703,182	1.0%

Source: EIA's "Natural Gas Monthly," January 2004

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WPS-ESI Gas Storage LLC/Kimball 27 Market Power Analysis Attachment 4
Michigan Gas Production 1998-2003

Date	Michigan Natural Gas Marketed Production (MMcf)	U.S. Natural Gas Marketed Production (MMcf)	Michigan's % of Total U.S. Marketed Production
Jul-2001	19,992	1,730,477	1.2%
Aug-2001	26,811	1,741,997	1.5%
Sep-2001	14,352	1,679,177	0.9%
Oct-2001	29,330	1,755,393	1.7%
Nov-2001	24,137	1,676,363	1.4%
Dec-2001	16,099	1,724,715	0.9%
Jan-2002	34,593	1,698,291	2.0%
Feb-2002	13,357	1,516,890	0.9%
Mar-2002	31,113	1,703,826	1.8%
Apr-2002	17,564	1,633,870	1.1%
May-2002	29,128	1,706,306	1.7%
Jun-2002	17,707	1,662,741	1.1%
Jul-2002	34,483	1,720,288	2.0%
Aug-2002	13,999	1,702,437	0.8%
Sep-2002	18,812	1,586,025	1.2%
Oct-2002	29,817	1,628,816	1.8%
Nov-2002	16,082	1,685,430	1.0%
Dec-2002	18,708	1,723,987	1.1%
Jan-2003	30,488	1,756,277	1.7%
Feb-2003	15,229	1,575,046	1.0%
Mar-2003	22,663	1,768,497	1.3%
Apr-2003	15,026	1,678,485	0.9%
May-2003	22,584	1,728,184	1.3%
Jun-2003	17,416	1,663,910	1.0%
Jul-2003	21,166	1,696,890	1.2%
Aug-2003	18,560	1,707,295	1.1%
Sep-2003		1,698,000	
Minimum Month	8,278	1,516,890	
Maximum Month	40,112	1,797,070	
Average Month	23,022	1,678,777	

Source: EIA's "Natural Gas Monthly," January 2004

Planned/Announced Upper Midwest U.S. Gas Storage and LNG Development Projects

Attachment 5

Project Name	Corporate	Developer/Operator	County	Reservoir Type	Status	Phase	Capacity (Bcf) Total	Working	Rates(MMcf/d) Delivery	Injection	Est. Date
ILLINOIS											
Mt. Simon		Illinois Power	Warren	Aquifer	S		11.3	3.6	75	20	
INDIANA											
Blackhawk	ProGas	ProGas (Texas) (Hamilton Natural Gas)	Vigo	Mixed aquifer & depleted oil	S		5.3	3.1	30		
Richland City		Robertson Engineering	Spencer	Aquifer	S		1.0	0.8	1.5	2	
Stendal East	ProGas	Progas	Pike	Depleted reservoir	S		0.9	0.5	25		
MICHIGAN											
Bluewater Gas Storage	Sempra	Sempra	St. Clair	Depleted reservoir	S			27.0	700		Apr-04
Grands Lacs		CMS	St. Clair	Bedded Salt	S			3.0	150		
Kalkaska 30		CMS Energy	Kalkaska	Depleted Reservoir	S		22.0	17.0	200	150	
South Chester 12		*CMS Energy*	*Otsego*	Depleted Reservoir	*I*		12.4	9.0	150		
Totals							**52.9**	**64.0**	**1,331.5**	**172.0**	

Legend:

C = In Construction
I = Inactive
P = Planned
S = Speculation
N/A = Not Available
Exp = Expansion
T = Terminated

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MIDWEST LNG PEAKING FACILITIES

State	Facility Name	Operator	Location	Facility Type	LNG Production Capacity 000 Gals/Day	LNG Production Capacity Cubic M/D	LNG Production Capacity Mcf/D	Withdrawal (Mcf/d) Mcf/D	Storage Capacity Capacity MMcf	No. Tanks	Inservice Date	Status
IL	Fisher	Peoples Gas	Fisher	Peaking	112.76	458	9,998	300,000	2,000	1	1973	Active
IN	Beech Grove	Citizens Gas	Beech Grove	Peaking	62.65	237	5,000	180,000	1,000	1	1971	Active
IN	NW Indianapolis	Citizens Gas	Indianapolis	Peaking	93.97	356	7,500	180,000	1,000	1	1991	Active
IN	Kokomo	Kokomo Gas & Fuel	Kokomo	Peaking	30.38	115	2,510	30,000	400	1	1973	Active
IN	LaPorte	NIPSCO	LaPorte	Peaking	250.58	949	20,000	400,000	4,000	2	1974	Active
WI	Eau Claire	Northern States Power	Eau Claire	Peaking	12.53	47	1,000	21,000	285	1	1969	Active
WI	LaCrosse	Northern States Power	LaCrosse	Satellite LNG			0	21,000	250	1	1969	Active
WI	Rice Lake	Wisconsin Gas Co	Rice Lake	Satellite LNG			0	5,000	16	4	1975	Active
WI	Oak Creek	Wisconsin Electric - Gas	Oak Creek	Peaking	9.25	35	750	60,000	250	4	1965	Active
				Region Totals:			**46,759**	**1,197,000**	**9,201**			

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EXHIBIT Z-6
(2 pages attached)

Draft Notice of Petition for Rate Approval

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

WPS-ESI Gas Storage, LLC) Docket No. CP04-___-000

NOTICE OF APPLICATION FOR SECTION 284.224 BLANKET CERTIFICATE

(March __, 2004)

Take notice that on March 11, 2004, WPS-ESI Gas Storage, LLC filed an application, pursuant to Section 284.224 of the Commission's regulations, as a Hinshaw natural gas storage entity in Michigan not subject to Commission jurisdiction by reason of section 1(c) of the Natural Gas Act ("NGA"). WPS-ESI Gas Storage requests a blanket certificate authorizing it to engage in the transportation or sale of natural gas that is subject to the Commission's NGA jurisdiction to the same extent that and in the same manner that intrastate pipelines are authorized to engage in such activities, transactions and services by Part 284, subparts C and D of the regulations. WPS-ESI Gas Storage also applies for authorization to charge market-based, firm and interruptible rates for such services because it asserts that it lacks the necessary market power in performing gas storage services to be able to charge rates in excess of amounts that its competitors charge for comparable storage services in the relevant market (or which that market would pay for alternatives for storage) for a significant period of time.

WPS-ESI Gas Storage explains that it owns and operates the Kimball 27 Gas Storage Field, which is an underground Niagaran gas reservoir storage facility with a working gas capacity of 3.049 Bcf that is located in St. Clair County, Michigan. WPS-ESI Gas Storage presently provides storage services at Kimball 27 subject to regulation by the Michigan Public Service Commission.

WPS-ESI Gas Storage states that a copy of this filing has been served on the interested State Commission.

Any person desiring to intervene or to protest this filing should file with the Federal Energy Regulatory Commission, 888 First Street, N.E., Washington, D.C. 20426, in accordance with Rules 211 and 214 of the Commission's Rules of Practice and Procedure (18 C.F.R. 385.211 and 385.214). Protests will be considered by the Commission in determining the appropriate action to be taken, but will not serve to make protestants parties to the proceeding. Any person wishing to become a party must file a motion to intervene. All such motions or protests should be filed on or before the comment date, and, to the extent applicable, must be served on the applicant and on any other person designated on the official service list. This filing is available for

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review at the Commission or may be viewed on the Commission's web site at http://www.ferc.gov, using the eLibrary (formerly FERRIS) link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll-free at (866) 208-3676, or for TTY, contact (202) 502-8659. Protests and interventions may be filed electronically via the Internet in lieu of paper; *see* 18 C.F.R. 385.2001(a)(1)(iii) and the instructions on the Commission's web site under the "e-Filing" link. The Commission strongly encourages electronic filings.

Comment Date: _____, 2004

Magalie R. Salas
Secretary

UNION GAS LIMITED

Undertaking of EEA Consulting
To Mr. Man

To provide description of Stagecoach look-alike deal using financial options.

The Enbridge Stagecoach 10 day storage service agreement is based on a contract that requires Constellation Energy to deliver up to a specified quantity of natural gas to the Enbridge CDA in exchange for natural gas withdrawn from the Stagecoach storage field in Western New York. The Stagecoach deal provides Enbridge with a source of natural gas for ten days during the winter at a predetermined price even though the natural gas withdrawn from the Stagecoach storage field is never transported to the Enbridge EDA. In this case, the cost to Enbridge presumably is the cost of natural gas injected into storage, plus the cost of the storage itself, plus any transactions costs associated with the Constellation contract (could be positive or negative). Enbridge pays a significant premium over the natural gas price (e.g., the cost of high deliverability storage) to ensure that peak period prices are known and reasonable. In effect, Enbridge receives price protection for peak gas requirements on up to 10 days during the winter.

The contract is converted to natural gas delivered to the Enbridge CDA by Constellation. Constellation would have a number of options for actualizing the conversion, including purchase of physical natural gas at Dawn on the daily market, with transportation to the Enbridge CDA, or exchange with another party, such as a Northeast LDC holding pipeline capacity through Ontario.

Currently, the NYMEX offers futures and options contracts for monthly natural gas purchases at Henry Hub, and futures and options contracts for monthly and seasonal natural gas basis from Henry Hub to Dawn[1]. Both the Henry Hub contracts and the Henry Hub to Dawn Basis contracts require monthly firm deliveries of gas. As a result, parties can contract for the financial equivalent of firm delivery of natural gas at Dawn using only financial instruments.

Any alternative to the Enbridge Stagecoach service based on financial options must also be converted to physical natural gas. Reliable delivery of the gas commodity requires both a reliable and predictable market for purchasing the natural gas commodity, and a reliable approach for delivering the gas. The physical gas commodity can be purchased in one of two

[1] Nymex products currently offered at Dawn include: Dawn natural gas basis swaps, Dawn natural gas swing swaps, and Dawn natural gas index swaps.

Witness: EEA Consulting
Question: May 19 2006
Answer: June 2, 2006
Docket: EB-2005-0551

ways. Either the purchase can be made on a daily basis at a liquid market hub, such as Dawn, where transactions reliably occur and purchases can be made on any day of the year (at some price) without prior arrangement (open market purchases) with reasonable certainty, or the purchase can be made by prearrangement from a party holding firm transportation capacity to or beyond the purchase point.

For the purposes of this example, we are assuming that the physical supply of natural gas is purchased in the daily market at Dawn and delivered to the Enbridge CDA via Enbridge pipeline capacity from Dawn to the Enbridge CDA, or exchange agreements with marketers or other parties holding capacity. Dawn has a demonstrated reliable and liquid market even on peak demand days, making this approach reasonable and reliable.

There are two alternative approaches to modifying the existing monthly financial contracts to simulate the Enbridge Stagecoach storage contract. The first is to use public exchange traded instruments to purchase natural gas at Dawn on a firm basis, and to structure a private "over-the-counter" option to sell any unneeded gas on an interruptible basis. The option to sell would be structured with a marketer actively trading at the Dawn Hub. This would be the most accurate representation of the Stagecoach storage agreement.

The second approach is based fully on publicly traded futures and options contracts, using options to collar natural gas price behavior and to limit risk of winter price changes

For example, a futures contract for firm natural gas at Dawn (a call) allows a buyer to lock in the purchase price of gas at Dawn for a winter month. The purchaser would have the right to take delivery of the gas on every day, and would sell this right into the market at Dawn on all but ten high price or high demand days. However, the price at which the gas on the other 21 days is sold into the market is unconstrained. If prices are higher than expected, the customer will benefit when gas that was purchased on the futures market is sold at market prices that exceed the futures purchase price. However, if prices fall, the excess gas released into the market will have less value, and the effective price of the 10 day gas supply will increase. Hence, the purchaser bears a price risk if the winter is warmer than normal, or if other factors cause prices to fall below expectations.

However, much of this price risk can be hedged using an option (a put) on the following month's futures contract. There is a linkage between behavior of market prices in the current month, and futures prices in the following month. Increases in current market prices tend to cause an increase in the price of next month's future contract and declines in the current market price tend to cause a decline in the price of next month's future contract. As a result, much of the price risk can be hedged by purchasing an option to sell gas (a "put" option) in the following month at a price somewhat below the asking price at the time that the first month's futures contract is purchased. The option will provide a collar on the downside price risk. If prices in the current month fall below expectations, the value of the option to sell in the following month can be

expected to increase above expectations. Hence, much of the price risk associated with converting a 30 day futures contract into a 10 peak day supply of natural gas can be hedged away using options on the next months' futures contract.

Because the exchange-traded options for natural gas are based on the month-ahead market, and close prior to the option month, and future month options do not perfectly correlate with current month prices, this approach has a slightly different risk/reward profile compared to the 10 day storage contract. Never-the-less, the price risk is largely hedged, and the actual delivery of natural gas should be as reliable as the Stagecoach contract.

Witness: EEA Consulting
Question: May 19 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of EEA Consultants
To Ms. Campbell

Please provide the following articles: 1) Page 4, Henning CV – the economic analysis of FERC Order 636, referred to at the top of the page (no date provided); 2) Page 6, Henning CV, No. 9 – "Analysis of FERC Staff Report Investigating California Natural Gas and prepared on Electricity Prices", San Diego Gas & Electric Co. the report was made on behalf of EEA. Mr. Sloan's CV (page 4, No. 3) makes reference to a report filed on behalf of Duke Energy in the same matter. Bother are dated October 15, 2002. Assuming these are two different reports, I would like copies of each of them; 3) Page 6, Henning CV, No. 12 – "Statement of Bruce B. Henning on behalf of American Gas Association", Price Discovery in Natural Gas and Electric Markets, June 25, 2005.

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1) The economic analysis of FERC Order 636.
(Undertaking No 53 – Attachment 1)

2) The document "Analysis of FERC Staff Report Investigating California Natural Gas and prepared on Electricity Prices", San Diego Gas & Electric Co.
(Undertaking No 53 – Attachment 2)

3) Mr. Sloan's CV (page 4, No. 3) makes reference to a report filed on behalf of Duke Energy in the same matter. Both are dated October 15, 2002. This is the same study as filed by Mr. Henning and referenced above in Undertaking No 53 – Attachment 2

4) "Statement of Bruce. B. Henning on Behalf of American Gas Association", Price Discovery in Nature Gas and Electric Markets, June 25, 2005.
(Undertaking No 53 - Attachment 3)

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551

UNION GAS LIMITED

Undertaking of EEA Consultants
To Mr. Brown

On page 167 of the transcript for May 19, 2006, Mr. Henning states that, subject to check, the EEA Base Case forecast includes between 40 and 50 Bcf of storage capacity expansion in Ontario between now and 2025.

This statement is slightly out-of-date. EEA is currently projecting the addition of 35 Bcf of natural gas storage between 2006 and 2025, and 55 Bcf of storage between 2006 and 2030.

This is a forecast of storage additions, and is not a forecast of storage potential. EEA's forecast of storage additions in Ontario has decreased in the last several years, as we have increased our projection of the growth in Michigan storage. Under different economic or regulatory conditions, the amount of storage construction in Ontario included in EEA's forecast could either increase or decrease.

Witness: EEA Consultants
Question: May 19, 2006
Answer: June 2, 2006
Docket: EB-2005-0551