

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
CONSUMERS ENERGY COMPANY for certificates)
of public convenience and necessity to construct and)
operate a natural gas storage facility and a related)
pipeline in Lyon Township, Oakland County.)
_____)

Case No. U-13322

At the October 3, 2002 meeting of the Michigan Public Service Commission in Lansing,
Michigan.

PRESENT: Hon. Laura Chappelle, Chairman
Hon. David A. Svanda, Commissioner
Hon. Robert B. Nelson, Commissioner

ORDER APPROVING SETTLEMENT AGREEMENT

On May 2, 2002, Consumers Energy Company (Consumers) filed an application, pursuant to the provisions of Section 2 of 1923 PA 238, as amended, MCL 486.252, and 1929 PA 9, as amended, MCL 483.101 et seq., for certificates of public convenience and necessity to construct and operate the proposed Lyon 29 Gas Storage Field (Lyon 29 field) and the Lyon 29 Pipeline in Lyon Township, Oakland County.

Pursuant to due notice, prehearing conferences were held on June 18 and July 11, 2002 before Administrative Law Judge George Schankler. Consumers, the Commission Staff (Staff), and

Abraham Shadeh participated in the proceedings. In addition, comments were received from a local landowner, Lawrence Richardson.¹

As set forth in the application, Consumers proposes to convert the depleted Lyon 29 Niagaran gas reservoir, by using existing wells and making necessary improvements, to operate as a natural gas storage facility. According to Consumers, the reservoir is a Niagaran pinnacle reef 48.5 acres in size at a depth of approximately 2,500 feet subsurface, located near the town of South Lyon. Maps accompanying the application reflect that the proposed storage field boundary covers 237 acres and includes parts of Sections 28, 29, 32, and 33 of Lyon Township. Consumers goes on to state that the primary purpose of the storage facility will be to provide up to 125 million cubic feet of gas per day during peak winter periods to meet overall system loads. The Lyon 29 field is well suited for this purpose, Consumers continues, because 32% of the company's total gas deliveries are made within 25 miles of the proposed facility's location.

With regard to the proposed pipeline, the application indicates that it will consist of a 12-³/₄ inch outer diameter line approximately 1.59 miles long, extending from the Lyon 29 Well in the SE/4 of Section 29 to a point of interconnection with two existing Consumers pipelines near the Lyon 34 Storage Facility in the NW/4 of Section 34, all in T1N, R1E, Lyon Township, Oakland County. According to Consumers, this pipeline will be used to inject gas into the Lyon 29 field during warm weather months and to remove gas for use by its customers during the coldest days of the year.

Attached to the application are (1) engineering specifications covering the construction, testing, operation, and monitoring of the Lyon 29 field and its associated pipeline to demonstrate compliance with the Michigan Gas Safety Standards, (2) testimony concerning the need for, and

¹ Mr. Richardson neither requested nor was granted intervention as a full party to these proceedings.

public benefits of, the proposed facility, and (3) a map showing the location of the proposed pipeline. According to those documents, the total estimated cost of developing the Lyon 29 field and constructing the pipeline is approximately \$9,970,000.

Following the Staff's review of the application and all supporting documents, Consumers and the Staff negotiated a settlement agreement, which is attached to this order as Exhibit A. Although he did not participate in the negotiations, Mr. Shadeh has indicated his non-objection to the Commission approving the settlement agreement and granting Consumers' application.²

The settlement agreement states, among other things, that (1) the depleted Lyon 29 gas reservoir has unique qualities that make it particularly well suited for conversion to a gas storage field, (2) the equipment and facilities intended for use as part of the Lyon 29 field and its related pipeline will be constructed, operated, and maintained in a manner that meets or exceeds all requirements of the Michigan Gas Safety Standards, (3) Consumers has agreed to several modifications of its original proposal, including changing the route of the pipeline to address concerns raised in Mr. Lawrence's comments, (4) all safety features will be tested at least once per year, and (5) Consumers will take all necessary steps to protect the quality of the groundwater around the Lyon 29 field. The settlement agreement further indicates that, based on its examination of the reservoir's geologic structure and the information provided by Consumers, the Staff agrees that the proposed storage field and pipeline will serve the public convenience and necessity, and that the application is therefore deserving of approval.

After reviewing the application, Consumers' supporting testimony and exhibits, and the terms of the settlement agreement, the Commission finds that development of the Lyon 29 field and construction of the related pipeline will serve the public convenience and necessity. The

² According to the settlement agreement, Consumers acknowledges that Mr. Shadeh's non-objection shall not be used against him in any subsequent proceeding.

Commission therefore concludes that it should approve the settlement agreement and grant the requested certificates of public convenience and necessity.

The Commission FINDS that:

- a. Jurisdiction is pursuant to Section 2 of 1923 PA 238, as amended, MCL 486.252; 1929 PA 9, as amended, MCL 483.101 et seq.; 1919 PA 419, as amended, MCL 460.51 et seq.; 1939 PA 3, as amended, MCL 460.1 et seq.; 1969 PA 306, as amended, MCL 24.201 et seq.; and the Commission's Rules of Practice and Procedure, as amended, 1992 AACRS, 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 Lyon 29 field for use as a natural gas storage facility.
- d. If developed and operated as proposed in the application and settlement agreement, the Lyon 29 field will be safe for use as a gas storage facility.
- e. The map, route, and type of construction of the Lyon 29 Pipeline, as revised by agreement of the parties and in response to public comment, should be approved.
- f. The pipeline is practicable in that it will provide the necessary means of transporting gas to and from the Lyon 29 field.
- g. The pipeline will meet the requirements of the Michigan Gas Safety Standards if constructed, tested, and operated as proposed.
- h. The pipeline will serve the public convenience and necessity.

THEREFORE, IT IS ORDERED that:

- A. The settlement agreement, attached as Exhibit A, is approved.

B. Consumers Energy Company is granted a certificate of public convenience and necessity to acquire, construct, and operate the Lyon 29 Gas Storage Field in Oakland County, as proposed in the application filed on May 2, 2002 and subject both to the terms and conditions of the settlement agreement and the requirements of Section 2 of 1923 PA 238, as amended, MCL 486.252.

C. Consumers Energy Company is authorized to construct and operate the Lyon 29 Pipeline in Oakland County, as proposed in the application filed on May 2, 2002 and subject both to the terms and conditions of the settlement agreement and the requirements of 1929 PA 9, as amended, MCL 483.101 et seq.

D. The map, route, and type of construction of the Lyon 29 Pipeline are approved.

E. Within 60 days after construction, Consumers Energy Company shall file a completion report including pressure test data and a map of the Lyon 29 Pipeline as constructed.

F. If in the future the Lyon 29 Gas Storage Field or the Lyon 29 Pipeline are used to store or transport third party gas, respectively, appropriate filings must be made with the Commission concerning rates and contracts.

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

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.

MICHIGAN PUBLIC SERVICE COMMISSION

/s/ Laura Chappelle
Chairman

(S E A L)

/s/ David A. Svanda
Commissioner

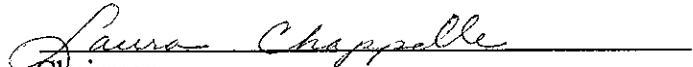
/s/ Robert B. Nelson
Commissioner

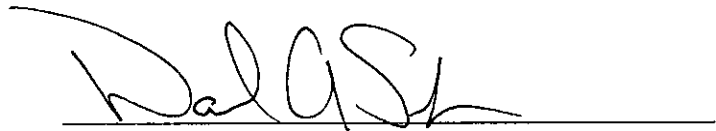
By its action of October 3, 2002.

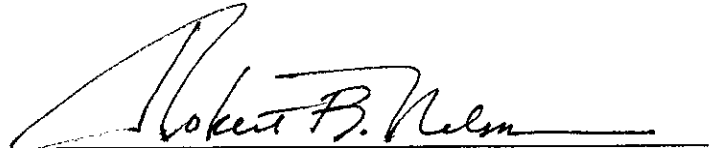
/s/ Dorothy Wideman
Its Executive Secretary

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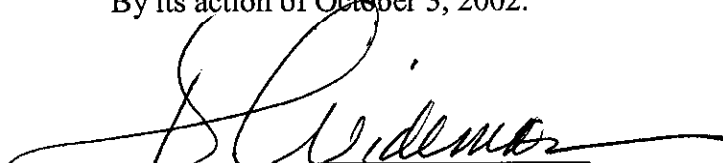
MICHIGAN PUBLIC SERVICE COMMISSION


Chairman


Commissioner


Commissioner

By its action of October 3, 2002.


Its Executive Secretary

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
 CONSUMERS ENERGY COMPANY)
 for a Certificate of Public Convenience)
 and Necessity (Lyon 29 Storage Field))
 _____)

Case No. U-13322

SETTLEMENT AGREEMENT

On May 2, 2002 Consumers Energy Company (“Consumers Energy” or “Applicant”) applied to the Michigan Public Service Commission (“Commission” or “MPSC”) for a Certificate of Public Convenience and Necessity to engage in the storage and transportation of natural gas in the Lyon 29 Storage Field pursuant to Section 2, 1923 PA 238, as amended by 1973 PA 26, MCL 486.251 *et seq.*, and for a Certificate of Public Convenience and Necessity to construct, maintain, and operate a pipeline in conjunction with the storage facility pursuant to Section 9, 1929 PA 9 as amended, MCL 483.101 *et seq.*

Pursuant to due notice, interested persons were invited to submit comments or petition to intervene no later than June 11, 2002. A prehearing conference was held on June 18, 2002. Mr. Lawrence Richardson, a property owner along the proposed pipeline route, commented about the proposed location of the new pipeline easement in relation to his property. No other comments or petitions to intervene were filed. Additional notices were distributed to some other landowners of the storage field, and interested persons were invited to submit comments or petition to intervene no later than July 5, 2002. A second prehearing conference was held on July 11, 2002. Intervention was granted to Mr. Abraham Shadeh. The Michigan Public Service Commission Staff (Staff) participated. No other comments or petitions to intervene were filed.

Consumers Energy filed the Direct Testimony and Exhibits of James D. Philo, Dale C. Puckett, Ralph A. Herberg and Margaret F. Parker, and the Supplemental Testimony and Exhibits of James D. Philo and Dale C. Puckett.

Following Staff's review of Consumers Energy's Direct Testimony and Supplemental Testimony and associated Exhibits, Staff and Consumers Energy negotiated this Settlement Agreement. Abraham Shadeh did not participate in the negotiations and executes this settlement agreement only to indicate his non-objection to the Commission granting the requested Certificates of Public Convenience and Necessity. Consumers Energy acknowledges that Mr. Shadeh's non-objection to this Settlement Agreement shall not be adversely used against him in any subsequent proceeding. Consumers Energy and Staff hereby agree and stipulate to the following:

1. Consumers Energy is a public utility engaged in, among other things, the transportation, distribution and sale of natural gas to over 1.5 million customers in the lower peninsula of the State of Michigan. Consumers Energy's gas system is fully integrated and interconnected, and is operated as a single system.

2. Consumers Energy's retail natural gas business, including its retail gas transportation, storage and distribution business, is subject to the jurisdiction of the Commission pursuant to various provisions of 1909 PA 300, as amended (MCL 462.2 et seq.); 1923 PA 238, as amended by 1973 PA 26, (MCL 486.251 et seq.); 1919 PA 419, as amended (MCL 460.51-et seq.); 1929 PA 9, as amended, (MCL 483.101 et seq.); 1969 PA 165, as amended (MCL 483.151 et seq.); 1939 PA 3, as amended (MCL 460.1 et seq.); 1969 PA 306, as amended (MCL 24.201 et seq.), and the Commission's Rules of Practice and Procedure, 1992 Annual Administrative Code Supplement, R 460.17101 et seq.

3. The natural gas industry has developed demand for additional storage capacity.

The natural gas industry has moved from conditions of excess deliverability to tighter supply and through a period of restructuring and deregulation into a more competitive marketplace. Customers have increasing opportunities and responsibilities for managing the purchase, transportation and storage of their natural gas supplies to optimize reliability and cost. The margin between peak gas deliverability and peak gas demand has significantly narrowed. Thus, the demand for additional storage at competitive prices will continue to grow as gas storage plays an increasing role in bridging the gap between production and consumption in the winter months. Michigan's geologic formations allow for the development of storage fields with high quality service at a competitive price. Michigan accounts for approximately 20% of the United States' storage capacity, and this share is expected to grow.

4. To develop additional storage capacity in Michigan, property rights need to be acquired in and around an appropriate geological feature, infrastructure facilities need to be installed, and cushion gas needs to be injected.

5. The depleted Lyon 29 Gas Field (so named because it is located primarily in Section 29, Lyon Township, Oakland County) has unique qualities that make it particularly well suited for conversion to a gas storage field. More than 75% of the recoverable gas reserves originally in this gas storage field were produced before the filing of Consumers Energy's Application. Reserves have been depleted to a 93.6% level. The estimated original reserves were 1,850,000 MCF; 1,731,214 MCF have been produced. The field is safe for development and operation as a gas storage field. The Lyon 29 Field is a Silurian Age Salina-Niagaran reef set in the Michigan Basin at a depth between 2,300 to 2,650 feet subsea, and is located immediately south of the town of South Lyon in the southwest corner of Oakland County in a near ideal location to Consumers market. The

Lyon 29 Field covers approximately 48.5 acres from the base of the reef. The Salina A-2 Anhydrite overlies the reef and is the caprock with a thickness of 27 feet over the reef, which effectively confines the gas within the reservoir. The A-2 Anhydrite Formation is very dense and non-permeable to natural gas. Consumers Energy and Staff agree that the strata involved will be from the top of the Bass Island Group (1780 feet), the Salina Group, and the Niagaran Series to the top of the Clinton Shale (3730 feet). The storage field boundary encloses approximately 237 acres and includes parts of Sections 28, 29, 32, and 33 of Lyon Township (T1N-R7E), as reflected on the map attached as Attachment 1. The storage field boundary extends beyond the reef outline by nearly 1320 feet on its east side, nearly 1000 feet on the north and south sides, and 400 feet at its closest point on the west side as derived from the seismic data outline of the base of the reef. Further seismic surveying will be performed to determine if any additional buffer zone is required. Staff and Consumers will review the new data before first injection to determine if additional buffer will be added. Approximately 32% of the total gas deliveries made on the Consumers Energy pipeline system are made within 25 miles of this field. Furthermore, the Lyon 29 Field is relatively unaffected by a major bottleneck on Applicant's pipeline system that restricts delivery from the Ray and St. Clair storage fields. At peak withdrawal times, the proposed field will be directly connected to the 16 inch Line 1020 from Northville Compressor Station to South Lyon City Gate. At low withdrawal times and during injection, the field will be connected to the 8 inch Northville storage line. The Lyon 29 field will provide about 125 MMcfd on the first day of withdrawal. After a sustained withdrawal of about 20 days, about 0.9 Bcf of working gas would be withdrawn..

6. The primary purpose of the Lyon 29 Storage Field will be to provide gas on the coldest winter days. The field will be valved in until the need for its gas is established based on weather forecasts and daily gas balance reports. Gas Control will be able to remotely open and close

the flow control valve. Field personnel will be dispatched, however, to open and close the manual valves as needed. In the spring, some gas may be withdrawn by way of the Northville Compressor Station to reduce field pressure. It is anticipated that in the fall, the field will be refilled using an existing compressor at the Northville Compressor Station and the 8-inch pipeline to the Lyon 34. This is the same operating technique used for the adjacent Northville Reef and Lyon 34 Storage Fields.

7. A 12-3/4 inch OD steel pipeline will be built from the existing Lyon 34 Storage Field to the Lyon 29 Field. The line will be a little over 1.5 miles in length and will be designed and built in accordance with the Michigan Gas Safety Standards with a Maximum Allowable Operating Pressure (MAOP) of 1800 psig with a 0.5 design factor and will be constructed with facilities to accommodate smart pigging. It will connect to an existing 8-5/8 inch OD steel pipeline at the Lyon 34 also designed and built with a MAOP of 1800 psig. Remote monitoring will occur with flow rate and pressure readings sent to the Gas Control Center in Jackson. The pipeline will be operated as a "Class 3 location." All safety features will be tested at least once a year. In addition to periodic patrols, trained personnel using sensitive leak detection equipment will walk the line twice a year. Road crossings will be leak surveyed every quarter. The pipeline will be buried at least five feet below the road profile or the existing land contour whichever is deeper. This is so future entrances onto 9 Mile Road or Griswold Road will not impact the pipe. On-line pigging equipment for cleaning and inspections will verify the integrity of the pipeline. This line connects to Northville Compressor Station approximately 3 miles east of the Lyon 34. The 12-3/4 inch OD pipeline will also connect to the 16 inch OD Line 4020 at the Lyon 34. The pipeline will parallel 9 Mile Road for most of its length. It is the Company's intent to obtain private right of way wherever possible. Prior to burial the pipe and weld joints will be coated to protect it from external corrosion. In addition, the

buried pipe will be cathodically protected by imposing low electrical voltage on the pipe to provide protection should coating imperfections occur.

8. Consumers Energy estimates the conversion cost to be \$9,970,000. The levelized annual revenue requirement over the facilities' life is approximately \$1,229,000 per year. Alternatively, Applicant might secure 125 MMcfd firm transportation service from an interstate pipeline at a cost of \$13,000,000 per year. The transportation cost for peak day deliveries for 125 MMcfd is currently estimated at \$1,150,000. This cost has risen substantially over the years and is expected to continue to rise.

9. Consumers Energy will take every precaution to protect the groundwater. The only gas production well in the Lyon 29 Field, the Randall 1-29, was run with three strings of casing cemented in place between the drinking water aquifers of the Glacial Drift and the active wellbore. Additional wells required for storage operation will be cemented similarly and are proposed at the injection/withdrawal well pad location. Groundwater flow direction will be determined, and then monitoring wells will be installed on the down-gradient edge of the site in both the upper and lower aquifers. Monitoring wells around the storage wells will be installed near each well pad. Prior to the first injection of gas into the storage zone, two sampling events will be performed six months apart from each aquifer zone for each well pad. After injection begins, Consumers Energy will sample on a quarterly basis during the first operational year. Thereafter, Consumers Energy will sample at the end of the injection cycle and at the end of the withdrawal cycle. The minimum sampling must include BTEX, dissolved methane, and chlorides. Estimated well depths of the usable aquifer will be based on the review of well log data. As required by law, application will be made to the Michigan Department of Environmental Quality for the drilling, recompleting and reworking of wells required for this project.

10. Electro magnetic tools and logs will be used to verify the integrity of the existing Randall 1-29 well to assess if any corrosion that has occurred both internally and externally on the well casing. It is the same technology used to assess the integrity of gas transmission pipelines. A cement bond log will verify the cement top as well as determine the cement quality and bonding to the casing and formation. A gamma ray neutron log will provide a check of the lithology and detect the presence of hydrogen to check for the presence of natural gas collecting behind well casings. Running this log before storage operations begin will provide a base log to use to determine if any changes occur on repeat logs. Any new wells drilled will also have these same logs run on each well.

11. The Endangered Species coordinator, MDEQ-Wildlife Division has reviewed the project and indicated that no known threatened or endangered species lie within the area directly affected by construction. No known sites of cultural resources were present in the work area. Less than 0.962 acres of regulated wetlands will be directly affected with the proposed routing alignment for the pipeline. No parcels along the pipeline right-of-way are encumbered with a conservation easement. Consumers Energy has taken steps to reduce environmental impact to a minimal level including route selection, construction technique (boring under wetlands and stream crossings) and providing commitments for effective and rapid soil stabilization and site restoration activities.

12. Staff has reviewed the Application, the Testimony and Exhibits filed by Consumers Energy. In addition, Consumers Energy has agreed to several modifications of its original application, including changing the route of the proposed pipeline as shown on Attachment 1 to address the public comments of Lawrence Richardson, and reducing the strata for which this certificate of public convenience and necessity is sought. The proposed storage field will not endanger public safety because Consumers Energy has prudently planned the operation, design, and safety systems. The basic geology of the storage formation was reviewed and each well in the field

will be equipped with a surface safety valve that will seal automatically in the event of an emergency. Based on its review of this information, Staff agrees that a certificate of public convenience and necessity should issue for the Lyon 29 Storage Field and its related pipeline.

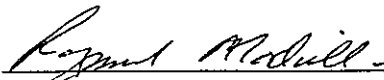
13. Reservoir pressure will not exceed the discovery pressure for the field of 1564 psig during storage operations.

14. This Settlement Agreement has been made for the sole and express purpose of reaching an alignment and an accommodation among the parties. This settlement agreement is intended for final disposition of the issues in this proceeding and the parties hereto join in respectfully requesting the Commission to grant its prompt approval. It is the opinion of the signatories hereto that this settlement agreement will aid the expeditious conclusion of this case and minimize the expenditures of resources which would otherwise have to be devoted to this matter by the Commission and the parties. Public convenience and necessity will be served by approval of this Application for a Certificate of Public Convenience and Necessity for the Lyon 29 Storage Field pursuant to Section 2, 1923 PA 238, as amended by 1973 PA 26, MCL 486.251 *et seq.*, and for a Certificate of Public Convenience and Necessity for a related pipeline necessary for the operation of the storage field pursuant to Section 9, 1929 PA 9 as amended, MCL 483.101 *et seq.*

15. Section 81 of the Administrative Procedures Act of 1969 is waived by the signatories.

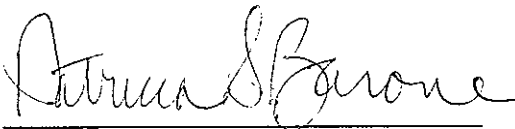
CONSUMERS ENERGY COMPANY

Dated: August 23, 2002

By: 
Raymond E. McQuillan (P24100)
Attorney for Consumers Energy Company
212 W. Michigan Avenue
Jackson, Michigan 49201


MICHIGAN PUBLIC SERVICE
COMMISSION STAFF

Dated: August 29, 2002

By: 
Patricia S. Barone (P29560)
Assistant Attorney General
6545 Mercantile Way, Suite 15
Lansing, Michigan 48911

ABRAHAM SHADEH, (NON OBJECTION ONLY)

Dated: August 26, 2002

By: 
Gary L. Worman (P29297)
2400 Lake Lansing Road
Lansing, Michigan 48912

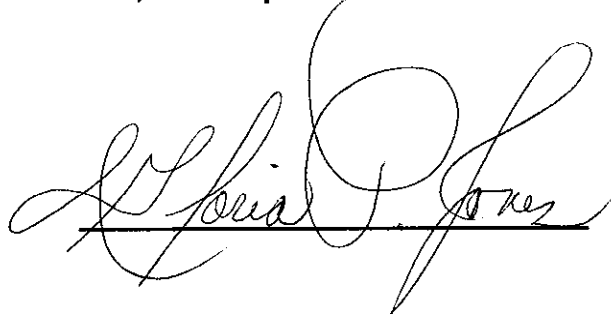
PROOF OF SERVICE

STATE OF MICHIGAN)

Case No. U-13322

County of Ingham)

Gloria P. Jones being duly sworn, deposes and says that on October 3, 2002, A.D. she served a copy of the attached Order by mailing copies thereof by first class mail, postage prepaid, or by inter-departmental mail, to the persons as shown on the attached service list.



A handwritten signature in cursive script, reading "Gloria P. Jones", is written over a horizontal line.

Subscribed and sworn to before me
this 3rd day of October 2002



A handwritten signature in cursive script, reading "Sharon Allen", is written over a horizontal line.

Notary Public, Ingham, County, Michigan
My Commission expires August 16, 2004

SERVICE LIST FOR DOCKET # U - 13322-
DATE OF PREPARATION: 10/04/2002

CASE #

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