

MANITOBA) **Order No. 154/09**
)
THE PUBLIC UTILITIES BOARD ACT) **November 13, 2009**

BEFORE: Graham Lane, C.A., Chairman
Monica Girouard, CGA, Member
Len Evans, LL.D., Member

**AN APPLICATION BY CENTRA GAS MANITOBA INC.
FOR AUTHORITY TO CONTINUE
WITH FOUR PARTY TRENCH INSTALLATIONS
FINAL AUTHORIZATION**

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1.0 INTRODUCTION

By this Order, the Public Utilities Board (Board) gives final approval to Centra Gas Manitoba Inc. (Centra) to employ “Four Party Trenching” (4PT), and for it to serve as the Utility’s default trenching methodology.

Centra, a wholly-owned subsidiary of Manitoba Hydro, a Crown corporation, is Manitoba’s largest natural gas distributor. In an ongoing effort to improve safety and, where possible, lower the costs of installing natural gas piping, Centra embarked on a pilot program of installing gas mains in a common trench with electrical, telephone and television cables. This installation method is termed 4PT. The planning for this pilot program began in 2003, with installations commencing in 2004.

In its 2005 General Rate Application hearing (GRA), Centra provided preliminary economic results from 4PT test initiatives that were disappointing, in that the costs incurred were higher than would be expected from piping installed by the conventional method (single party trench).

Accordingly, Board Order 103/05 directed:

“Centra cease all gas pipe line installations using the four party trench method as of December 31, 2005, unless and until Centra can satisfy the Board that anticipated savings can be realized and that there is no greater risk to public safety.”

The deadline set by Board Order 103/05 was subsequently extended, first by way of Order 10/06, then to August 31, 2006, and by subsequent letter, then to September 30, 2006. By an application dated September 29, 2006, Centra asked the Board to provide unconditional approval to the 4PT method, on the basis that Centra was fully implementing a cost optimization plan.

Centra further requested that, if the Board was unwilling to give unconditional approval for 4PT, it extend the deadline for a response to Board Order 10/06, which called for an

assessment of the cost experience and prospects of 4PT, to no earlier than March 31, 2009.

The Board reviewed Centra's request in a public hearing, held in the Board's offices in December 2006. Interveners to the process were Consumers' Association of Canada (Manitoba) Inc. and Manitoba Society of Seniors (CAC/MSOS) and CEPU, Local 681. Following the hearing, the Board provided the following direction to Centra:

1. Centra Gas Manitoba Inc. may employ 4PT construction as it deems advisable for safety reasons;
2. Centra is to seek cost optimization, consistent with enhanced safety, for 4PT;
3. Centra was to file with the Board on or before June 30, 2009, a report outlining its safety and cost experience with 4PT, both as incurred and in comparison with projections for conventional trenching results; and
4. Centra was to advise the Board, on no less than a quarterly basis, of its ongoing experience with 4PT, and upon a material change in either its experience or its expectations with respect to 4PT.

2.0 BACKGROUND

The following provides a review of events and timelines with regard to 4PT:

- Centra began testing 4PT in early 2004. From March 2004 to present, nearly all new development in urban centers involve 4PT.
- In December 2004 Centra reported that initial analysis indicated a potential 25% overall cost savings for 4PT relative to the conventional method of installation. Centra also expressed the view that 4PT installations are safer.

- Early results and expectations were reiterated through the Information Request process leading to the 2005 GRA. However, during the cross examination phase of the hearing, Centra reported 4PT results indicative of increased costs over conventional methods of 80%-100% or higher. Centra opined that the 4PT “optimization process”, to be completed in 2005, would achieve savings of approximately 20% from conventional installations.
- By Board Order 103/05, the Board indicated that 4PT costs nearly double the conventional method of installation were unacceptable. The Board directed Centra to demonstrate potential savings by the end of 2005. Centra was directed to file a report with the Board supporting 4PT economics by December 31, 2005.
- In compliance with Board Order 135/05, Centra provided a December 2005 report calling for 4PT to continue through an optimization process, indicating that anticipated savings of up to 20% could be realized. Safety advantages over conventional installations were again indicated. Centra requested that the Board rescind Board Order 103/05, and allow Centra to proceed with the process of optimizing 4PT.
- By December 2005, Centra had not made any contingency plans for 2006 construction if the Board directed an end to 4PT. So that construction during the peak heating season was not adversely impacted by Board deliberation on 4PT, by a January 2006 letter, the Board extended the December 31, 2005 deadline to April 30, 2006.
- On January 24, 2006, Board Order 10/06 provided a further extension to August 31, 2006. Centra was directed to have in place by June 30, 2006 a contingency plan to take effect if the Board rejected Centra continuing with 4PT.
- By a letter dated April 2006, the Board approved capital costs required by Centra to implement the 4PT optimization process.

- In a letter of July 2006, Centra reported that 4PT costs remained higher than conventional trenching costs, and indicated the optimization process was not complete.
- By a letter of August 2006, the Board further extended the 4PT deadline to September 30, 2006. Again, the Board directed that alternate construction plans be prepared in the event the Board did not grant approval to continue with 4PT.
- In September 2006, Centra requested a further extension of the 4PT deadline to allow for two full construction seasons in order to complete optimization. Accordingly, Centra proposed a deadline of March 31, 2009 for completion of the costing analysis called for by Directive 9 of Order 103/05. Centra reiterated that there was sufficient evidence to support the continuation of the 4PT program until that date, and that safety advantages, if not economic, remained with 4PT.
- By a letter dated October 25, 2006, the Board informed Centra that the 4PT issue, and Centra's September 2006 request to further extend the deadline for proof of adequate economics, would be considered by the Board in an oral public hearing to be held in December 2006.
- On December 22, 2006, Board Order 177/06 approved the continued use of the 4PT process, directing Centra to seek cost optimization consistent with enhanced safety, for 4PT and to file with the Board on or before June 30, 2009, a report outlining the safety and cost experience, both as incurred and experienced, and in comparison with projections for conventional trenching results.
- During the course of Centra's general rate application for 2009-10 and 2010-11, there were a number of information requests related to 4PT, the responses to which were to be provided by Centra in considering their request for final approval.

3.0 CENTRA'S POSITION

Centra submitted its report on 4PT to the Board on July 10, 2009, and, at the request of the Board, circulated its report to the interveners who participated in the hearings during which the matter was last discussed.

Centra again submitted that 4PT enhances safety, by reducing potential damages to gas mains and services. Further, Centra asserted that the costs of installing gas to an underground residential development using 4PT is either no more if not less than the cost of installation using the single party approach, this the result of Centra having achieved optimization of the process.

Centra also advised of developments that have occurred in the housing industry since 2005:

- The City of Winnipeg's recent change to its zoning by-law allows for a reduced setback in residential subdivisions. With the reduction of the space between the front property line and the home, the common Four Party trench has been moved to the public right-of-way.
- In addition to the reduced setbacks, the homebuilders are trending to build as close as possible to the side property lines as well. This combination of reduced setback from the front property line and minimum setback from the side property line leaves very little space in the front yard to excavate for service installations of both the shallow and deep utilities.
- In some developments home designs with the garage protruding to the front are no longer being used. The current by-law continues to allow the home builder to place a step or veranda on the front of the house further reducing the space in the front yard by up to an additional five feet.

- The space available to install the shallow and deep utilities in a condominium development is considerably less than that available in a typical subdivision.
- Space is tight for the shallow utilities even if installed in a common trench. Installation of a single party trench for gas would only make the situation worse.

Centra requested the Board grant final approval for the use of 4PT as the default trenching methodology.

3.1 Safety

Centra reported having analyzed records of gas damages over a 9-year period, and concluded that 60% of those damages could have been avoided under 4PT, due primarily to service line damages previously caused by road work or by sewer and water installation. These service lines are eliminated under 4PT.

4PT also eliminates the need to cross energized high-voltage electric cables and gas mains when extending services to homes.

3.2 Economics

Key factors underlying the business case include:

- Most costs associated with the installation of services are avoided using 4PT;
 - Gas mains installed by the Four Party method are installed by internal crews;
 - Gas mains installed by the single party method are installed by Contractor forces;
 - Services in both cases are installed by Contractor forces;
 - Operating costs have not been included as they are considered to be cost neutral;
- and

- No corporate overhead or interest is included for either Four Party or single party installations.

In assessing economics, Centra considered:

- Categories for Analysis of Mains Costs: Planning, Design & GIS, Inspection (mains), Property, Staking, Material (Mains) Contract Services (Mains) Excavation Permits (Mains) Contribution to Main Work Order, Chutes, sand, pea gravel, soft dig;
- Categories for Analysis of Service Costs: Service Installation (Contractor Cost), Service Installation (Material Cost), Inspection Cost (Services), Excavation Permits (Services), Sod Cut Permits, Safety Watching;
- Overheads & Interest;
- Municipal Taxes;
- Results of Optimization; and
- Analysis of Test Cases.

Centra outlined and reviewed seven scenarios, called test cases, comparing estimated comparative costs. These scenarios showed that, in all but one case, the cost of 4PT is less than estimated single party cost. In the one case, where the cost was estimated to be almost 30% more under 4PT, the installation was by way of a contractor rather than a Manitoba Hydro crew. In all of the other scenarios tested, the trenching was done by Manitoba Hydro crews, and the difference in the installer was identified as the principal cause for the one installation's costs being higher than would have been the case with single party installation.

3.3 Information requests

Centra's report included response to information requests that the Board had submitted to Centra:

- Gas mains and services installed using the Four Party method by Manitoba Hydro crews have achieved cost performance equal to or better than that of the single party installation method. In the City of Winnipeg, analysis of a sample of projects done in late 2008 shows an average cost reduction of 17% over the single party method. In the rural areas, the analysis of a sample of projects completed in late 2008 shows an average cost reduction of 5% over the single party method. The weighted overall average cost reduction for the Province is 14%. This cost reduction is based on the initial installation cost and the subsequent costs of all service installations.
- The actual and forecasted capital expenditures for the Four Party Trench Program were provided.
- The report provided an updated comparison of the cost to install gas mains using the Four Party method with that of the single party method. The Four party method now provides for an overall average cost reduction of 14% over the single party method. From July 2006 to present Centra's processes have been in a state of development and continual improvement making it impossible to provide an annualized cost comparison.
- The actual Four party trench installation costs with estimated conventional installation costs for the Waverley West, Stone Ridge Meadows were provided.
- All six of the main extensions (related to MER's) examined for this report were feasible using the actual Four party construction costs and therefore no customer contributions would have been required.

4.0 INTERVENERS' POSITIONS

The July 10, 2009 report was distributed to all interveners of record on July 14, 2009. No comments were submitted in relation to the report.

The Board concludes that sufficient opportunity to comment was provided and that the interveners have no objection to Centra's application.

5.0 BOARD FINDINGS

The Board is convinced that 4PT offers safety advantages, and has and continues to hold that safety is more important than economics when natural gas distribution is involved.

That said, Centra's proposal is bolstered now that the optimization plan for 4PT has resulted in the costs of the process being, at least generally, less than the single party installation methodology.

The Board is satisfied that Centra is equipped to judge both when to employ 4PT and when to rely on private contractors rather than its own crews.

Board decisions may be appealed in accordance with the provisions of Section 58 of *The Public Utilities Board Act*, or reviewed in accordance with Section 36 of the Board's Rules of Practice and Procedure (Rules). The Board's Rules may be viewed on the Board's website at www.pub.gov.mb.ca.

6.0 IT IS THEREFORE ORDERED THAT:

Centra Gas Manitoba Inc. be authorized to employ four-party trenching as it deems appropriate.

THE PUBLIC UTILITIES BOARD

“GRAHAM LANE, C.A.”

Chairman

“GERRY GAUDREAU, C.M.A.”

Secretary

Certified a true copy of Order No.
154/09 issued by The Public Utilities
Board

Secretary