

**CALPINE CANADA RESOURCES LTD.  
SOUR NATURAL GAS BATTERY AND  
SOUR NATURAL GAS PIPELINE  
BATTLE LAKE PROJECT**

**Decision 2001-73  
Applications No. 1069517 and 1069518**

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**1 DECISION**

On September 12, 2001, the Alberta Energy and Utilities Board (EUB/Board) approved Applications No. 1069517 and 1069518, subject to the commitments set out in the Appendix. This report details the Board's reasons for its approval of the above-noted applications. In approving these applications, the Board took into consideration that the proposed facility and pipeline meet all regulatory requirements and that objections to the subject applications were withdrawn. The Board directs that the facility approval and pipeline licence be issued in due course.

**2 APPLICATIONS AND HEARING**

**2.1 Applications**

Calpine Canada Resources Ltd. (Calpine) submitted an application pursuant to Section 7.001 of the Oil and Gas Conservation Regulations for approval to build a sour natural gas battery to be located in Legal Subdivision 4, Section 14, Township 46, Range 2, West of the 5th Meridian (LSD 4-14-46-2W5M). The proposed battery would be designed for a sulphur inlet of 0.98 tonnes per day (t/d), would process 40.0 thousand cubic metres per day ( $10^3 \text{ m}^3/\text{d}$ ) of sour natural gas, and would produce 1.0  $\text{m}^3/\text{d}$  of water. The maximum continuous sulphur emission rate would be 0.002 t/d. The sour natural gas would have a maximum hydrogen sulphide ( $\text{H}_2\text{S}$ ) concentration of 18 moles per kilomole (mol/kmol) (1.8 per cent).

Calpine also submitted an application in accordance with Part 4 of the Pipeline Act for approval to construct and operate a sour natural gas pipeline for the purpose of transporting sour natural gas from the proposed battery facility at LSD 4-14-46-2W5M to a riser on the existing Crystal Pipeline at LSD 4-8-46-2W5M. The proposed pipeline would be approximately 6.20 kilometres in length, with a maximum outside diameter of 114.3 millimetres. It would transport sour natural gas with a maximum  $\text{H}_2\text{S}$  concentration of 18 mol/kmol (1.8 per cent). The proposed pipeline would be operated as a level-1 pipeline in accordance with EUB *Interim Directive (ID) 81-3: Minimum Distance Requirements Separating New Sour Gas Facilities from Residential and Other Developments* as amended by ID 96-2 and ID 97-6.

**2.2 Interventions**

The EUB received objections to Calpine's applications from area residents. Subsequently, the EUB directed, pursuant to Section 29 of the Energy Resources Conservation Act, that a public hearing be held to consider the applications and interventions.

## 2.3 Hearing

The subject hearing was originally scheduled to commence on June 27, 2001. The Board received a number of requests to postpone the hearing and granted those requests.

The hearing was convened at the 4-H Centre at Battle Lake on September 12, 2001, before J. D. Dilay, P.Eng. (Presiding Board Member), W. G. Remmer, P.Eng. (Acting Board Member), and R. G. Evans, P.Eng. (Acting Board Member). Calpine requested a brief adjournment to allow for additional discussions between the applicant and the interveners with a view to a potential resolution of outstanding matters and a withdrawal of the interveners' objections. The Board granted Calpine's adjournment request.

Upon resumption of the hearing later that same day, Calpine advised that as a result of agreeing to undertake a number of commitments in addition to those already contained in its applications, the interveners were withdrawing their objections. Calpine read its commitments into the record and the interveners acknowledged that they were withdrawing their objections. The Board approved the subject applications and closed the hearing. Those who appeared at the hearing are listed in the following table.

### **THOSE WHO APPEARED AT THE HEARING**

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#### Principals and Representatives

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Calpine Canada Resources Ltd.

L. A. Cusano  
K. P. Reh

P. and N. Hannemann  
M. Bronaugh

R. Benedetto  
C. Ollenberger  
J. Granger  
J. Reid  
E. and T. Bachand  
A. and D. Dyck  
B. Blackmore

Alberta Energy and Utilities Board staff

J. P. Mousseau, Board Counsel  
T. Pesta, P.Eng.  
K. Eastlick, P.Eng.  
P. Ferenowicz  
T. Tran

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Dated at Calgary, Alberta, on October 2, 2001.

**ALBERTA ENERGY AND UTILITIES BOARD**

*<original signed by>*

J. D. Dilay, P.Eng.  
Presiding Board Member

*<original signed by>*

W. G. Remmer, P.Eng.  
Acting Board Member

*<original signed by>*

R. G. Evans, P.Eng.  
Acting Board Member

## **APPENDIX TO EUB DECISION 2001-73—COMMITMENTS UNDERTAKEN BY CALPINE**

The Board notes that in its applications and during the hearing Calpine undertook to conduct certain activities in connection with its operations, some of which are required by the EUB and others of which are not strictly required by the EUB's regulations or guidelines. These undertakings are described as commitments and are listed below. It is the Board's view that when a company makes commitments of this nature, the company has satisfied itself that the activity will benefit both the project and the public, and the Board takes these commitments into account when arriving at its decision. Having made these commitments to local residents, the Board expects the applicant to carry out the undertakings fully or advise the Board if, for whatever reasons, it cannot fulfill any of the commitments. At that time the Board will assess whether the circumstances of the failed commitments may be sufficient to trigger a review of the approval. Affected parties also have the right to ask the Board to review an approval if commitments made by an applicant remain unfulfilled.

The Board notes that Calpine has committed to updating its emergency response plan (ERP) on a two-year basis and that a table-top training exercise will be conducted on an annual basis. The EUB's requirement as set out in *Informational Letter (IL) 90-17: Emergency Procedure Plans for Sour Gas Facilities—Biennial Meetings* states: "The emergency procedure plan must be reviewed at least annually by the operator and changes forwarded to the Board."

Therefore the Board requires Calpine to update its ERP on an annual basis in accordance with the subject document.

### **Commitments Listed in the Applications**

- 1) During the construction period, the intersection of Highway 13 and Range Road 22 will not be used as a parking or meeting area, nor will the section of road north or south of this intersection be so used, other than to provide access to the well site lease and pipeline rights-of-way.
- 2) Well-site equipment will be fenced using chain link fence. Cattle wire fence can remain around the entire lease during the revegetation period.
- 3) The well-site lease will be contoured to prevent rain runoff from leaving the lease. Should the lease require water to be drained, the runoff retention area will be sampled and tested, and disposal will meet EUB off-lease disposal regulations.
- 4) Subject to landowner approval, where the pipeline intersects a road, seedlings will be planted to limit visibility of the cleared right-of-way. The planting pattern will still permit access to the right-of-way for maintenance purposes.
- 5) Calpine will not add compression at the 4-14-46-2W5M well site.
- 6) The flare stack will be equipped with an additional shroud around the burner tip, in an effort to limit the amount of visible flame and to reduce or eliminate night lighting.

- 7) Any future electrical lighting that may be used at the well site will be equipped with motion sensors.
- 8) The flare knockout tank size will be 200 barrels.
- 9) Water trucking will be limited to the hours between 8:00 a.m. and 5:00 p.m. during regular operating periods. In the event of an emergency, trucking to and from the site may occur outside the stated hours.
- 10) All water trucking from the well site to the disposal will be done using sealed tank trucks.
- 11) Flaring at the well site will only be done as a safety procedure (pressure safety valve, etc.) or after notification to adjacent landowners in the event of well and pipeline blowdown requirements.
- 12) Low-flow and low-pressure alarms complete with call-out system to the operator will be installed on the sales meter at the 4-14 site.
- 13) Pipeline maintenance will follow the same procedure as the existing Crystal system. This covers the spring flyover and the fall inspection done on foot along the entire right-of-way and also includes the internal and external corrosion mitigation plans and procedures.
- 14) Range Road 22 to the well will be maintained as an all-weather road.
- 15) Pipeline material will be up to sour service specification.
- 16) Minimum depth of cover on the pipeline will be 1.8 metres.
- 17) Maximum H<sub>2</sub>S content in the pipeline is 18 mol/kmol.
- 18) Welding procedures will be to the applicable codes for sour service pipeline.
- 19) X-rays of all welds will be made available for viewing through a third-party service.
- 20) Calpine will keep the pipeline at level 1.
- 21) Emissions from the 4-14-46-2W5M facilities have been calculated and are under the regulated allowable.
- 22) An emergency shutdown (ESD) valve will be installed at 12-10-46-2W5M on the surface riser.
- 23) An ESD valve will be installed on the well flow line to the separator.
- 24) Calpine will operate the 4-14-46-2W5M facility with sweet fuel for instrumentation and fuel gas.

- 25) Calpine will support a community-driven effort for area monitoring, to a maximum of \$5000 during the first year of operation and \$1000 per year for five years thereafter. The Calpine well must be producing prior to the release of funding, as Calpine has only one well in the area and will not participate without the production from the 14-4 well.
- 26) Saltwater disposal will be at an EUB-approved well and facility.
- 27) Calpine will operate the facility with all venting of sour emissions from tank, dehydrator, and pumps routed to a suitable BTEX incinerator.
- 28) Any change to the design capacity of the proposed facility at 4-14-46-2W5M will require notification to all parties present at the meeting held on November 29, 2000, at the Battle Lake 4-H Centre and must meet *Guide 56* requirements. If the parties present at this meeting are no longer area residents of Battle Lake, they are not required to be contacted.

### **Further Commitments Made at the Hearing**

- 29) Calpine agrees to amend the Crystal Pipeline corrosion inhibitor program to include continuous injection of corrosion inhibitor at the 4-8-46-2W5M riser. Calpine undertakes to implement this at the earliest possible date, as determined by land access, construction, and technical issues dealing with the chemical, its formulation, and the injection entry to the pipeline. The continuous inhibitor injection will be operational before the Battle Lake lateral is brought into service.
- 30) Calpine will make the coupon replacement procedure available as part of the Crystal Pipeline operations manual.
- 31) Calpine will notify residents/landowners within the emergency planning zone radius of any Crystal or Battle Lake pipeline repairs.
- 32) Calpine will notify those individuals who are within the emergency planning zone of all new facilities to be built by Calpine that relate to the Crystal or Battle Lake Pipelines.
- 33) Calpine will conduct its flyover of the Crystal Pipeline in the spring and will conduct a walk-through flame ionization survey between July 15 and July 31 and also in the fall prior to snowfall and frost.