ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

TAYLOR PROCESSING INC.
APPLICATIONS FOR THREE PIPELINE LICENCES
AND A FACILITY LICENCE AMENDMENT **Decision 2010-036 Erratum**
HARMATTAN-ELKTON FIELD **Applications No. 1612382 and 1618312**

A. S. Hollingworth, Q.C., counsel for Inter Pipeline Fund (IPF), has brought to the attention of the Energy Resources Conservation Board (Board) that in *Decision 2010-036*, Appendix 4, Hearing Participants, page 31, S. J. Murphy was not included as co-counsel for IPF.

The Board considers that the inclusion of Mr. Murphy as co-counsel for IPF properly amends the list of the hearing participants. Therefore, the Board approves a correction to *Decision 2010-036* to include this information.

Dated in Calgary, Alberta, on January 24, 2011.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

B. T. McManus, Q.C.
Presiding Member

Taylor Processing Inc.

Applications for Three Pipeline Licences and a Facility Licence Amendment Harmattan-Elkton Field

December 7, 2010

Energy Resources Conservation Board

ENERGY RESOURCES CONSERVATION BOARD
Decision 2010-036: Taylor Processing Inc., Applications for Three Pipeline Licences and a Facility Licence Amendment, Harmattan-Elkton Field

December 7, 2010

Published by

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AND A FACILITY LICENCE AMENDMENT **Decision 2010-036**
HARMATTAN-ELKTON FIELD **Applications No. 1612382 and 1618312**

1 DECISION

[1] Based on its consideration of all of the evidence, the Energy Resources Conservation Board (ERCB/Board) hereby approves Applications No. 1612382[1] and 1618312 (Applications) subject to the condition outlined in this report and summarized in Appendix 1.

2 INTRODUCTION

2.1 Applications

[2] Taylor Processing Inc. (Taylor; a subsidiary of AltaGas Ltd.) submitted Application No. 1612382, pursuant to Part 4 of the *Pipeline Act*, for approval to construct and operate two natural gas pipelines and one high vapour pressure (HVP) pipeline and Application No. 1618312, pursuant to Section 39(1)(b) of the *Oil and Gas Conservation Act*, to amend Licence No. 4285 for its existing Harmattan-Elkton Gas plant. The gas plant, with the amendments proposed in Application No. 1618312, will be referred to hereinafter as the Harmattan plant.

[3] The purpose of the Applications is to allow for a co-streaming[2] project that would include processing natural gas from the NOVA Gas Transmission Ltd. (NGTL) Western Alberta System (Western Leg) and the Foothills Pipe Lines Ltd. pipeline into lean residue gas and recovered natural gas liquids (NGL). The processed residue gas would be returned to the Western Leg downstream of the Cochrane Liquid Extraction plant (Cochrane plant). The ethane extracted from the natural gas would be delivered through an existing Taylor-operated pipeline to the Alberta Ethane Gathering System (AEGS) operated by NOVA Chemicals Corporation (NOVA). The recovered propane, butanes, and condensate products would be delivered by pipeline, truck, or rail to local, provincial, and export markets. The co-streaming project would allow for the diversion of up to 493.3 million cubic feet per day (MMcf/d) [13.89 million cubic metres per day (10^6 m^3/d)] from the Western Leg to the Harmattan plant.

[4] Application No. 1612382 is for approval to construct and operate three pipelines with no hydrogen sulphide (H_2S). The first pipeline would transport natural gas from the NGTL system at Legal Subdivision (LSD) 1, Section 23, Township 31, Range 5, West of the 5th Meridian, to the Harmattan plant at a tie-in point at LSD 15-27-31-4W5M. It would have an outside diameter of 610 millimetres (mm) and would be about 8.4 kilometres (km) in length. The second pipeline

[1] On November 26, 2010, the ERCB's Facilities Application Registry (FAR) system was turned off and the pipelines submitted under Application No. 1612382 were transferred to the Electronic Application System (EAS) and separated into two applications. Application No. 1669464 was assigned to the HVP pipeline.
[2] The terms co-streaming and side-streaming as they relate to the Applications, along with other abbreviations and definitions, are in Appendix 2.

(the Residue Gas Pipeline) would transport the processed residue gas from the Harmattan plant back into the Western Leg at LSD 9-16-26-4W5M. It would have an outside diameter of 610 mm and be about 74.3 km in length. The third pipeline would transport HVP products from the Harmattan plant at a tie-in point in LSD 16-27-31-4W5M to the Taylor Didsbury loading terminal located at LSD 2-25-31-2W5M. It would have an outside diameter of 168.3 mm, be about 23.4 km in length, and have a maximum calculated emergency planning zone of about 0.8 km.

[5] Application No. 1618312 is for approval to amend Licence No. 4285 for the existing Harmattan-Elkton gas plant located at LSD 9-27-31-4W5M, about 27km west of Didsbury. The amendment proposes the addition of three electric powered compressors, additional metering equipment and gas and liquid analyzers, and changes to product recovery rates.

[6] Collectively, the existing Harmattan-Elkton gas plant along with the additions and amendments proposed in the Applications will be referred to hereinafter as the Project (see Figure 1).

[7] It is the Board's practice to use metric units. Since participants at the hearing referred to gas volumes in imperial units, the metric equivalent will also be provided throughout the report.

2.2 Background

[8] Solex Gas Processing Corp. (Solex) submitted an application to the Alberta Energy and Utilities Board (EUB) in 2003 to process side-streamed gas from the Western Leg at the Harmattan-Elkton Gas plant. The application was denied as per *Decision 2004-006: Application to Amend a Gas Processing Scheme and for Natural Gas Pipelines* (Solex Decision) issued on January 27, 2004.

[9] Taylor submitted applications similar to Applications No. 1612382 and 1618312 in 2006. The Board directed the closure of those applications in *Decision 2008-045: Applications for a Facility Amendment and Three Pipeline Licences*, as Taylor had identified the need to modify certain details.

[10] The Applications are the first submissions for a co-streaming project since the release of *Decision 2009-009: Inquiry into Natural Gas Liquids (NGL) Extraction Matters* (NGL Inquiry report) on February 4, 2009. In that decision, the Board set out seven general factors (see Appendix 3) to be addressed in any future co-streaming or side-streaming application, in addition to any specific application requirements.

2.3 Interventions

[11] The Board received interventions from several industry parties and area landowners.

[12] The industry participants that indicated concern with the Applications were Inter Pipeline Fund (IPF), BP Canada Energy Company and BP Canada Energy Resources Company (BP), and DOW Chemical Canada ULC (DOW). These parties were concerned about the economic impact of the Applications on the existing straddle plant system given the availability of existing unused processing capacity at these plants, the unnecessary proliferation of facilities, the Project not providing meaningful competition, the availability of processing capacity for raw gas production,

the impact on the ethane supply and overall NGL recovery, and whether the Applications were in the public interest.

[13] NOVA participated in the hearing and in closing argument was supportive of the Applications. Several other parties indicated an interest in the Applications but were not actively involved during the proceeding. These parties were AEGS, Spectra Energy, and Shell Canada Energy.

[14] Two area landowners, Deryl Mork and Paul Tarjan, also participated in the proceeding. They made short presentations related to environmental and social impacts, unnecessary proliferation, and location of the Residue Gas Pipeline relative to their lands and residences.

2.4 Hearing

[15] The Board held a public hearing in Calgary, Alberta, before Vice-Chairman B. T. McManus, Q.C., (Presiding Member), Board Member G. Eynon, P.Geol., and Acting Board Member G. J. DeSorcy, P.Eng. The hearing commenced on August 31, 2010, and concluded on September 9, 2010. Those who appeared at the hearing are listed in Appendix 4.

3 FACTORS CONSIDERED IN MAKING THE DECISION

[16] In addition to the seven general factors from the NGL Inquiry report, participants raised several issues for the Board to consider with respect to the Applications. The Board addresses these as additional factors, which are as follows:

- onus and adequacy of information
- green-field facility
- cost benefit analysis
- landowner concerns

[17] To appropriately assess issues raised by the Applications, the Board considered the seven recommended factors from the NGL report in the following order:

- availability of existing unused processing capacity at the straddle plants
- resource conservation and effective utilization of resources including: impact on total NGL recovery, energy efficiency, and other aspects of resource conservation
- impact on the existing straddle plant system
- availability of processing capacity for raw gas production
- unnecessary proliferation of facilities
- meaningful competition

- industry support

[18] In reaching the determinations contained in this decision report, the Board considered all relevant materials constituting the record of the proceeding, including the evidence and argument provided by each party. Accordingly, references in this decision to specific parts of the record are intended to assist the reader in understanding the Board's reasoning relating to a particular matter and should not be taken as an indication that the Board did not consider all relevant portions of the record with respect to that matter.

4 ADDITIONAL FACTORS

4.1 Onus and Adequacy of Information

[19] BP, and to a lesser extent IPF, provided extensive argument on the adequacy of the information submitted by Taylor in support of the Applications. Specifically, both parties asserted that Taylor failed to provide adequate information demonstrating the Applications were in the public interest.

[20] IPF submitted that Taylor, as the applicant, bore the responsibility to file adequate materials to support its case for approval of the Applications, but instead, filed materials inadequate in this regard. IPF submitted that Taylor should have provided materials and witnesses to address the matters with regard to gas supply in the Western Canadian Sedimentary Basin, gas flows on the Western Leg, engineering matters related to liquid extraction, a cost benefit analysis (CBA), and other relevant materials. Instead, IPF noted that it, as intervener, provided those materials and witnesses.

[21] BP also submitted that Taylor, as the applicant, was responsible for satisfying the Board, on the balance of probabilities, that the approval it was seeking should be granted. BP argued that the Board should determine whether Taylor produced enough evidence to support approval of the Applications. BP submitted that Taylor had not met this test given the paucity of evidence it filed to support its case.

[22] BP further asserted that due to Taylor's lack of evidence to support its case, the Board would be unable to determine if the Applications were in the public interest. It noted that, in particular, Taylor's lack of evidence respecting sufficient gas supply resulted in an inability to demonstrate a need for the Project. It submitted that an evaluation of gas supply was essential to the Board's assessment of the Applications in considering several factors from the NGL Inquiry report. BP asserted that the Board should disregard the gas supply forecasts presented by Taylor, including those prepared by Ziff Energy Group, because Taylor did not provide any witnesses for examination on the accuracy of those forecasts. BP asserted that the only evidence with respect to gas supply that the Board can rely on was provided by Purvin & Gertz Inc., since it was supported by testimony and tested in cross-examination.

Findings of the Board

[23] The Board understands that the applicant is responsible for providing the Board with sufficient evidence for it to determine if an application is in the public interest. The Board agrees with BP and IPF in that approval of the Applications requires that the potential benefit of the

Project outweighs the possibility of harm. However, the Board does not accept the assessment of BP and IPF on how the Board should determine public interest in this case.

[24] The Board notes that its assessment as to whether an application is in the public interest involves considering the social, economic, and environmental impacts of a project[3]. It also notes that to be in the public interest, a project must not only benefit the applicant and those directly connected to it but must benefit Albertans in general. The Board recognizes that while the determination of the public interest is a subjective matter, constrained only by the objectives of the legislation and the Board's power to carry out those purposes, such determination must arise from the evidence presented and the careful and fair consideration of that evidence by the Board.

[25] The Board also notes that its assessment of the public interest with respect to the Applications requires considering the factors from the NGL Inquiry report. It also notes that these factors vary in significance, depending on the facts, circumstances, and issues surrounding a particular co-streaming or side-streaming application and that no single objective test of what constitutes the public interest can be formed. It is the Board's view that no single factor presents a barrier to the approval of a project that may be in the overall public interest.

[26] In light of the situation-specific nature of the public interest test and the considerations in this particular matter, the Board is satisfied that it has sufficient evidence before it relating to the factors most significant to the Applications to proceed with a careful and fair assessment. In doing so, it agrees with the position of the interveners that the onus is on Taylor to satisfy the Board that the Applications are in the public interest.

4.2 Green-Field Facility

[27] Taylor submitted that the term green-field facility refers to a new facility constructed at a site where no facility previously existed, noting that the Applications did not propose a new green-field processing facility. It stated that the proposed amendments were to an existing facility within the Harmattan-Elkton Gas plant boundaries and that the proposed Residue Gas Pipeline would follow an existing right-of-way (ROW) for the majority of the route.

[28] Taylor argued that the focus of the NGL Inquiry report was not on the construction of new pipelines but on the construction of new green-field facilities. It recognized that the construction of a new facility raises concerns with respect to the public interest and that this was why the NGL Inquiry report cautioned that if an existing straddle plant had unused capacity, a green-field facility was unlikely to be in the public interest

[29] Taylor further stated that a co-streaming project needs pipelines to transport gas from the NGTL system to the co-streaming plant, transport the residue gas downstream of the existing straddle plant, and transport the recovered NGL from the co-streaming plant to a market outlet. Taylor reiterated that the Applications satisfied co-streaming project definitions established in the NGL Inquiry report to transport the residue gas downstream of the Cochrane plant, resulting in its need for the Residue Gas Pipeline. It further stated that this would not constitute unnecessary proliferation as argued by IPF and BP, since without a pipeline co-streaming would not be possible. Taylor's interpretation of the NGL Inquiry report was that the EUB did not intend to inhibit co-streaming merely because associated pipeline construction was necessary.

[3] Section 3 *Energy Resources Conservation Act,* RSA 200 c. E-10.

[30] IPF noted that it was unclear if a green-field facility meant the construction of an entirely new plant dedicated to co-streaming or side-streaming or the use of an existing facility newly adapted for that purpose. IPF recognized that the Harmattan plant was not, in a strict interpretation of the term, a green-field facility but submitted that the overall Project could be considered a green-field facility because it involves significant capital investment. IPF noted that the magnitude of the required capital investment had not been disclosed to the Board.

[31] BP submitted that Taylor's interpretation of a green-field facility from the NGL Inquiry report was both narrow and incorrect. BP argued that in the NGL Inquiry report the EUB intended green-field facilities to include the same type of facilities as in *Decision 1996-07: Strachan Gas Plant Approval Amendment NGTL Gas Side-streaming Application* (Strachan Decision) when it referred to new grassroots facilities. BP submitted that the limitations imposed by the EUB should not be side-stepped by building within the fenceline of an existing facility. BP further submitted that if a proposed scheme to convert a field plant to incorporate a straddle plant function required an investment comparable to what a new straddle plant would cost, the facilities involved would clearly constitute green-field facilities as contemplated in the NGL Inquiry report.

[32] BP submitted that costs equal to or exceeding those associated with an entirely new plant were not in the public interest, especially if unused straddle plant capacity is available. While BP acknowledged that some of the facilities proposed by Taylor would be on what industry would consider a brown-field site, it believed that where the facilities would be constructed is not relevant. Instead, it believed the relevant issue was the purpose of the facilities and their economic efficiency in accomplishing that purpose.

Findings of the Board

[33] The Board notes that Application No. 1618312 is to amend an existing facility within existing lease boundaries. The Board considers the proposed amendments to be relatively minor considering the size and the equipment already in operation at the Harmattan-Elkton gas plant.

[34] With respect to the proposed pipelines, the Board notes that the Residue Gas Pipeline would follow an existing ROW for most of the route, resulting in minimal incremental disturbance.

[35] The Board is satisfied that the Project is not a green-field site as described in the NGL Inquiry report. The Board is also satisfied that the relative magnitude of the capital investment for the Project does not negate a determination of it being in the public interest.

4.3 Cost Benefit Analysis

[36] During the proceeding, parties raised the issue of whether a CBA was relevant to an assessment of the public interest. Recognizing that a CBA was not one of the seven factors from the NGL Inquiry report, the Board, in this section addresses the question of whether it should also consider a CBA as a factor in assessing the Applications.

[37] Taylor noted that relying on a CBA would be unproductive since different parties may use varying incremental production estimates in their analyses, resulting in different CBA outcomes. Taylor referred IPF to the Strachan Decision in which the Board noted that it did not regard the absence of significant or unequivocal net social benefit as an important reason for the denial of

an application. Taylor noted that a CBA was not in the seven general factors from the NGL Inquiry report despite the recommendation from IPF and other straddle plant owners to require applicants of co-streaming or side-streaming projects to demonstrate a net economic benefit to the province.

[38] Taylor restated that the Board should not second guess market-based decisions made by sophisticated market participants, particularly if based on the results of a CBA. Taylor rejected the notion of using a CBA and further rejected the results of IPF's CBA. Taylor concluded that there was no merit in presenting multiple analyses when the Board could rely on a market-determined result.

[39] NOVA noted that the competitive access to ethane and propane plus liquids proposed by the Applications was an unquantifiable element in a CBA and argued that the Applications would be economically beneficial and were in the public interest.

[40] IPF recognized that the Board did not require a CBA from Taylor with its Applications, but was of the opinion that the Board expected some kind of useful analysis. IPF stated that the Board could use a CBA to systematically and consistently assess many of the factors from the NGL Inquiry report. IPF believed that the CBA it submitted provided the Board with quantitative evidence to assist in deciding the public interest issues. IPF recognized that to satisfy the fourth factor of the NGL Inquiry report—the impact on the existing straddle plant system—the Board needed to understand whether the Cochrane plant could continue to be viable if the Project proceeded. IPF further noted that its CBA would allow the Board to assess this.

[41] IPF admitted that circumstances may arise in which a project or activity with a negative result from a CBA could still be in the public interest. IPF recognized that non-quantifiable issues (e.g., disturbance to landowners) could result in a conclusion contrary to that produced from a CBA.

[42] BP submitted that a CBA allowed for the quantification of the following factors: resource conservation and effective use of resources, the impact of the Applications on the long-term viability of the existing straddle plant system, the unnecessary proliferation of facilities, and, to some extent, whether meaningful competition would be created by approval of an application. BP concluded that the intent of a CBA was not to be determinative of the public interest but was a useful tool for quantifying relevant factors.

Findings of the Board

[43] The Board finds that although a CBA was not included in the general factors from the NGL Inquiry report, this does not imply that such an analysis might not be relevant. The Board notes that it is possible for a project to be in the public interest and yet have a negative net economic impact on the province. It acknowledges that a number of problems exist with using a CBA in making decisions, such as a lack of consistent methodologies, time frames, or formats; a reliance on detailed forecasts and assumptions; an inability to quantify certain costs and benefits; and a tendency to focus on numbers instead of the overall public interest.

[44] The Board notes that several of the recommended factors influence CBA calculations, but others, such as competition, are difficult to quantify. Given these difficulties, the Board does not consider a CBA necessary in its assessment of the Applications.

4.4 Landowner Concerns

[45] Mr. Tarjan and Mr. Mork raised concerns with the Residue Gas Pipeline route. They noted that in response to their objection to the initial route, Taylor re-routed the pipeline to avoid crossing their lands. Mr. Mork also doubted that Taylor would ensure that the condition of the land remained the same, either during operations or following abandonment. Mr. Tarjan stated concerns with possible noise and dust during construction, noting that he received very little detail on Taylor's construction schedule and work hours other than the fact that summer construction would occur during daylight hours. Mr. Tarjan requested that work during construction be limited to the hours between 8:00 a.m. and 5:00 p.m. on weekdays only.

[46] Taylor recognized that the route it selected avoided landowners opposed to the pipelines and densely populated areas north of the Cochrane plant. Taylor confirmed that the conservation and reclamation plan for its HVP pipeline received approval from Alberta Environment, noting that similar approvals for the two natural gas pipelines were pending, subject to ERCB approval.

[47] Taylor acknowledged that further consultation is required and agreed to complete pre-construction consultation with affected landowners regarding construction schedules and work hours.

Findings of the Board

[48] The Board notes Taylor's evidence that it contacted Alberta Environment for the required approvals and is satisfied that these will serve to minimize long-term effects on private lands. The Board also notes Taylor's agreement to consult with all affected landowners on construction schedules and hours of operation.

5 RECOMMENDED FACTORS IN NGL INQUIRY REPORT

[49] Taylor stated that it based its case for the Applications on the seven factors from the NGL Inquiry report. Taylor noted that in the NGL Inquiry report participants raised several points that were not accepted by the Board and were not included in the seven factors.

[50] IPF accepted that the purpose of seven factors was to guide both the presentation and the construction of future co-streaming or side-streaming applications. However, it noted that these factors were broad and required input not only from the applicant but also from industry to help the Board determine the public interest. IPF submitted that the Board did not list these factors as exclusive criteria for evaluating a co-streaming application. IPF further stated that while the seven factors help proponents and opponents construct applications and argue them, simply addressing these factors might not be sufficient enough to approve the Project.

[51] BP argued that the factors established in the NGL Inquiry report were consistent with the type of CBA used in the Strachan and the Solex decisions, noting that some of the factors depended on the availability of a CBA for the purposes of quantification of efficiency and conservation. BP noted that, although not included in the seven general factors, a CBA was a tool by which a number of the factors listed in the NGL Inquiry report can be measured and assessed.

Findings of the Board

[52] The Board recognizes that in the NGL Inquiry report the EUB indicated its expectations for co-streaming and side-streaming applications, stating that it was inappropriate for it to prescribe a set of criteria that may create barriers to projects that may be in the public interest overall. The EUB suggested that, in addition to any specific application requirements established from time to time by the regulator, the seven general factors should be addressed in any future co-streaming or side-streaming application.

[53] The Board believes that although the seven general factors are relevant in this case they are not to be used exclusively to determine the overall public interest. In the sections that follow, the Board considers all recommended factors to better address the issues raised by the Applications.

5.1 Availability of Existing Unused Processing Capacity at the Straddle Plants

[54]Taylor submitted that the NGL Inquiry report did not state that co-streaming would not be in the public interest if there was unused straddle plant capacity. Taylor stated that competitive markets by definition have unused capacity and that competition would not exist without it. Taylor noted that IPF was currently the sole provider of NGL extraction services on the Western Leg and stated that if it could successfully compete for extraction rights it would take business away from IPF.

[55] Considering gas supply forecasts, Taylor believed that substantial gas flows would be possible even at gas rates as low as 1.2 billion standard cubic feet per day (bcf/d) (33.81 10^6 m^3/d) as asserted by IPF.

[56] NOVA noted that the Cochrane plant operated at an average capacity of 68 per cent from 2006 to 2008. It also noted IPF's claim that the Cochrane plant would lose 25 to 30 per cent of its current volumes if the Project proceeded. It further stated that, notwithstanding the plant's current and potential future unused capacity, IPF did not demonstrate that competition for 300 to 400 MMcf/d (8.45 to 11.26 10^6 m^3/d) of raw gas would render the Cochrane plant unviable. NOVA stated that some unused capacity was necessary for competition to exist and that creating competition for NGL extraction on the Western Leg justified the impacts of diverting some of the gas currently flowing through the Cochrane plant to the Harmattan plant.

[57] IPF maintained that duplicating facilities would worsen costs associated with the large and growing unused straddle plant capacity and would not provide significant incremental production of NGL. IPF stated that its evidence on unused straddle plant capacity was undisputed.

[58] IPF argued that approval of the Applications would set a precedent for other gas processing plants on the Western Leg to convert to liquids extraction, and cumulatively, could diminish the economic viability of the Cochrane plant. IPF noted that converting a field facility to a co-streaming facility would add new straddle plant capacity and transfer unused capacity from field plants to straddle plants.

[59] BP stated that the capital costs necessary to convert a gas plant for co-streaming were unlikely to be in the public interest if unused straddle plant capacity existed.

[60] BP noted that the Cochrane plant's three trains of cryogenic processing capacity of 1.6 bcf/d (45.08 10^6 m^3/d) set the benchmark for determining its unused capacity. It further noted that based on the Purvin & Gertz gas flow forecast of 1.2 bcf/d (33.81 10^6 m^3/d) on the Western Leg from 2010 to 2020, one of the three cryogenic trains at the Cochrane plant would constitute excess capacity, which would double if the Board approved the Applications.

[61] DOW argued that the Project would increase unused capacity at the Cochrane plant and would represent a misallocation of resources that was not in the public interest.

Findings of the Board

[62] The Board understands that the Cochrane plant's current unused NGL extraction capacity could be exacerbated by an approval of the Project, but remains unconvinced that the Project, given its relative capacity, would jeopardize the economic viability of the Cochrane plant. The Board notes that IPF did not provide evidence in the form of financial information related to the Cochrane plant to demonstrate that the Project would threaten the shutdown of the Cochrane plant.

[63] The Board recognizes that the existing unused processing capacity at the Cochrane plant would increase if the Project is approved. The Board also notes that the Harmattan-Elkton Gas plant currently has unused capacity. However, the Board does not believe the existence of unused capacity at the Cochrane plant, in and of itself, affects the public interest in such a way as to warrant denial of the Applications.

5.2 Resource Conservation and Effective Utilization of Resources

5.2.1 Impact on Total NGL Recovery

[64] Taylor noted that in the NGL Inquiry report the EUB did not specify minimum ethane and propane plus[4] recovery factors for either new projects or the existing straddle plants. Taylor believed this to mean that for the Board to approve a co-streaming or side-streaming project, the project did not necessarily have to result in an increase to the overall ethane and propane plus supply in Alberta but that it was important the project not impact the supply in a significantly negative way.

[65] Taylor applied for approval to process up to 493.3 MMcf/d (13.89 10^6 m^3/d) of gas. It stated that, in order to achieve a 90 per cent recovery rate, it planned to process 150 MMcf/d (4.23 10^6 m^3/d) of raw gas and 250 MMcf/d (7.04 10^6 m^3/d) of co-streamed gas. Taylor confirmed that the Project was designed to achieve an ethane recovery rate of 90 per cent for volumes up to 400 MMcf/d (11.26 10^6 m^3/d) and 80 per cent for the additional 90 MMcf/d (2.53 10^6 m^3/d), giving a blended efficiency rate of over 88 per cent for the total 493 MMcf/d (13.89 10^6 m^3/d). Taylor based its recovery volume estimates on the application of the same recovery factor over a 24-hour operational time period for both the co-stream and the raw gas inlets and on the recovery of pure ethane, not specification ethane. Taylor added that the Project was also designed to recover all the available propane plus.

[4] A mixture of propane and butanes that may or may not include pentanes plus.

[66] Taylor asserted that the Project would increase Alberta's overall ethane and propane plus supply and that this could be very significant. Taylor argued that even if it accepted IPF's numbers for bypassed volumes at the Cochrane plant in 2008, it would have recovered incremental volumes of 2100 barrels per day (bbl/d) (334 m^3/d) of ethane and 850 bbl/d (135 m^3/d) of propane plus. This would have produced annual revenues of $40 million. Taylor further suggested that the total incremental recovery could amount to 8000-10000 bbl/d (1272-1590 m^3/d).

[67] Taylor concluded that, although gas flows at the Cochrane plant were hard to forecast, the Applications would not negatively impact Alberta's overall ethane and propane plus supply. Taylor insisted that the Project would result in incremental NGL recovery even if flows at the Cochrane plant were less than 1.4 bcf/d (39 10^6 m^3/d). It further asserted that this incremental NGL recovery could be very substantial if the future gas flows at the Cochrane plant remained at current levels.

[68] NOVA submitted that the liquids recovery at the Harmattan plant would be better than at the Cochrane plant as a result of its cryogenic trains operating at a higher efficiency. NOVA noted that the Cochrane plant uses a less efficient lean oil tower in conjunction with the cryogenic trains at high gas volumes. Nova also stated that IPF would need to invest considerable capital to match the efficiency of the Harmattan plant. In addition, NOVA believed that the recovery would be better at the Harmattan plant because the Cochrane plant sometimes bypassed some of the common stream gas, noting that this would happen less often in a co-streaming scenario.

[69] IPF submitted that it expected little incremental NGL recovery from the Project. It believed that with the flows reasonably expected at the Cochrane plant, the ethane recovery factor would be similar at both plants. IPF recognized that the Cochrane plant's lean oil tower was not as efficient as cryogenic units and stated that, given its own projections of gas flows on the Western Leg, this unit would not be needed. It further submitted that less gas actually bypassed the Cochrane plant than Taylor suggested. It further believed that bypass volumes would not change since the Harmattan plant was upstream and could not reprocess any gas bypassed by the Cochrane plant.

[70] BP argued that Taylor was inflating its ethane recovery factor from NGTL gas by blending it with raw gas and assuming an equivalent recovery factor for the blended stream. BP argued that in order to compare the Cochrane plant and Harmattan plant recovery factors and determine the amount of incremental ethane production, the Board must know the recovery factor for the NGTL gas in isolation at the Harmattan plant.

[71] DOW believed that there would be little or no incremental ethane recovery from the Project; merely a shift in the point of extraction.

Findings of the Board

[72] The Board finds that NGL recovery from the Western Leg is in the public interest. It recognizes that the Cochrane plant plays a critical role in ensuring a supply of ethane and other NGLs in Alberta. The Board also finds that Cochrane plant's continued operation is important for providing NGL feedstock to the Alberta petrochemical industry.

[73] The Board acknowledges that the volume of gas processed at the Harmattan plant typically would be less than the full capacity of the plant. The Board accepts Taylor's evidence that the recovery factor for ethane and propane plus at the Harmattan plant for volumes up to 400 MMcf/d (11.26 10^6 m^3/d) would normally be 90 per cent and 98 per cent respectively. The Board accepts IPF's historical ethane recovery efficiencies for the Cochrane plant, having regard for varying throughput volumes, and also accepts the recovery factor for propane plus as between 92 and 99 per cent.

[74] The Board believes that the future gas flow volumes on the Western Leg will significantly impact the potential incremental recovery of NGL if the proposed Project proceeds. The Board fully understands the limitations of predicting future gas flows and notes the wide variations of the forecasts presented in evidence. In that regard, the Board notes that while the TransCanada Pipelines Ltd. (TCPL) base case forecast is at the high end of the range, the Purvin & Gertz forecast is at the low end of the range. The Board further notes that the TCPL forecast assumes throughput will decline from 2.0 bcf/d (56.34 10^6 m^3/d) in 2010 to 1.4 bcf/d (39 10^6 m^3/d) in 2012; thereafter, the throughput rates are expected to return to levels reaching 1.7 bcf/d (47.89 10^6 m^3/d) by 2014 and declining slowly to 1.6 bcf/d (45.07 10^6 m^3/d) by 2020. Conversely, it notes that Purvin & Gertz expects throughput rates to decline significantly from 2010 levels, reaching 1.09 bcf/d (30.70 10^6 m^3/d) by 2015 and growing slowly thereafter to reach 1.23 bcf/d (34.65 10^6 m^3/d) by 2020.

[75] The Board expects the gas flows to be somewhere between the TCPL and Puvin & Gertz forecasts. The Board accepts Taylor's evidence that gas flows at the Cochrane plant have been higher than Kingsgate flows by close to 80 MMcf/d (2.25 10^6 m^3/d) based on 18 months of historical data. The Board also acknowledges that the El Paso Corporation's Ruby Pipeline, forecast to come on stream in 2011, will displace some volumes of gas currently flowing on the Western Leg, but not to the extent predicted by Purvin & Gertz. The Board further expects that British Columbia gas volumes and Alberta unconventional gas production will likely mitigate the decline in gas flows on the Western Leg, but not to the extent predicted by TCPL.

[76] Based on the evidence submitted by Purvin & Gertz, the Board considers that the ethane and propane gas compositions of 5.90 moles per cent and 1.60 moles per cent respectively are useful for evaluation purposes. Although somewhat leaner than what Taylor suggested, the Board finds that these values reflect its view that unconventional gas produced in British Columbia and Alberta may contain less liquids. The Board notes that streaming lean gas to intra-Alberta markets was raised as an issue at both the NGL Inquiry and North Central Corridor pipeline[5] hearing. Both suggested that gas compositions at border straddle plants will likely remain similar to current levels.

[77] The Board accepts that the Project's potential incremental ethane and propane plus recovery is sensitive to gas flows on the Western Leg and the Harmattan plant processing flows in excess of the Cochrane plant cryogenic trains capacity. The Board expects that the Project's potential incremental ethane and propane plus recovery would become significant at the upper range of gas flows on the Western Leg.

[5] AUC *Decision 2008-095: NOVA Gas Transmission Ltd., North Central Corridor, North Star and Red Earth Sections, Meikle River Compressor Station, Application for Permit and Licence, Application No. 1551990*, October 10, 2008.

[78] The Board finds that at the lower end of likely gas flows on the Western Leg, the Project may have only a small positive incremental effect on NGL Recovery in Alberta. However, it also finds that it is unlikely the Project would result in a detrimental effect on overall Alberta NGL production. At a minimum, the Board expects that the Project would not diminish Alberta NGL recovery and would present a significant upside for future incremental NGL recovery if current gas flows on the Western Leg continue at recent rates or increase above those rates.

[79] The Board notes that although Taylor submitted that it could recover liquids from gas historically bypassed at the Cochrane plant, it believes that this would only be feasible during planned outages at the Cochrane plant and would be complex to arrange and execute. However, the Board finds that this might also provide some incremental recovery of NGL.

[80] The Board finds that the Project's potential for increased NGL recovery from co-processing gas that would otherwise flow to the Cochrane plant and processing bypassed gas during the Cochrane plant planned outages is significant to its overall assessment of the public interest since the majority of the incremental recovery would be ethane and would serve an important role as a feedstock to the petrochemical industry.

5.2.2 Impact on Energy Efficiency

[81] Taylor suggested that energy use represented less than 15 per cent of the total cost incurred by straddle plants in recovering NGL and that the majority of this cost (around 85 per cent) was associated with gas shrinkage. It indicated that the cost associated with energy use varies with the volume of gas processed. It argued that any increase in this cost would be masked by changes in gas price. Taylor stated that although approval of the Applications would increase energy consumption at the Harmattan plant and decrease it at the Cochrane plant, the overall impact on energy efficiency in processing NGL would be minimal.

[82] NOVA suggested that energy efficiency would increase when both the Harmattan plant and the Cochrane plant process peak flows and indicated that some inefficiency was unavoidable when competition was allowed.

[83] IPF suggested that 75 per cent of the total operating cost of an extraction facility was from energy use, noting that each of the three cryogenic process trains at the Cochrane plant used large gas compressors that consumed the same amount of energy regardless of inlet gas supply. IPF argued that an increase in energy use at the Harmattan plant would not decrease energy use at the Cochrane plant, except in cases where reduced flow on the Western Leg shuts down an entire processing train. IPF submitted that Project approval would increase energy use per barrel of NGL recovered because, most of the time, compressor equipment at both plants would operate below designed capacity and not at peak efficiency.

Findings of the Board

[84] The Board recognizes that energy consumption will increase at the Harmattan plant if it approves the Applications. It also recognizes that some reduction in energy use at the Cochrane plant is possible, although it would not be directly proportional to the increase in energy consumption at the Harmattan plant, which would imply some level of inefficiency.

[85] The Board notes that in the Solex decision the panel included energy costs in its assessment of the project's possible benefits to the public interest as the residue gas from the Harmattan plant noted in that decision was proposed to be delivered upstream of the Cochrane plant. However, the subject Applications propose that the residue gas from the Harmattan plant be delivered downstream of the Cochrane plant; therefore, the Board does not consider the energy cost of processing this gas at both plants a factor in its assessment of the public interest in this case.

[86] The Board also notes that although an approval of the Applications would result in some inefficiencies in energy use, it finds them to be insignificant. The Board expects operators at both plants to strive to reduce any inefficiency. It anticipates that these inefficiencies will not negatively impact the petrochemical industry in Alberta or the public interest of Albertans.

5.2.3 Other Aspects of Resource Recovery

[87] Taylor submitted that the Project would extend the economic life of the Harmattan-Elkton gas plant, enhancing raw gas exploration and production in the Harmattan capture area. It also suggested that the Project could potentially increase producers' revenue from NGL recovery, providing them with an incentive to develop more raw gas.

[88] IPF expressed doubt that the Project would have any positive impact on gas exploration and production.

Findings of the Board

[89] While the Board acknowledges that extending the economic life of the Harmattan-Elkton gas plant might provide some incentive for greater gas exploration and production in the Harmattan capture area, it is likely that such impact would be minor and would not be a significant factor in determining the public interest.

5.3 Impacts on the Existing Straddle Plant System

[90] Taylor confirmed that it would deliver residue gas downstream of the Cochrane plant, avoiding the dilution of the plant's inlet gas. It added that it fully understood the Project's potential impact on the Cochrane plant in terms of competition for extraction rights. Taylor indicated that the actual amount it would be able to process at the Harmattan plant depended on its ability to successfully compete for extraction rights. Similarly, Taylor also noted that the Project's impact on the Cochrane plant would depend on IPF's ability to compete for extraction rights. Taylor further noted that even if it were to use all the forecasted unused capacity at the Harmattan plant, a substantial amount of gas would continue to be available for processing at the Cochrane plant.

[91] Taylor argued that although the CBA submitted by IPF discussed the Project's impacts on the straddle plant system, it did not assess the impact on the Cochrane plant itself. Taylor submitted that to assess the viability of the Cochrane plant in relation to the Applications, IPF would have needed to conduct and submit a private financial analysis of the Cochrane plant. Taylor further noted that the CBA included neither an assessment of the viability of the straddle plant system generally, nor of the Cochrane plant specifically.

[92] NOVA argued that the important issue was whether creating competition on the Western Leg would justify diverting a volume of gas away from the Cochrane plant. It submitted that Taylor was responding to a need for more ethane extraction, better liquids service, and more competitive pricing than that currently offered by the Cochrane plant. The fact that NOVA was making arrangements with Taylor while being the majority purchaser of ethane from the Cochrane plant, was evidence of the market power that IPF has the ability to wield. NOVA argued that approval of the Project could affect up to 30 per cent of the Cochrane plants current volumes, depending how well IPF competes. It indicated that IPF had not presented evidence suggesting the introduction of competition would affect the viability of the Cochrane plant.

[93] IPF submitted that the existing straddle plant system was already underused and that with a forecast showing decreasing future utilization, there was already pressure on the overall viability of the system. IPF also submitted that the Applications were likely the first of many such applications that would have a further detrimental impact on existing straddle plants. IPF submitted that approval of the Applications would reduce the advantage of economies of scale offered by the straddle plants, and may cause an increase in the cost of ethane, resulting in a negative impact to the petrochemical industry.

[94] In its CBA, IPF suggested that substantial costs would be incurred at the Harmattan plant from greenhouse gas emissions, fuel, electricity, operations, maintenance, and transportation. It submitted that although the entire revenue stream for any given volume transferred from the Cochrane plant would shift to the Harmattan plant, the Cochrane plant would not experience a corresponding reduction in costs. It further noted that given its configuration the Cochrane plant would experience a significant net loss. It noted the CBA also indicated that the negative impact at the Cochrane plant would be much greater than any positive benefit to the Harmattan plant. IPF also noted that the CBA assessed the impact of conducting co-streaming at the Jumping Pound plant, pointing out that while the capital costs associated with that plant's conversion were lower, it resulted similarly in a net negative impact to the Cochrane plant.

[95] IPF noted that raw gas processing plants were significantly underused in the province. It submitted that this challenged plant operators to either acquire new sources of raw gas or seek consolidation opportunities and risk losing operational control. IPF submitted that the consequences of using field plants for co-streaming could have a significant effect on the straddle plant system as a whole.

[96] IPF suggested that 400 MMcf/d (11.26 10^6 m^3/d) of gas diverted to the Harmattan plant would result in a 30 per cent decline in gas processed by the Cochrane plant, which projections indicated would increase as gas flows decline. Consequently, IPF argued that the potential financial loss of $630 million in revenue was a threat to the viability of the Cochrane plant.

Findings of the Board

[97] The Board notes the parties' agreement that the Project will have an effect on the Cochrane plant. The Board agrees with the position taken by Taylor and NOVA that the impact on IPF and its Cochrane plant would depend on Taylor's ability to negotiate extraction contracts with shippers currently contracted with IPF. Further, the Board notes that the negative net economic impacts identified in IPF's CBA appear to directly impact only the Cochrane plant and do not extend to the rest of the straddle plant system.

[98] The Board notes that in the NGL Inquiry report, emphasis was placed on the threat to the economic viability of any impacted plant. The Board continues to find this concern appropriate. Although the financial impact on the Cochrane plant may be significant, the Board sees no evidence of an imminent threat to the viability of the Cochrane plant if the Project proceeds and Taylor successfully competes for extraction rights. Notwithstanding what happens at the Harmattan plant, no evidence indicates that the Cochrane plant would not continue to be viable as a straddle plant for the foreseeable future. Given that IPF has existing contracts for extraction rights with shippers, the challenge in making the Harmattan plant economically viable would fall on Taylor and its ability to acquire gas to process.

[99] The Board notes the parties' concern that approval of the Project would set a precedent. However, the Board finds that each application for co-streaming needs to be examined in relation to the unique characteristics of the facility, as well as the prevailing circumstances at the time of the application. While the Board remains of the view that opportunities for co-streaming are limited, it recognizes that the impacts of further co-streaming or side-streaming could become more serious in the future if more of these projects are proposed and expects to examine this matter carefully for any future applications.

5.4 Availability of Processing Capacity for Raw Gas Production

[100] Taylor acknowledged that the Harmattan plant was designed and built for raw gas processing and that several of its functional units would only be economically viable for that purpose. It further stated that processing raw gas represented a significant financial return and that it would prefer processing raw gas over NGTL gas regardless of any regulatory requirement. Taylor submitted that the Project would benefit raw gas producers in the area by extending the lifespan of the Harmattan plant and enhancing the recovery of reserves in the area.

[101] Taylor indicated that it did not plan to fill the Harmattan plant with co-streamed gas from NGTL and submitted that additional raw gas would be available to the plant in small, readily manageable amounts. Taylor asserted that it would set up a portion of its contracts with co-stream shippers in such a way that they could be interrupted if a need to process raw gas arose. Further, it suggested that if the Harmattan plant were to function at capacity, it would decrease the volume of NGTL gas processed and accept penalties from non-interruptible contracts for co-stream processing in order to process raw gas. Taylor argued that larger volumes of raw gas, typically seen with plant consolidations, normally took considerable time to develop and that it would be prepared to make the necessary arrangements to accept them.

[102] Taylor asserted that the Harmattan plant design would permit the plant to be competitive in attracting gas with lower levels of H_2S and higher liquids content. It submitted that for higher-content H_2S gas, the Harmattan plant might require modifications that would make attracting those volumes more challenging. Taylor indicated that as a midstream operator, its focus was on making the plant competitive with other processing alternatives whereas the interests of a producer-owner would lie more in maintaining capacity to accommodate its own future drilling activities.

[103] Taylor stated that the Applications reflect a pursuit of economic diversity and growth. It submitted that processing of raw gas would continue to be preferential and that spare capacity would be used for NGTL gas. Taylor stated that, even in the unlikely scenario of having its plant

operate at capacity in processing raw gas, it would accept a zero per cent return on investment for the co-streaming project while it processed that raw gas.

[104] Taylor pointed out that it has invested $100 million in the Harmattan plant to enhance raw gas recovery—through CO_2 recovery, increased NGL fractionation and terminal storage, additional raw gas gathering and other infrastructure to tie-in new wells, and plant consolidation—none of which was done to attract NGTL gas. Taylor asserted that the rationale for the Project was that there was insufficient incremental raw gas in the area to fill the spare capacity of its plant. Taylor reiterated that the foundation of the Harmattan plant was raw gas processing and indicated that it would be prepared to satisfy the ERCB on an annual basis that it was making reasonable efforts to fully use the plant for raw gas processing.

[105] IPF suggested that denial of the Solex application and closure of the previous Taylor application resulted in increased volumes of raw gas being processed at the Harmattan plant. IPF suggested the Harmattan plant should continue to pursue consolidation opportunities instead of co-streaming, arguing that approval of the Applications would create a disincentive for Taylor to seek new raw gas. IPF further argued that since the Project was being paid for by NOVA on a cost-of-service basis, pursuing additional raw gas would place Taylor in a conflict of interest.

[106] BP suggested that Taylor did not support its claim of enhanced resource conservation. BP argued that, just as the denial of the Solex application resulted in a focus on raw gas processing and plant consolidation, a denial of these Applications would do the same. BP argued that by pursuing co-streamed gas Taylor would be unlikely to compete for raw gas processing and that any efforts it took to demonstrate compliance with a condition of the Applications in this regard would be questionable. BP submitted that co-streaming at the Harmattan plant would allow Taylor to replace raw gas with NGTL gas and would prove to be a disincentive to raw gas conservation and plant consolidation.

Findings of the Board

[107] The Board considers the availability of capacity for raw gas processing to be a particularly important matter in terms of the development and conservation of resources, and therefore, in terms of the Alberta public interest. The Board accepts Taylor's position that raw gas processing would likely be a financially preferable use of its infrastructure over processing co-streamed gas. The Board also agrees that plant consolidation is a complex business decision with significant variables that would need to be aligned before consolidation could be realized. The Board is not prepared to provide further direction regarding plant consolidation beyond acknowledging that it is supportive of such initiatives.

[108] The Board recognizes that, currently, conventional resource development within the Harmattan catchment area appears to be in decline. The Board is not aware of any unconventional resource development in the area and no evidence was presented that would suggest it is likely to occur. The Board would be concerned about raw gas being denied access to the Harmattan plant if it were at or near capacity with co-streamed gas. It does not believe that this concern should lead to a denial of the Applications as suggested by several of the interveners. Rather, the Board intends to condition any approval to ensure that ongoing preference is on the processing of raw gas over NGTL gas by requiring Taylor, or its successor in ownership of the Harmattan plant, to file annual reports with the ERCB on the volume of raw gas processed, the volume of raw gas offered or nominated, and the disposition of raw gas

nominations. The report would also include any ongoing efforts to consolidate processing operations in the Harmattan catchment area. Additionally, the Board would require Taylor to demonstrate that the current financial incentive to process raw gas over NGTL gas continues to exist.

5.5 Unnecessary Proliferation of Facilities

[109] Taylor submitted that, since pipelines are necessary in any co-streaming project, there would be no unnecessary proliferation of facilities. Taylor noted that it had assessed opportunities for using existing facilities and pipelines and stated that it had discussions with NGTL about leasing an existing NGTL pipeline for part of the route to the Cochrane plant. It further stated that it will continue to pursue this option if the Applications are approved. Taylor noted that it made considerable effort to address landowner concerns and reduce the social, land use, and environmental impacts of the proposed pipelines.

[110] IPF pointed out that the Board's position on proliferation referred not only to facilities but also to pipelines. IPF submitted that the Applications proposed new and unnecessary pipelines at significant environmental and social costs.

[111] BP submitted that effective resource use and unnecessary facility proliferation were both factors related to the statement in the NGL Inquiry report that new green-field facilities may not be in the public interest. BP noted that the proliferation factor was most obvious in the way Taylor had routed the Residue Gas Pipeline. BP disagreed with Taylor's assertion that there was no plant proliferation as long as the proposed amendments remained within the Harmattan-Elkton gas plant's existing boundaries. BP pointed out that in previous decisions the Board had denied pipeline applications despite a lack of evidence that any directly-affected landowner had an issue with duplicate facilities. BP believed that in cases where pipelines were truly needed, the environmental consequences of their construction and ultimate reclamation were considered acceptable because the pipeline was in the public interest. BP argued that this was not the case with the Applications.

[112] Although Mr. Mork and Mr. Tarjan did not specifically talk about proliferation, they did question the need for the pipeline and raised concerns regarding its impacts, both of which are noted in Section 4.4: Landowner Concerns.

Findings of the Board

[113] The Board's policy guidelines, requirements, and expectations for pipeline and facility applications, including matters related to the issue of proliferation, are outlined in *Directive 056: Energy Development Applications and Schedules*, *IL 91-01: Applications for Approval of Gas Processing Schemes*, *Policy on Plant Proliferation,* and *ID 2001-03: Sulphur Recovery Guidelines for the Province of Alberta*.

[114] The Board notes that the intent of this policy and its objective with respect to plant proliferation, is to avoid unnecessary duplication of processing facilities, encourage the use of existing facilities and infrastructure wherever practical, and ensure that applicants take into account the needs of area producers when determining a facility's size. The Board expects applicants to investigate the use of all existing facilities in the area that afford viable alternatives. The Board notes that its policy on avoiding plant proliferation in *IL 91-01* applies largely to new

oil and gas facilities. The Board notes that as the Project's facility application amends an existing facility and does not result in any safety or environmental issues, proliferation requirements are of relatively minor importance.

[115] The Board finds that the statements regarding unnecessary facility proliferation from the NGL Inquiry report also apply to pipelines as well as plants. With respect to new pipelines, the Board expects applicants to demonstrate that development can occur in a manner that minimizes surface disturbance, overall environmental impacts, competing land uses, and public safety. The Board notes that Taylor proposes that the Residue Gas Pipeline follow an existing ROW for the majority of the route and that, aside from IPF's objection, there are no outstanding objections from landowners on the ROW. Furthermore, the Board is satisfied that Taylor has assessed existing infrastructure in the area as demonstrated by its discussions with NGTL about leasing the existing NGTL pipeline.

[116] Although Taylor could have routed the Residue Gas Pipeline more directly, the Board is satisfied that its pipeline application is acceptable from environmental, technical, and safety standpoints. The Board accepts that the proposed pipelines are integral components of the Project and will not have a significant negative impact on the public interest.

5.6 Meaningful Competition

[117] Taylor indicated that since the Cochrane plant is the only one that reprocesses gas on the Western Leg, its operator is the only party able to acquire extraction rights on that flow path and decide how and to whom the recovered NGL would be sold. Taylor submitted that the intent of the Applications was to introduce competition for both purchasing extraction rights and selling extracted NGL. Taylor indicated that introducing a new entrant into a market would always result in some transfer of functions from one party to the new party, but that the result would be improved competition. Taylor suggested that its willingness to enter the market and acquire market share through different contract terms would provide meaningful competition, as would its ability to offer services currently unavailable at the Cochrane plant, such as upgrading NGL into specification products.

[118] Taylor submitted that its desire to compete would encourage it to focus on alternative services, operating efficiencies, and costs. Taylor argued that the Applications would help level the playing field, an issue identified during the Solex hearing, and compete fairly with the operator of the Cochrane plant. Taylor pointed out that under the current convention only the delivery shippers had the right to exercise extraction rights. Taylor submitted that the delivery shippers' only choice on the Western Leg currently is to use the Cochrane plant or bypass the gas.

[119] Taylor argued that IPF demonstrated monopolistic behaviour in not refuting the fact that its extraction premium paid at the Cochrane plant was less than that at the Empress plant. Taylor suggested that IPF could compete, but preferred not to, and suggested that truly competitive extraction premiums would ensure continued success in attracting gas to the Cochrane plant.

[120] Taylor argued that the Board often relied on business decisions made in the marketplace to ensure economic, orderly, and efficient development of resources. It further pointed out that introducing competition on the Western Leg may encourage IPF to improve efficiency at its Cochrane plant. At the Solex hearing, IPF identified criteria that could indicate meaningful

competition. Taylor maintained that the Applications met some of these criteria. It pointed out that the supporters of the Applications expressed the need for competition and an increase in the value of extraction rights. Taylor submitted that comments from IPF about shutting down its Cochrane plant were additional evidence that competition from the Harmattan plant would be meaningful.

[121] Taylor pointed out that the Board tends not to impose its views on a market with sophisticated participants able to operate in that environment. Taylor pointed out that approval of the Applications was not a guarantee of business success and that it would need to successfully compete with IPF for extraction rights. Taylor further suggested that to function in a market with excess capacity, a new entrant must be competitive with the incumbents and that those incumbents could not rely on past performance to ensure future success. Taylor added that in the functioning of a normal market, there should be no need to protect incumbents from either excess capacity or new entrants.

[122] NOVA confirmed that it would purchase ethane and propane plus from the Harmattan plant and was supportive of competition. It pointed out that the Applications would allow for fair competition, benefiting the producers, the petrochemical industry, and Albertans. It further stated that IPF's suggestion that NOVA was attempting to become a competitor when it was also a customer of IPF was inaccurate. It noted that straddle plant customers have multiple interests and that there was no reason to protect the Western Leg from competition.

[123] NOVA noted that allowing competition on the Western Leg could potentially increase ethane production and access to fractionated propane plus, both of which were in the public interest. NOVA submitted that, regardless of its position as the majority purchaser at the Cochrane plant, it supported the Applications to address the need for competition. NOVA noted that competitive operations at the Empress plant allow the market to function. It further stated that, by analogy, unused capacity at both the Harmattan plant and the Cochrane plant was necessary for competition to exist on the Western Leg.

[124] On behalf of IPF, Dr. Mansell suggested that for competition to be meaningful there must be clear evidence that a new competitor would increase provincial wealth and thus benefit the public interest. He asserted that the Project was simply a transfer of function from one operator at one location to another operator at a different location. He submitted that a consideration of competition should be conducted in the context of applicable regulations, rules, and conventions and that there needed to be a level of fairness to ensure that competition serves the public interest. Dr. Mansell argued that the Applications would not result in significant incremental production volumes of ethane or propane plus and therefore, would not increase the overall supply of NGL in a meaningful way.

[125] IPF argued that adoption of the NGL Extraction Model (NEXT) would allow receipt shippers to contract with any straddle plant for extraction rights regardless of flow path, thus further diminishing the case for meaningful competition from co-streaming. IPF further noted that TCPL, the proponent of NEXT, was firm in its view that NEXT would lead to greater competition between straddle plants.

[126] Taylor submitted that export delivery shippers had the extraction rights but could not take advantage of field extraction or seek extraction at another straddle plant under the current conventions. Taylor further noted that on the Western Leg, the Cochrane plant represented the

only opportunity for the delivery shippers to contract for extraction. Taylor submitted that even if the NEXT system was implemented on NGTL, the Cochrane plant would still be in a position to offer lower value for NGL since the relative value of NGL extraction rights at the Empress plant and the Cochrane plant would not likely impact gas flow. Taylor stated that under the NEXT protocol, receipt shippers would be able to contract for extraction at the Empress plant up to the limit of the actual flow of those plants. Beyond those flows, it noted that shippers would need to arrange for extraction at the Cochrane plant, but that IPF would not be obligated to pay the same premium as at the Empress plant. It argued that the existence of the Harmattan plant would ensure maximization of extraction premiums under those circumstances.

[127] Dr. Mansell set out a series of tests for meaningful competition that he suggested would be somewhat dependant on the specific circumstances surrounding the Applications. He asserted that the Applications failed to meet these tests for the following reasons: no significant volume of gas could be processed at the Harmattan plant that was not currently being processed at the Cochrane plant; the technical efficiency for extracting ethane was only marginally higher at the Harmattan plant than at the Cochrane plant; the Project would result in greater emission costs and other environmental liabilities; the possibility of higher extraction premiums would not result in increasing gas or liquid supply for the province; and there was no evidence to show that the Harmattan plant would reduce the cost of raw gas processing or increase the amount of raw gas recovered.

[128] Taylor suggested that the tests set out by Dr. Mansell were specifically designed to prevent approval of co-streaming applications and argued that co-streaming was simply a concept to process gas that would otherwise be processed at an existing straddle plant. It submitted that the nature of such a project would ultimately result in that gas not having to be reprocessed by a straddle plant. Taylor stated that it was not in a position to direct less efficient straddle plants to close and could only use its high extraction efficiency to compete for extraction rights. Taylor argued it was irrelevant to include a test for how market efficiency for NGL extraction may result in producers expanding the gas supply as a determinant of the suitability of a co-streaming proposal. Taylor submitted that these tests would provide little value to the Board in its assessment of the Applications.

Findings of the Board

[129] The Board interprets the term meaningful competition, as used in the NGL Inquiry report, as the existence of an environment that would provide the opportunity for the parties with extraction rights to get the most favourable terms for those rights. The Board believes that the only way this could occur would be for more than one extraction facility to exist on the same flow path. The Board does not agree that the use of other pipelines, extraction in the field, or NOVA Inventory Transfer sales represent real options for gas shippers on the Western Leg with extraction rights.

[130] The Board acknowledges that comments were made regarding the potential impact of the NEXT convention on the need for competition. However, it notes that during the proceeding there was no evidence put forward indicating that a change in the contracting convention on the NGTL system to NEXT is forthcoming. Although the Board believes that implementing a receipt point convention such as NEXT would likely result in a reduced need for co-streaming, the Board is not of the opinion that such a convention would, or should, preclude co-streaming.

[131] The Board notes Taylor's argument that the Board often relies on business decisions to ensure appropriate developments. Although the Board agrees that, in certain cases, it uses a market data and analysis in making its decision, it recognizes that market forces do not always prevail where serious negative impacts on the environment or on other elements of the public interest are likely.

[132] The Board notes Dr. Mansell's evidence that meaningful competition must provide an overall gain in the public interest, such as more or better product or improved social welfare; otherwise, there is simply a transfer of wealth. However, as already discussed, the Board believes that if the Project proceeds, it will likely improve NGL recovery

[133] The Board notes Dr. Mansell's suggestion that given competition for extraction rights exists only at the Empress plant, it is not the norm for the province. While the Board agrees that this may be the case, it notes that a considerable portion of the gas produced in Alberta flows through the Empress plant. More importantly, the Board does not see a lack of competition in some locations as reason for not allowing it on the Western Leg. The Board takes this position because it believes competition for extraction rights on the Western Leg has the potential to increase efficiencies, innovations, volumes of recovered NGL, and fairness to gas shippers. For these reasons and in the specific circumstances of this case, the Board considers the matter of competition to be extremely important in terms of the public interest; without the proposed Project there will continue to be no meaningful competition on the Western Leg.

5.7 Industry Support

[134] Taylor noted that it had received industry support for the Applications as demonstrated by letters from producers and delivery shippers, extraction rights contracted to date, and its commercial arrangement with NOVA. Taylor further noted that the support letters point to the need for competition for NGL extraction on the Western Leg and to the benefit to raw gas producers in extending the economic life of the Harmattan plant. Taylor confirmed that, despite lengthy delays in the application process and uncertainty regarding approval of the Applications, it had acquired rights from a shipper to process 100 MMcf/d (2.82 10^6 m^3/d) of NGTL gas at the Harmattan plant. Taylor also confirmed that it had entered into a commercial arrangement with NOVA and that this satisfies the factor requesting industry support in the NGL Inquiry report. Taylor stated that it had informed all the producers in the Harmattan plant about the Project and that it did not receive any objections from these parties. Taylor argued that its commercial arrangement with NOVA, which is prepared to pay on a cost-of-service basis over 20 years, is clear evidence for market-based tests that this is a bona fide project.

[135] NOVA recognized that the commercial support that underpins the Applications is the memorandum of understanding signed between AltaGas Ltd. and NOVA. It noted that this agreement would offer NOVA access, not only to ethane supply, but also to fractionated propane plus, an important feedstock for its petrochemical operations. NOVA further noted that its support for the Project together with support from other producers and shippers was evidence that the Project had commercial merit by increasing competition. NOVA submitted that its 20 year cost-of-service arrangement for the full production of the co-stream facilities and well-advanced definitive agreements are compelling evidence that the Applications have sufficient industry support.

[136] IPF acknowledged the support for the Project from a number of shippers, marketers, and producers but noted that none offered any contractual commitment or appeared at the hearing. IPF questioned the significance of Taylor's contract with a shipper for 100 MMcf/d (2.81 10^6 m^3/d) since it did not submit the details of the contract. IPF noted that Taylor had already lost contracts for some of the previously contracted volume (115 MMcf/d or 3.24 10^6 m^3/d) of NGTL gas. IPF submitted that it considered the arrangement between Taylor and NOVA as nothing more than a memorandum of understanding that would be subject to a negotiation of definitive agreements, a favourable decision on the Applications, and the approval of the respective boards of directors.

[137] BP noted that Taylor had lost industry support since the Solex proceeding, adding that the subject Applications have no real competitive or industry support. BP submitted that meaningful competition and industry support are related and that if there were a need for meaningful competition on the Western Leg, there should be much more than 100 MMcf/d (2.81 10^6 m^3/d) of gas supply contracted with a single shipper.

Findings of the Board

[138] The Board received letters from several parties that indicated support for the Applications but were not actively involved in the proceeding. It notes that support letters were submitted by Bonavista Petroleum Ltd. (current and potential extraction rights owner), NV Energy (extraction rights owner), Tenaska Marketing Canada (extraction rights owner), Canadian Natural Resources (receipt and delivery shipper on the NGTL system), Sacramento Municipal Utility District (not-for-profit utility district transporting gas from Canada to produce power for its customers), and Tidal Energy Marketing Inc. (current and potential buyer of NGL). It also notes that these Project supporters pointed out the need for processing alternatives to the Cochrane plant on the Western Leg to provide competition and potentially increase the value of the extraction rights on the NGTL system.

[139] The Board acknowledges Taylor and NOVA's evidence on the contractual arrangement between them, recognizing that the intent of the memorandum of understanding has not yet been converted to a contract. The Board is satisfied that Taylor has secured support and received commitment from NOVA to purchase the ethane supply and the fractionated propane plus.

[140] The Board also notes Taylor's evidence that it acquired rights from a shipper to process 100 MMcf/d (2.81 10^6 m^3/d) of NGTL gas at the Harmattan plant. Although the contractual details have not been made public, the Board believes that this is an indication of potential future contracts.

[141] The Board recognizes that the support for the Project Taylor has obtained to date is not substantial but accepts that its level of support is reasonable given the history of the Project and the uncertainty of regulatory approval. The Board is satisfied that there is sufficient support for the Applications to demonstrate the viability of the Project.

6 CONCLUSIONS AND DECISIONS

[142] In the preceding sections, the Board reviewed a number of factors with the potential to impact its assessment of whether approval of the Applications is in the public interest. In this section, the Board summarizes its conclusions with respect to these factors.

[143] The Board understands that if the Project proceeds, it would likely increase the Cochrane plant's unused capacity. The Board notes that its main concern is the negative impact on the public interest that would occur if the economic viability of the Cochrane plant were threatened and that no evidence was put before the Board suggesting that this would be the case. Although impacts on the Cochrane plant may not be positive from a public interest viewpoint, it finds that in this particular circumstance, those impacts do not cause the Board to deny the Applications.

[144] The Board recognizes that the Residue Gas Pipeline constitutes some degree of facility proliferation. However, it also acknowledges that the Residue Gas Pipeline is necessary for reducing the impact of the Project on the Cochrane plant. The Board is satisfied that the proposed pipelines are acceptable from an environmental, technical, and public safety viewpoint. In addition, it notes and accepts Taylor's commitment to consult with landowners in an effort to mitigate their concerns. For these reasons, the Board concludes that any negative impacts from the proposed pipelines would be relatively minor.

[145] The Board finds that the Project will provide meaningful competition for extraction rights on the Western Leg. It believes that this competition, particularly because it would be the first on this system, would be beneficial to the public interest. Additionally, the Board concludes that sufficient industry support shows that the Project would be viable.

[146] The Board also finds that resource conservation and effective resource use are important elements of the public interest, particularly with respect to the Project's impact on total NGL recovery. The Board concludes that the Project would likely increase total NGL production in Alberta. It notes that this is significant as the production increase would mostly be ethane, which is important to the petrochemical industry in Alberta. The Board recognizes that an increased NGL recovery may lead to some energy use inefficiencies; however, the Board considers the impact to be minimal and outweighed by the increased recovery of NGL.

[147] Approval of the Applications, in the Board's view, may potentially increase the exploration for and production of gas in the Harmattan capture area by extending the life of the Harmattan-Elkton gas plant. The Board recognizes that this impact would be minor in nature.

[148] The Board is concerned that with approval of the Project, the priority of processing raw gas over NGTL gas may not continue at the Harmattan plant. The Board notes and accepts Taylor's commitment to continue to give priority to processing raw gas and further understands that Taylor currently has an economic incentive to do so. However, notwithstanding this economic incentive, the Board conditions the approval to ensure that processing of raw gas will continue to receive priority on an ongoing basis.

[149] The Board, based on its examination and consideration of all the evidence, concludes that approval of the Applications is in the public interest. The Board hereby approves Applications No. 1612382 (see footnote 1) and 1618312, subject to the condition outlined in this decision report and summarized in Appendix 1 and the commitments made by the applicant.

Dated in Calgary, Alberta, on December 7, 2010.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by<

B. T. McManus, Q.C.
Presiding Member

<original signed by<

G. Eynon, P.Geol.
Board Member

<original signed by<

G. J. DeSorcy, P.Eng.
Acting Board Member

APPENDIX 1 SUMMARY OF CONDITIONS AND COMMITMENTS

Conditions generally are requirements in addition to or otherwise expanding upon existing regulations and guidelines. An applicant must comply with conditions or it is in breach of its approval and subject to enforcement action by the ERCB. Enforcement of an approval includes enforcement of the conditions attached to that licence. Sanctions imposed for the breach of such conditions may include the suspension of the approval, resulting in the shut-in of a facility. The conditions imposed on the licence are summarized below.

The Board notes that Taylor Processing Inc. has made certain commitments to parties involving activities or operations that are not strictly required under ERCB requirements. These commitments are separate arrangements between the parties and do not constitute conditions to the ERCB's approval of the Applications. The commitments that have been given some weight by the Board are summarized below.

The Board expects the applicant to comply with commitments made to all parties. However, while the Board has considered these commitments in arriving at its decision, the Board cannot enforce them. If the applicant does not comply with commitments made, affected parties may request a review of the original approval. At that time, the ERCB will assess whether the circumstances regarding any failed commitment warrant a review of the original approval.

CONDITIONS

The Board conditions the Applications to ensure that priority is given to raw gas processing at the Harmattan plant, requiring Taylor to file an annual report to the ERCB that includes

- the volume of raw gas processed,
- the volume of raw gas offered or nominated,
- how raw gas nominations had been disposed of,
- details of any ongoing efforts to consolidate processing operations in the Harmattan catchment area, and
- verification that the current financial incentive to process raw gas over NGTL gas continues to exist.

COMMITMENTS BY TAYLOR

In its submission and during the proceeding, Taylor committed to the following:

- to consult with landowners respecting construction schedules, work hours and other concerns;
- to give priority to the processing of raw gas, rather than NGTL system gas at the Harmattan plant; and
- to minimize impacts on the environment in the construction and operation of the new pipelines.

APPENDIX 2 ABBREVIATIONS AND DEFINITIONS

Abbreviation	Name in Full
AEGS	Alberta Ethane Gathering System
BP	BP Canada Energy Company and BP Canada Energy Resources Company
CBA	cost benefit analysis
CO_2	carbon dioxide
Cochrane plant	Cochrane Liquid Extraction plant (located at LSD 16-16-026-04W5M)
Co-streaming	Taking gas from the NGTL System upstream of an existing straddle plant, extracting NGL from the gas, and injecting the dry residue gas downstream of the straddle plant.
DOW	DOW Chemical Canada ULC
ERCB	Energy Resources Conservation Board
EUB	Alberta Energy and Utilities Board
Harmattan plant	Harmattan-Elkton gas plant (located at LSD 9-27-31-4W5M)
HVP	high vapour pressure
H_2S	hydrogen sulphide
IPF	Inter Pipeline Fund
NEXT	NGL EXTraction Model
NGL	Natural gas liquids including ethane, propane, butanes, pentanes plus, and mixtures of the components.
NGL Inquiry report	*Decision 2009-009: Inquiry into Natural Gas Liquids (NGL) Extraction Matters*
NGTL	NOVA Gas Transmission Ltd.
NOVA	NOVA Chemicals Corporation
Purvin & Gertz	Purvin & Gertz, Alberta Natural Gas Supply and Exports (August 9, 2010)
propane plus	A mixture of propane and butanes that may or may not include pentanes plus.

ROW	right-of-way
Side-streaming	Taking gas from the NGTL System upstream of an existing straddle plant, extracting NGL from the gas, and injecting the processed gas into the commingled stream upstream of the straddle plant.
Solex	Solex Gas Processing Corp.
Solex Decision	*Decision 2004-006: Solex Gas Processing Corp., Application to Amend a Gas Processing Scheme and for Natural Gas Pipelines,* January 27, 2004
Strachan Decision	*Decision 1996-07: Gulf Canada Resources Limited, Strachan Gas Plant Approval Amendment, NGTL Gas Sidestreaming Application,* September 26, 1996
Taylor	Taylor Processing Inc.
TCPL	TransCanada Pipelines Ltd.
Western Leg	Western Alberta System
bbl/d	barrels per day
bcf/d	billion standard cubic feet per day 1 bcf = 28.2 10^6 m^3
km	kilometre
LSD	Legal Subdivision
mm	millimetres
MMcf/d	million cubic feet per day
10^6 m^3/d	million cubic metres per day

APPENDIX 3 RECOMMENDED FACTORS IN THE NGL INQUIRY REPORT

Excerpt from EUB Decision 2009-009 – pages 105-107

Accordingly, the Board suggests that in addition to any specific application requirements established from time to time by the regulator, the following general factors should be addressed in any future co-streaming or side-streaming application.

- **The availability of existing unused processing capacity at the straddle plants.** The existence of unused processing capacity at the straddle plants would make an application to construct a new green-field facility to co-stream, and particularly to side-stream, unlikely to be supportable in the public interest.

- **Availability of processing capacity for raw gas production.** Field plants were constructed to process raw gas and should continue to provide processing service for raw gas production in the supply area to support efficient recovery of gas reserves. The Board considers it important that co-streaming or side-streaming at field plants not impair the availability of processing capacity for raw gas produced in the plant's supply area and consequently views that such plants should provide preferential access for processing raw gas relative to Common Stream gas.

- **Resource conservation and effective utilization of resources.** This requires forecasting of gas supply and throughput on the relevant sections of the NGTL System in order to predict the impact of the project on total NGL recovery. The impact on the recovery of certain NGL, particularly ethane, would be particularly important given its role as feedstock to the petrochemical industry. The Board would be concerned if co-streaming or side-streaming projects resulted in significant negative impacts on overall Alberta ethane and propane plus NGL recovery. While the Board is not prepared to recommend specific minimum ethane and propane plus NGL recovery factors for proposed co-streaming and side-streaming projects, it considers that any such proposal should incorporate significant ethane recovery capability in addition to propane plus NGL extraction. The Board suggests that applications for co-streaming and side-streaming include a discussion on design NGL recovery levels, as well as on potential impacts on overall Alberta ethane supply and overall NGL recovery. That discussion should take into consideration the planned recovery of ethane and other NGL by the proposed project as well as a discussion of the anticipated implications for recoveries at downstream straddle plants. The net impact on the overall energy efficiency including consumption of energy use per unit of NGL extracted provincially should also be addressed.

- **The impact on the existing straddle plant system.** The Board has an interest in seeing that the viability of the existing NGL extraction infrastructure is maintained. Therefore, the impact of a co-streaming or side-streaming conversion proposal on existing NGL extraction facilities must be understood. In terms of impact on the existing system, side-streaming would create a more significant negative impact by reducing the liquid content of the gas in the Common Stream available for reprocessing at downstream straddle plants. The Board is of the view that, absent extraordinary circumstances, applicants for side- streaming projects would be challenged to demonstrate significant positive public interest elements of the application relative to the negative implications of reduced Common Stream NGL content available for reprocessing at straddle plants. In short, given the greater potential for sidestreaming applications to impact existing straddle plants, and perhaps the recovery of

NGL, the Board considers that side-streaming applications are unlikely to be in the public interest.

- **Unnecessary proliferation of facilities.** The Board continues to be concerned with the social, land use and environmental impacts of new and expanded facilities and pipelines. The Board is of the view that co-streaming and side-streaming proponents should assess opportunities to avoid or minimize impacts by using existing facilities and pipelines and include the assessment in related applications.

- **Real meaningful competition.** The Board is supportive of competition, and meaningful competition would be a primary reason for allowing co-streaming or side-streaming to occur. However, projects that would simply transfer a function from one facility and party to another, and not provide meaningful competition, might be questionable.

- **Support from the industry.** Co-streaming and side-streaming applications should demonstrate sufficient industry support to ensure that the proposed project would be viable.

APPENDIX 4 HEARING PARTICIPANTS

Principals and Representatives	Witnesses
Taylor Processing Inc. D. G. Davies B. Ho	G. Engbloom, P.Eng., of Confer Consulting Ltd. J. Maddocks, P.Eng., of Gas Liquids Engineering Ltd. D. Schmunk, P.Eng. G. Salahor, P.Eng., of Mistral Energy Inc. and AltaGas Ltd. D. Tulk, P.Eng., of AltaGas Ltd.
Inter Pipeline Fund A. S. Hollingworth, Q.C.	M. Dawson G. Goobie, M.B.A., P.Eng., of Purvin & Gertz Inc. R. L. Mansell, Ph.D., of Wright Mansell Research Ltd. P. J. Murphy, P. Geol. W. Rousch, P.Eng., of Cambria Energy Inc. D. Spagnolo, Ph.D., P.Eng., of Reaction Consulting Inc.
NOVA Chemicals Corporation G. M. Nettleton	
BP Canada Energy Company and BP Canada Energy Resources Company B. J. Roth L. K. Estep	
DOW Chemical Canada ULC M. Bradley	
P. Tarjan	
D. Mork	
Alberta Ethane Gathering System Resources Company K. King	
Spectra Energy R. Shouldice	

Shell Canada
S. MacDonald

Energy Resources Conservation Board staff
M. LaCasse, Board Counsel
R. J. Mueller, Board Counsel
M. Alboiu, P.Ag.
D. Campbell
R. MacLeod
K. Eastlick, P.Eng.
M. Kirsch
B. Greenfield, P.Biol.

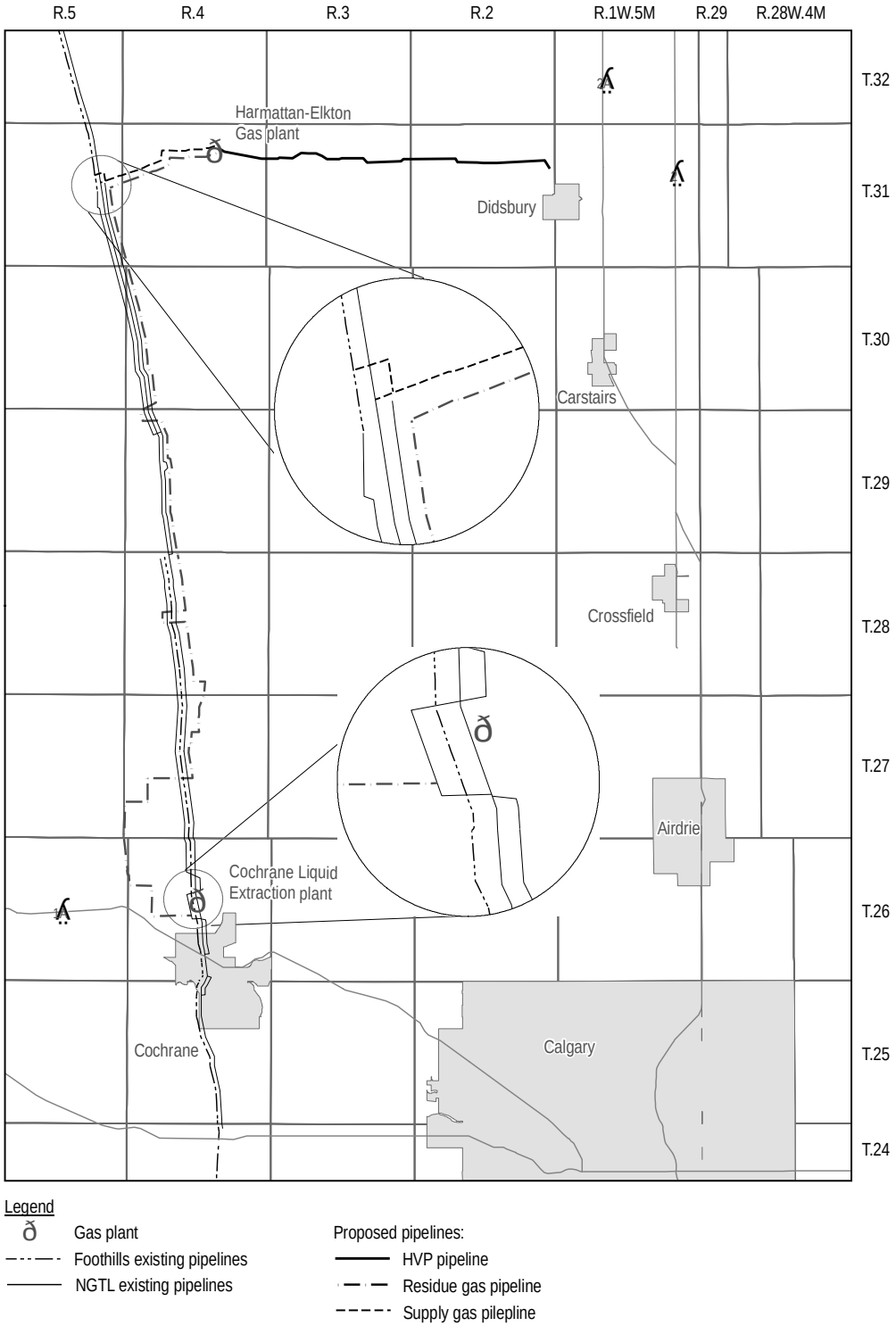

Figure 1. Project map