



## **Millar Western Forest Products Ltd.**

**Biogas Power Plant**

**June 5, 2012**



**The Alberta Utilities Commission**

Decision 2012-153: Millar Western Forest Products Ltd.

Biogas Power Plant

Application No. 1607779

Proceeding ID No. 1521

June 5, 2012

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The Alberta Utilities Commission

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## **1 Introduction and background**

1. Millar Western Forest Products Ltd. (Millar Western) filed Application No. 1607779 with the Alberta Utilities Commission (AUC or the Commission) on October 18, 2011, pursuant to Section 11 of the *Hydro and Electric Energy Act*, requesting approval to construct and operate a 5.2-megawatt (MW) biogas power plant (the power plant) as a part of a Bioenergy Effluent Project (the proposed project), on its manufacturing site located in the town of Whitecourt, Alberta.
2. The power plant will be located in the northwest quarter of Section 35, Township 59, Range 12, west of the Fifth Meridian, adjacent to the Millar Western pulp mill.
3. The major equipment for the proposed project includes three anaerobic digestion tanks, a hydrogen sulphide (H<sub>2</sub>S) removal system and two internal combustion engine-driven generators (genset). Each genset is capable of producing up to 2.7-MW of electrical power and will produce a cumulative total of 5.2-MW. The power produced will be consumed by the adjacent pulp mill and will not be exported to the Alberta Interconnected Electric System.
4. The source of fuel for the power plant will be biogas converted from the organic matter collected from the adjacent pulp mill effluent. If biogas production is insufficient, natural gas will be substituted as fuel for the power plant.
5. On December 7, 2011, the Commission issued information requests to Millar Western. Millar Western responded to the requests on January 27, 2012.
6. As a part of its information responses to the Commission, Millar Western submitted documents detailing the correspondence between themselves and Rosa and William Eberhardt (the Eberhardt family). On July 28, 2011, and November 28, 2011, the Eberhardt family submitted their statements of concern to Alberta Environment and Water regarding the *Environmental Protection and Enhancement Act* application for the power plant. In the information responses, Millar Western submitted their response to the concerns raised by the Eberhardt family.
7. On February 2, 2012, Millar Western submitted a letter requesting that, should a hearing for the application be deemed necessary, the AUC expedite the process by dispensing with the step of issuing a notice of application and proceed directly to issuing a notice of hearing. Millar Western stated that its request was warranted since its extensive consultation efforts exceeded the AUC consultation requirements, and also, that after many attempts to resolve the Eberhardt family's concerns, an objection was still expected.

8. On February 16, 2012, the Commission issued a notice of hearing indicating an oral hearing date of March 28, 2012, and deadline of March 6, 2012, for any interested party to file a submission. The Commission published the hearing notice in the Whitecourt Star newspaper on February 22, 2012.
9. The Commission advised Millar Western that, for this application, it could hand-deliver the hearing notice to all occupants, residents and landowners within the one- to two-kilometre radius of the proposed project by February 23, 2012. For occupants, residents and landowners within one kilometre of the proposed project, the hearing notices were sent via Canada Post to the list of occupants, residents and landowners supplied by Millar Western.
10. On March 5, 2012, in response to the notice of hearing, Ms. Rosa Eberhardt (Ms. Eberhardt) filed a statement of intent to participate, which also indicated that she was uncertain if she would be able to attend the hearing, but that she would submit her concerns for review.
11. On March 7, 2012, the Commission faxed a letter to Ms. Eberhardt requesting that she confirm her attendance at the hearing or file a request with the Commission by March 9, 2012, to reschedule the hearing. The letter also stated that because she was the only intervener, if she was unable to attend and did not want to reschedule the hearing, the Commission may cancel the hearing and make a decision on the application after considering all of the information filed including any information that she may file by March 21, 2012.
12. On March 16, 2012, Ms. Eberhardt filed a letter stating that she would not be available for the hearing on March 28, 2012, but that she would submit her concerns to the Commission prior to the March 21, 2012, deadline.
13. Due to a large number of returned notices, the Commission decided to adjourn the hearing until a later date to provide an opportunity for all potentially affected persons to receive adequate notice and the opportunity to participate in the hearing process. The notice of hearing adjournment was issued on March 16, 2012, with the deadline for interested parties to file their submission extended to April 2, 2012. It was contemplated that the notice would be immediately hand-delivered to addressees on the returned notices.
14. On March 17, 2012, Millar Western filed a document demonstrating the delivery of the hearing notice to all addresses that were returned as undeliverable to the AUC. Additionally, Millar Western also filed an affidavit, sworn by Dave Martell on March 29, 2012, attesting to the delivery of the notices listed in the March 17, 2012, document.
15. On March 30, 2012, the Commission wrote to Millar Western and expressed its concern that all occupants, residents and landowners within 2,000 metres of the proposed project may not have received adequate notification of the proposed project as required by AUC Rule 007: *Rules Respecting Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations* (AUC Rule 007) and Section 9 of the *Alberta Utilities Commission Act*. To alleviate this concern, the Commission requested an affidavit attesting to the delivery of the notice of hearing to all potentially and adversely affected occupants, residents and landowners located within one kilometre of the proposed project.

16. On April 2, 2012, Ms. Eberhardt filed a letter stating that she would be unable to attend the hearing. The letter also included a list of all her concerns regarding the impact of the proposed project.
17. On April 4, 2012, the Town of Swan Hills filed a letter of support for the proposed project based on its anticipated environmental benefits, including reduced greenhouse gas emissions and improved quality of effluent discharges into the Athabasca River, and its potential to improve the financial performance of a major regional employer.
18. On April 5, 2012, Millar Western filed a letter responding to Ms. Eberhardt's April 2, 2012, submission.
19. Due to ongoing concerns that all potentially directly and adversely affected parties may not have received notice of the proposed project, the Commission retained the assistance of Bissett Resource Consultants to determine a list of landowners within one kilometre of the proposed project and deliver the notice of hearing to all occupants, residents and landowners located within one kilometre of the proposed project.
20. On April 21, 2012, Bissett Resource Consultants hand-delivered an updated hearing notice to all occupants and residents within one kilometre of the proposed project. The Commission extended the deadline for interested parties to file their submissions to May 3, 2012.
21. On April 24, 2012, Ms. Shannon Konsmo filed a submission with the Commission stating her primary concerns about the proposed project and its impacts. After meeting with Millar Western representatives, Ms. Konsmo was satisfied that any potential negative outcomes of the project would be successfully mitigated and was supportive of the project.
22. On April 30, 2012, the Commission issued a second round of information requests to Millar Western. The request was responded to by Millar Western on May 7, 2012.
23. On May 7, 2012, Ms. Eberhardt filed a letter reiterating that she would not be able to attend the hearing and responding to Millar Western's letter submitted to the Commission on April 5, 2012.
24. On May 9, 2012, Millar Western filed a letter responding to Ms. Eberhardt's letter submitted to the Commission on May 7, 2012.
25. On May 9, 2012, the Commission faxed a letter to Ms. Eberhardt to inform her that because she was the only intervener in the proceeding and she was unable to attend the hearing, the Commission was cancelling the hearing originally scheduled for March 28, 2012, and would not be rescheduling the hearing. Additionally, the Commission informed her that a decision will be made on the application after considering all of the information filed, including her submissions.
26. In making its decision on this application, the Commission considered all evidence on the proceeding record. Any reference to specific parts of the record are intended to assist the reader in understanding the Commission's decision, but should not be taken as an indication that the Commission did not consider the entire record as it relates to that issue.

## 2 Legislative framework

27. For applications under Section 11 of the *Hydro and Electric Energy Act*, the Commission must consider whether the project is in the public interest. Section 17 of the *Alberta Utilities Commission Act* reads:

**17(1)** Where the Commission conducts a hearing or other proceeding on an application to construct or operate a... power plant... under the *Hydro and Electric Energy Act*... it shall, in addition to any other matters it may or must consider in conducting the hearing or other proceeding, give consideration to whether construction or operation of the proposed... power plant... is in the public interest, having regard to the social and economic effects of the ...plant ...and the effects of the..... plant ...on the environment.

28. In Decision 2001-111,<sup>1</sup> the Alberta Energy and Utilities Board (EUB), predecessor to the AUC, explained its approach to assessing whether the approval of a power plant is in the public interest as follows:

The determination of whether a project is in the public interest requires the Board to assess and balance the negative and beneficial impacts of the specific project before it. Benefits to the public as well as negative impacts on the public must be acknowledged in this analysis. The existence of regulatory standards and guidelines and a proponent's adherence to these standards are important elements in deciding whether potential adverse impacts are acceptable. Where such thresholds do not exist, the Board must be satisfied that reasonable mitigative measures are in place to address the impacts. In many cases, the Board may also approve an application subject to specific conditions that are designed to enhance the effectiveness of mitigative plans. The conditions become an essential part of the approval, and breach of them may result in suspension or rescission of the approval.

In the Board's view, the public interest will be largely met if applications are shown to be in compliance with existing provincial health, environmental, and other regulatory standards in addition to the public benefits outweighing negative impacts.<sup>2</sup>

29. The Commission's review and consideration of this application also takes place in the context of thorough regulatory requirements and detailed information filed in support of the application as well as the submissions of the participants. The power plant facility application must meet the informational and other requirements set out in the AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines and Industrial System Designations* (AUC Rule 007) as well as the information requirements, notification to or approval of government departments such as Alberta Culture and Community Spirit, Alberta Environment and Sustainable Resource Development, Alberta Transportation, and municipalities.

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<sup>1</sup> EUB Decision 2001-111: EPCOR Generation Inc. and EPCOR Power Development Corporation 490-MW Coal-Fired Power Plant, Application No. 2001173, December 21, 2001.

<sup>2</sup> EUB Decision 2001-111, page 4.

### 3 Overview

30. In its application, Millar Western submitted that the power produced by the power plant would be used solely by the adjacent pulp mill. Additionally, Miller Western stated that the proposed project would be fully self-contained and would have no impact on land use beyond the existing Millar Western pulp mill site. The biogas fuel for the power plant would come from the processed organic matter collected from the adjacent pulp mill.

31. Millar Western stated that burning biogas in the reciprocating engines would result in minimal increases in some air emissions, but they would all remain well within the allowable levels specified by the *Alberta Ambient Air Quality Objectives*.

32. Millar Western submitted an environmental impact statement report conducted by AMEC Environment and Infrastructure. The results concluded that the power plant was not likely to result in significant adverse environmental effects.

33. Millar Western retained ATCO Structures and Logistics to conduct both the initial and revised noise impact assessment for the proposed project and the results state that the power plant would comply with the requirements of AUC Rule 012: *Noise Control* (AUC Rule 012).

34. Millar Western submitted that it conducted a participant involvement program, notifying all occupants, residents and landowners within two kilometres and consulting with those within 800 metres of the proposed project. A public open house, advertised in the *Whitecourt Star*, was also held on May 19, 2011.

35. Additionally, a series of meetings and information sessions were held for the Millar Western employees to discuss the overall proposed project and safety protocols related to the H<sub>2</sub>S removal system. Millar Western has committed to keeping the employees apprised of the project and involved with the development of emergency response plans.

### 4 Adequacy of notice

36. One of the fundamentals of procedural fairness requires that adequate notice of a proceeding must be given to all parties that may be potentially affected by it. This requires the Commission to ensure that all parties who may be affected by its decision have an adequate opportunity to learn the facts and respond to evidence or arguments submitted by other participants in the proceeding or in the knowledge or control of the decision maker.

37. In addition to being a fundamental principle of procedural fairness and natural justice, Section 9 of the *Alberta Utilities Commission Act* requires that, if it appears to the Commission that a person's rights may be directly and adversely affected by a decision of the Commission, it must give notice of the application, provide all potentially directly and adversely affected occupants, residents and landowners an opportunity to learn the facts relating to the application, and hold a hearing, if necessary. The Commission is not required to hold a hearing if it is satisfied that the applicant has met the relevant Commission rules respecting each owner of land that may be directly and adversely affected by the Commission's decision on the application.

38. Given the importance of adequate notice in terms of both procedural fairness and the Commission's statutory requirement, compounded by the fact that a notice of application was not issued, the Commission ultimately retained the services of a third-party in order to ensure delivery of the hearing notice to all potentially directly and adversely affected occupants, residents and landowners.

#### **4.1 Alberta Environment and Water approval**

39. In her statement of intent to participate submitted March 6, 2012, Ms. Eberhardt stated that she was involved in the Alberta Environment and Water<sup>3</sup> process to have her concerns addressed. She also stated that cooperation with Alberta Environment and Water in this process, will address many of the concerns that will otherwise become concerns for the Commission.

40. Ms. Eberhardt submitted an additional letter to the Commission on April 2, 2012, which included a list of approximately 35 concerns related to noise, environmental impacts and Millar Western's emergency response plan for the power plant. This list included the same concerns that were submitted to Alberta Environment and Water on July 28, 2011, and November 28, 2011, and subsequently responded to by Millar Western.

41. In its letter submitted April 5, 2012, Millar Western stated that Ms. Eberhardt's submission dated April 2, 2012, identified issues that had already been raised with Alberta Environment and Water and the AUC, and that had been addressed by Millar Western over the course of several detailed responses. Additionally, Millar Western stated that Alberta Environment and Water was satisfied with its efforts to resolve Ms. Eberhardt's concerns, and subsequently issued the amendment to the pulp mill's operating permit for the implementation of the proposed project.

42. In Ms. Eberhardt's letter of May 7, 2012, in response to Millar Western's letter of April 5, 2012, she stated that she did not have a direct response from Alberta Environment and Water and that her concerns had not been adequately addressed.

#### **4.2 Air quality**

43. Ms. Eberhardt submitted concerns regarding the impact on air quality of the proposed project during normal operating conditions, during a potential rapid uncontrolled release of gases, and during the maintenance period for the equipment.

44. Millar Western responded that RWDI AIR Inc. (RWDI), an independent consultant, was retained to conduct air quality modelling for the proposed project. RWDI's study results indicate that during normal operation, burning biogas in reciprocating engines results in a small increase in some emissions, but that all emissions will remain well within the *Alberta Ambient Air Quality Objectives*.

45. Millar Western stated that air quality modelling was not performed for a rapid uncontrollable release of biogas because RWDI submitted that it would be unnecessary given the small quantity of gas that is present in the system at any given time and that there is no gas containment vessel associated with the proposed project.

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<sup>3</sup> In May 2012, the Department of Environment and Water merged with the Department of Sustainable Resource Development to create a single ministry called the Department of Environment and Sustainable Resource Development.



46. Millar Western submitted that during a shutdown of the digestion tanks, whether for planned or unscheduled maintenance or repair, the pulp mill effluent stream will bypass the digestion tanks and instead enter the mill's existing effluent treatment system. As no effluent is entering the digestion tanks, there will be no biogas produced. Also, routine cleaning of the digestion tanks will be performed in an enclosed environment with no venting or releasing of biogas.

#### **4.3 Noise**

47. Ms. Eberhardt submitted that in the noise impact assessment for the proposed project, it shows a calculated noise level of 39 decibels at her residence. This noise level is only one decibel below the permissible sound level as determined in accordance with AUC Rule 012. She stated that the one decibel threshold is not an acceptable safety factor and outside equipment such as pumps and blowers have not been included in the noise impact assessment. She requested that a third-party comprehensive noise study be performed to identify ways in which Millar Western can reduce its noise levels.

48. Millar Western responded that the results of the noise impact assessment were highly conservative. The noise reduction steps, including the addition of a further sound barrier for the power plant building, increasing the power plant building size to allow for the enclosure of the exhaust system heat exchangers, and upgrades to the exhaust system silencing equipment were not factored in the noise impact assessment. In addition, Millar Western submitted that the reduction in noise due to shutdown of two 900-horsepower blowers and a 50 per cent reduction in truck traffic associated with reduced pulp sludge hauling after the commissioning of the power plant, were also not factored in the noise impact assessment.

49. Furthermore, Millar Western stated that it will commission another third-party noise assessment following installation of the proposed project to ensure that actual noise levels under normal operating conditions will be within the parameters of AUC Rule 012.

#### **4.4 Water and soil contamination**

50. Ms. Eberhardt submitted concerns regarding drainage control for spilled material and the release of certain chemicals.

51. Millar Western responded that the design for the proposed project includes the construction of a retention wall to encompass the digestion tanks and that the entire project site will be designed and contoured to allow appropriate runoff control and sufficient collection capability for any spills that could potentially occur. Also, the drainage of the moisture separator in the fuel line will be piped back into the return digestate line to be sent back into the mill's existing treatment system. Millar Western has also incorporated the drainage plan into the site plan.

52. Millar Western indicated that no new chemicals will be brought on-site for the proposed project or introduced into the effluent stream at any time. Acetaldehyde, formaldehyde and methanol will not be released as a result of the proposed project.

#### **4.5 Safety**

53. Ms. Eberhardt submitted concerns regarding the concentration of H<sub>2</sub>S as well as the adequacy of the 100-metre emergency planning zone specifically for H<sub>2</sub>S, and that Millar Western's emergency response plan would be made available for her review.

54. In its responses to Ms. Eberhardt, Millar Western stated that her residence falls outside of the 100-metre zone and that the calculation of the approximate zone size was based on the gas volumes and concentrations associated with the proposed project, as specified by Alberta's Energy Resources Conservation Board (ERCB). It also stated that it does not expect any off-site, or public, safety concerns associated with the volumes and concentrations of biogas generated by the proposed project. On-site safety assurance will be provided via equipment and processes that include H<sub>2</sub>S monitors.

55. In its May 7, 2012 response to the Commission's second round of information requests, Millar Western described the methodology that was used to determine the zone radius.

56. Millar Western responded that emergency response preparedness planning will be conducted by the pulp mill staff, whose existing plans and processes are subject to regular, independent International Standards Organization and insurance audits, in addition to stringent government regulation. These plans will be developed in coordination with detailed engineering for the proposed project facilities, which is subject to completion of the proposed projects regulatory approval process. Millar Western has committed to providing a copy of the emergency response plan to Ms. Eberhardt once the plan is completed.

#### **4.6 Additional concerns**

57. Ms. Eberhardt also raised many additional concerns throughout her statements that were submitted to both Millar Western and the AUC. The list included, but is not limited to, concerns related to cyclone dryers, air modelling, meteorology, topography, chemical use, equipment maintenance, increase in logging trucks, odour and nitrogen dioxide (NO<sub>2</sub>) emissions.

58. Millar Western supplied responses directly to the Eberhardt family as well as to the AUC throughout the application process addressing the concerns raised in the submissions by the intervener.

### **5 Findings**

59. In accordance with the application, the proposed power plant will have an operating capacity of 5.2 MW and the energy produced by the power plant will be used solely by Millar Western pulp mill.

60. The Commission notes that the potential for additional visual impact and land disturbances will be minimal because the proposed power plant will be located on an existing industrial site.

61. The proposed power plant is not likely to produce significant adverse environmental impacts because the proposed project is located on the existing pulp mill site. The Commission finds that the emissions from the proposed project, as demonstrated in air modelling, will comply with *Alberta Ambient Air Quality Objectives* and notes in this regard that a runoff control and material spill retention have been incorporated into the development of the proposed project.

62. The proposed power plant is expected to deliver benefits to the environment by providing an alternate source of heat and power for the pulp mill, thereby reducing its daily natural gas consumption and cutting the direct and indirect greenhouse gas emissions of the pulp mill.

63. The Commission is satisfied that the proposed power plant will meet the noise requirements as prescribed by AUC Rule 012. However, the Commission considers that a follow-up comprehensive noise survey is an important step to ensure compliance with AUC Rule 012 and acknowledges Millar Western's commitment to conduct a follow-up noise assessment. The Commission will accordingly include, as a condition to the approval it issues to Millar Western, requiring it to conduct a comprehensive noise survey at the power plant within six months after the power plant is commissioned, and to report the findings to the Commission and to Ms. Eberhardt. The comprehensive sound level survey shall be conducted in accordance with the requirements stipulated in AUC Rule 012, at the same receptors identified in the noise impact assessment filed with the application.

64. The Commission recognizes that the 100-metre emergency planning zone proposed by Millar Western is consistent with the 100-metre setback required by the ERCB for Level 1 sour gas wells and notes that the release rate for the proposed plant is less than that of a Level 1 sour gas well. Given the low pressures and concentrations of H<sub>2</sub>S and the fact that the 100-metre emergency planning zone is located entirely within the existing pulp mill site, the Commission is satisfied that Millar Western has addressed off-site safety concerns associated with the H<sub>2</sub>S production at the power plant. However, the Commission is not prepared to unconditionally approve the project in the absence of a finalized emergency response plan. Therefore, the Commission will include, as a condition to the approval it issues to Millar Western requiring it to conduct at least one emergency response exercise based upon the maximum H<sub>2</sub>S release possible. This exercise must be conducted prior to the finalization of the project's emergency response plan and prior to the commissioning of the project. Further, as a part of this condition Millar Western must prepare a report summarizing the results of the exercise and provide that report to the Commission and to Ms. Eberhardt.

65. Having regard to the foregoing, the Commission finds that approval of the proposed project is in the public interest.

## 6 Decision

66. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants the approval set out in Appendix 1 – 5.2-MW Biogas Power Plant Approval No. U2012-237 – June 5, 2012, to operate the power plant (Appendix 1 will be distributed separately).

Dated on June 5, 2012.

### **The Alberta Utilities Commission**

*(original signed by)*

Anne Michaud  
Panel Chair

*(original signed by)*

Neil Jamieson  
Commission Member

*(original signed by)*

Ian Harvie  
Acting Commission Member