

# ALBERTA ENERGY AND UTILITIES BOARD

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Calgary, Alberta

**GRID COMPANY OF ALBERTA INC.  
TRANSMISSION BYPASS AVOIDANCE RATE  
DOW TRANSMISSION BYPASS**

**Decision U98125  
File 5603-1  
Application No. RU97276**

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## 1. INTRODUCTION

On 12 December 1997, the Grid Company of Alberta Inc. (Gridco), as the Transmission Administrator (TA), applied to the Alberta Energy and Utilities Board (the Board) under the *Electric Utilities Act* (the EU Act) to implement a transmission bypass avoidance rate rider (Bypass Avoidance Rate or Rider B), in order to provide discounted transmission service to TransAlta Utilities Corporation (TransAlta). The discounted service was to apply to TransAlta service to Dow Chemical Canada Inc. (Dow). Gridco, TransAlta and Dow made a joint submission to the Board in support of the Application.

Notice of the Application was published in major provincial newspapers and provided to parties to the Board's 1996 Electric Tariffs Proceeding. Interventions were received and the Board examined the application in a written proceeding.

## 2. PARTIES TO THE PROCEEDING

Written submissions were received from:  
(Abbreviations used in the Decision Report)

Alberta Power Limited (APL)  
Dow Chemical Canada Inc. (Dow)  
Enmax Corporation (Enmax)  
ESBI Alberta Ltd. (EAL)  
The Firm Customers, including,  
    Alberta Federation of REAs  
    Alberta Association of Municipal Districts and Counties  
    Alberta Irrigation Projects Association  
    Consumers Coalition of Alberta  
    Municipal Intervenors  
    Public Institutional Consumers Association  
Grid Company of Alberta (Gridco)  
Independent Power Producers Society of Alberta (IPPSA)  
TransAlta Utilities Corporation (TransAlta)

Reply submissions were received from:

Dow Chemical Canada Inc.  
Enmax Corporation  
Grid Company of Alberta  
TransAlta Utilities Corporation  
Industrial Power Consumers Association of Alberta

### 3. BACKGROUND

Gridco's application to provide a discounted transmission service to TransAlta was made in response to Dow's proposal to transmit electricity generated onsite at Dow's Fort Saskatchewan plant complex to its onsite plants and to Praxair Canada Inc.'s (Praxair) air separation facility (ASU2), located adjacent to the Dow complex. According to Gridco, the proposed Bypass Avoidance Rate was required to respond to the credible threat of a physical bypass, by Dow, of TransAlta's existing transmission facilities, which currently serve Dow's existing load.

TransAlta Energy Corporation and Air Liquide Canada Inc. propose to construct additional cogeneration facilities at the Dow complex. These cogeneration facilities, known as G3, would be the primary source of the incremental electricity carried by the transmission system serving Dow and ASU2.

TransAlta negotiated an arrangement with Dow pursuant to which TransAlta was required to seek a discount for system access service from the TA. Gridco stated that it was satisfied that the cost of Dow's physical bypass option was less than its standard tariff charges for system access service. It negotiated Rider B with TransAlta in keeping with TransAlta's arrangement with Dow. The Bypass Avoidance Rate aims to keep Dow neutral between the cost of using either existing transmission facilities or building its physical bypass option.

Gridco stated that it provided TransAlta with a special one year contract for short term service to ASU2. Further, Gridco stated Dow intends to have the physical bypass completed and operating by the contract expiry date, 31 October 1998, if Rider B is not approved.

### 4. EVALUATION OF THE APPLICATION

The Board evaluated the Application with reference to four criteria established in Decision U97096 which dealt with Nova Gas Transmission Limited's (NGTL) application for a Load Retention Service. These four criteria can be described as follows:

- The bypass avoidance rate is required to respond to a credible bypass threat,
- The bypass avoidance rate must exceed the long run incremental cost of service,
- The bypass avoidance rate is no more attractive than is reasonably required to avoid duplicate facilities,
- The cost of offering the bypass avoidance rate is appropriately shared between other

utility customers and the utility shareholders.

While this Application and the NGTL case both involve the potential construction of a physical bypass of utility transmission service, there are differences, which the Board has taken into account.

#### 4.1 The Bypass Duplication Avoidance Rate is Required to Respond to a Credible Bypass Threat

##### 4.1.a Legal Feasibility of Dow's Physical Bypass Option

In order for the Board to approve the Bypass Avoidance Rate, it must be demonstrated that it is necessary in the circumstances. Dow, TransAlta and Gridco argued that the Rider B is necessary to retain Dow's load because Dow has developed a physical alternative that would allow it to transmit power to itself at the Dow complex and to Praxair at its facility located adjacent to the Dow complex. The threat of the proposed bypass is of concern to TransAlta because its transmission facilities currently serving Dow would be bypassed. Gridco was also concerned about the bypass because, as Transmission Administrator, it is affected as the Alberta Interconnected Electric System (AIES) would be bypassed. TransAlta and Gridco would not be providing their services to Dow because the EU Act, which mandates the use of TransAlta and Gridco's franchise services, would not apply to the proposed bypass. Those immediately affected parties, TransAlta and Gridco, have therefore negotiated the Bypass Avoidance Rate that affords Dow a discounted transmission service in return for Dow abandoning its bypass proposal and continuing to use the services of TransAlta and Gridco.

APL, the Firm Customers and Enmax offered a different interpretation, arguing that the proposed bypass would not be exempt from the provisions of the EU Act resulting in Dow having to take service from TransAlta and Gridco. According to these interveners, if the EU Act applies to the proposed bypass, there is no need to address issues relating to the Bypass Avoidance Rate as the rate is unnecessary in these circumstances.

The system of regulation under the EU Act does not apply to all electric energy. Subsection 2(b) of the Act provides as follows:

#### 2. This Act does not apply

(b) to electric energy produced on property of which a person is the owner or a tenant, for use solely by that person and solely on that property.

Section 5 is also of some consequence and reads as follows:

5(1) A person wishing to obtain electricity for use on property must buy the electricity from the owner of the electric distribution system in whose service area

the property is located.

(2) Subsection (1) does not apply to electric energy produced in accordance with section 2(b) or (d).

### **Positions of the Interveners**

APL, the Firm Customers, and Enmax advanced arguments to support their contention that the Board is without jurisdiction to grant the relief sought by Gridco in this case. Although stated in slightly different ways in each of their submissions, these interveners argued that the Bypass Avoidance Rate should only be available if it can be demonstrated that the proposed bypass meets certain mandatory statutory prerequisites that would exempt it from the EU Act. Those statutory prerequisites are outlined in subsection 2(b) which provides an exemption for a class of energy produced and distributed "behind the fence". These interveners argued that Gridco could not rely on subsection 2(b) because, although electricity will be generated behind Dow's fence, Dow will be distributing electricity to land beyond its fence line to land and facilities owned by Praxair. The interveners therefore concluded that absent the mandatory statutory prerequisites, the bypass proposal would not be exempt from the EUA and there is no need to offer the bypass avoidance rider.

### **Positions of Gridco, Transalta and Dow**

By contrast, Gridco, TransAlta and Dow argued that a party seeking a bypass avoidance rider need only satisfy the Board that it was in a position, and prepared to, do everything that would be required to gain an exemption for its bypass proposal under the EU Act, whether or not it had actually done everything necessary to gain the exemption. Put another way, the distinction between the arguments advanced is that the interveners argue that a burden rests on an applicant to prove the statutory conditions actually exist that would allow for the construction of an EU Act exempted bypass before a bypass avoidance rate is approved. On the other hand, Gridco, TransAlta and Dow argue that it is sufficient to establish that the conditions essential for an exemption are capable of being put in place, and that the proponent of the bypass proposal is actually prepared and able to put them in place if necessary.

## Board Findings

The Board has carefully considered the arguments advanced by all parties. While the Board agrees that subsection 2(b) is relevant, it does not consider the subsection determinative in deciding the threshold of its authority to deal with the Application. This case is somewhat difficult because it does not deal with a situation that fits as neatly within the confines of subsection 2(b) as a case where the Board is asked to make a specific exemption ruling on existing facilities. In this case the Board is charged with determining whether a bypass avoidance rate should be approved to avoid the construction of bypass facilities and subsection 2(b) alone does not sufficiently prescribe the powers necessary for the Board to deal with this situation.

In the Board's view this type of application calls for the Board to exercise some discretion in determining the credibility of the proposed bypass, including the ability of Dow to position itself to fulfil the qualifications for an exemption under the EU Act. This interpretation is consistent with the objects and purposes of the EU Act. In the Board's view, the EU Act sets out a legislative framework that allows for the implementation of decisions that place a greater emphasis on market forces and competition in generation. The Board considers that a narrow view of the legislation will impair the development of a framework that will implement competitive principles.

In this case, for Dow to fulfil the statutory prerequisites of subsection 2(b), it need only purchase the Praxair site and facilities which it stated it was committed to doing if required. That commitment, together with a significant degree of integration between Dow and Praxair, were material considerations in the Board's deliberations. In the Board's view a regulatory approach that forces an applicant to purchase land and facilities solely to satisfy the Board that certain statutory prerequisites could be met would be unduly restrictive, not in keeping with the development of an infrastructure that fosters competition, and not in the public interest.

The Board therefore rejects the narrow interpretation urged upon it by APL, the Firm Customers and Enmax that would force the purchase by Dow of the Praxair site and facilities before the Bypass Avoidance Rate could be approved. In doing so the Board emphasizes that in this case Dow has demonstrated a significant degree of integration between its site and that of Praxair and, in a persuasive way, its commitment to purchase the Praxair land and facilities should that have been necessary.

### 4.1.b Economic and Technical Feasibility of Dow's Physical Bypass Option

#### Positions of Gridco, Transalta and Dow

Gridco stated its belief that Dow had the opportunity to build transmission facilities parallel and superfluous to existing transmission facilities owned by TransAlta and administered by Gridco. Gridco supported the development of a discounted transmission service option to match the cost of the physical bypass option which it believed was a credible threat.

Dow maintained that, economically speaking, its proposed transmission system was justified on

an avoided cost basis. Both the capital cost and the annualized cost of its bypass option would be significantly less than annual transmission charges payable to the TA for the use of existing transmission facilities.

Dow estimated the total capital cost of its proposed bypass to be \$4,656,038. Additionally, it estimated the bypass would incur \$191,250 annually in operating and maintenance costs, losses, and ongoing spare parts inventory. In comparison, Dow estimated the annual cost of 120 Mw of Generation Interconnection Service, Generation Support Service, and Losses (roughly the amount of transmission Dow proposed to utilize) to be \$9,928,886 at current TA rates. Dow argued that the magnitude of the cost savings in just one year more than justified its building the bypass, unless it obtained suitable discounted transmission service .

Besides the economic advantages of its transmission proposal, Dow cited additional benefits of its transmission bypass proposal, as follows:

- Direct supply of new load(s) onsite without having to establish any new Point(s) of Delivery with the TA,
- Expansion of its portfolio of interruptible loads to include oxygen production, thus creating further diversity in the economics of real time load shed decisions,
- Better control and utilization of the coincident peak diversity of its loads in response to real time price signals from TransAlta, thus further reducing the overall costs of its electricity purchases from the AIES,
- Increased access to the AIES for sales to the Power Pool of Alberta, without reducing the amount of its simultaneous Rate 790 purchases by as much as is currently required when it sells to the Pool.

In return for discounted transmission service as per Rider B, Dow was willing to forgo its physical bypass option and make two monetary contributions totalling \$5,071,038 to TransAlta, consisting of the \$4,656,038 in capital costs Dow would have incurred had it built the bypass, and \$415,000 in future operating and maintenance costs, losses and spare parts inventory costs. Dow submitted that the contributions, along with the other terms and conditions of the Bypass Avoidance Rate, kept it neutral between choosing to take service under Rider B and building the physical bypass option.

Responding to APL's argument that the cost of acquiring ASU2 be included in the contribution amount of Rider B, Dow stated that it had contracted for ASU2's output for 15 years, thereby effectively paying for the facilities and land over the duration of the contract. Dow stated that in North America this type of contracting (long term lease) was the norm for the industry. Dow submitted that few additional costs would be incurred to change from a lease type arrangement to an ownership arrangement with ASU2.

Responding to the Firm Customers' argument that the revenues lost to the TA from the ASU2 load be included in the cost of the physical bypass option, Dow stated that it could have provided

power to ASU2 from its startup. However, Dow chose a one year contract with TransAlta and paid the entire capital cost of serving ASU2 rather than have TransAlta make an investment in transmission facilities. Therefore, parties could not conclude that Dow's serving ASU2 was lost revenue to the TA since there would have been no future revenues to forecast.

TransAlta believed Dow's physical bypass option represented a viable, functional and economic alternative to the existing transmission system. In support of its position, TransAlta cited the annual cost savings of the physical bypass option; the reduced costs of the physical bypass option due to the relocation of G3 to the main Dow site; and Dow's ability to have the first segment of the physical bypass option operational before the end of 1998. TransAlta submitted that Rider B was a fair and equitable response to the physical bypass threat.

TransAlta disagreed with APL's suggestion that the costs of Dow acquiring the ASU2 site and facilities be included in the costs of the physical bypass option. TransAlta pointed out that Dow was in effect paying for the ASU2 facilities by having contracted for all of ASU2's capacity. Therefore, to include the ASU2 costs in the amount of the contribution calculation for Rider B would be asking Dow to pay twice.

### Positions of the Intervenors

The Firm Customers argued that the economics of the physical bypass option were predicated on the inclusion of service to ASU2. The avoided cost of the physical bypass option would be different if service to ASU2 was not included as part of the physical bypass. Dow should be required to purchase the ASU2 land and facilities from Praxair in order to avail itself of the exemption available under Section 2(b) of the EU Act.

Alternatively, the Firm Customers argued, the discounted rate offered to Dow under Rider B should be reduced by an amount equal to the TA's annual revenue loss that occurs when Dow serves ASU2 instead of TransAlta. The Firm Customers estimated the amount of that annual loss to be \$2.3 million.

APL argued that in order to consider the Dow bypass option as credible, Dow must purchase the ASU2 facilities and land. However, should the Board not require Dow to purchase ASU2 in order to qualify for a bypass avoidance rate, the costs of such a purchase should, nevertheless, be considered part of the costs of the physical bypass option. APL stated that the proposed Rider B rate is significantly understated because these costs were omitted.

Although it did not comment on the specifics of the Application, EAL believed duplication of transmission facilities with the potential creation of stranded assets is wasteful and not in the interest of the TA's customers and other stakeholders. The TA must be in a position to respond to a credible bypass option in order to mitigate the negative impacts on the TA's customers that result from loss of load and loss of TA revenue. In its view, a *credible bypass* meant a bypass that was not contrary to existing legislation and public policy, and was technically and

economically feasible. Each potential transmission bypass must be considered on its own merits. In appropriate circumstances, a bypass avoidance rate could be in the best interests of the TA's customers.

### **Board Findings**

The Board believes Dow's physical bypass option is economically viable. The Board notes the considerable cost savings accruing to Dow if it constructs the proposed bypass. The Board also notes the other economic advantages that Dow would obtain from building the bypass.

The Board accepts the argument that the cost of acquiring the ASU2 facilities and land need not be part of the economics of the bypass option because it would result in a double counting of Dow's costs. Similarly, the Board accepts that there are no future TA lost revenues due to Dow's serving the ASU2 load. The one-year contract with TransAlta and Dow's payment of the entire transmission investment necessary to serve ASU2 should preclude any expectation of future TA revenues from this load.

The Board also believes Dow's proposed bypass is technically and physically viable. The Board notes the extensive nature of Dow's existing onsite utility operations and that the construction and operation of the bypass is a relatively straightforward addition to Dow's existing electric operations. The Board observes that none of the intervenors challenged the technical and physical viability of Dow's proposal, nor Dow's ability to construct and operate the bypass.

The Board observes that Dow has consistently pursued development of the bypass over an extended period of time. In this regard, the Board notes Dow's dealings with TransAlta regarding service to ASU2, where it has already paid the full cost of transmission service and entered into a one year service contract. The Board also notes Dow is pursuing the development of new onsite generation which provides an additional impetus for a bypass.

In short, the Board believes Dow is well positioned to meet its own requirements in an effective manner absent a suitable transmission bypass avoidance rate. Should it do so, the costs of TransAlta's underutilised transmission assets would be borne by remaining transmission system users and/or TransAlta's shareholders. Therefore, the Board finds Dow's physical bypass option a credible threat. Accordingly, it believes the development of a suitable bypass avoidance rate is in the public interest.

#### **4.2 The Bypass Avoidance Rate Must Exceed the Long Run Incremental Cost of Service (LRIC)**

The Bypass Avoidance Rate consists of two monetary contributions totalling \$5,071,038 from

Dow to TransAlta. From the perspective of TransAlta, the Bypass Avoidance Rate represents a reduction to its recovery of Transmission Costs from Gridco over the life of Rider B, which extends to the year 2021. Finally, from Gridco's perspective and that of the TA's customers, transmission costs will be lower by an amount equivalent to Rider B. Schedule B1 in the Application provides a forecast of the expected benefit to the TA and its customers resulting from the Bypass Avoidance Rate.

### **Position of Gridco**

Gridco stated that there are no short or long run incremental costs being borne by the TA to provide the discounted transmission service. On the contrary, it was suggested that the full revenue from Rider B would provide a contribution towards the fixed costs of the AIES.

Gridco submitted that the existing facilities at the Dow site need not be expanded to provide the transmission service being requested for Dow. If future expansion were required, full contribution by TransAlta for Dow would be required. Therefore, no investment by the TA would be made.

In reference to the replacement of existing facilities due to failure, Gridco stated that the replacement facilities would be of a size that would be the same as the Interconnection Contract Demand (ICD), or at the next largest engineering increment.

### **Positions of the Intervenors**

No intervenor suggested that the LRIC of providing the service described in the Application would exceed the revenue from Rider B. However, parties did seek clarification regarding the replacement of existing facilities due to failure or expansion.

### **Board Findings**

The Board does not agree with Gridco that there is no LRIC of providing service to Dow. However the Board does consider that the LRIC of service in this case is minimal compared to the annual revenue from Rider B of between \$232 and \$865 thousand. The Board accepts that the Rider B, if approved, will prevent the unnecessary construction of redundant facilities and shelter AIES customers from the cost of absorbing stranded assets. The Board therefore considers that the second criterion is met.

Regarding the replacement of existing facilities, it is the Board's view that a contribution would be required from Dow or any future customer served by the Bypass Avoidance Rate for the costs of any incremental facilities over and above the replacement facilities required to serve TransAlta's ICD at that point in time. The Board considers that it would be inappropriate for Dow to benefit from incremental facilities unless it is prepared to pay a contribution toward the

incremental facilities. Payment could be in the form of a monetary contribution, or an increase in its ICD at the affected facilities.

#### **4.3 The Bypass Avoidance Rate is No More Attractive Than is Reasonably Required to Avoid Duplicate Facilities**

##### **Positions of Gridco, TransAlta and Dow**

Gridco accepted TransAlta's position that Dow was indifferent between either using existing transmission facilities or building its bypass provided the cost was similar. The contribution paid by Dow was intended to reflect the costs of the bypass. Gridco submitted that there would be a benefit to other customers in the form of an annual reduction to the revenue requirement passed on by TransAlta for its transmission cost of service.

Two contributions are to be made by Dow, namely, \$1,888,538 in 1997, and \$3,182,500 in 1998, matching the timing of the construction of the two segments of the proposed bypass. They reflect \$4,656,038 of capital that Dow would have had to incur, and an estimate of the present value of some of the operating expenditures of the bypass in the order of \$415,000. The method used to determine the estimate of operating and maintenance expenses, losses and spare parts (O&M) was provided, but no explanation was given to support the methodology used.

TransAlta provided information regarding the actual capital expenditures made toward the facilities used to serve the ASU2 load. A comparison of the actual amounts to the forecast amounts indicated that the variance was relatively small.

TransAlta suggested that the level of the contribution was fair to both Dow and to remaining rate payers. TransAlta submitted that the capital and O&M costs included in the contributions constituted a reasonable compromise between the objective of incenting Dow not to build the bypass and the objective of maximizing the contribution. TransAlta pointed out that no intervenor provided evidence which indicated that the contribution as a whole was unreasonable. The contribution was determined through negotiation with reasonable give and take between Dow and TransAlta, and was based on the worst case or most costly routing of the line from Dow's perspective. TransAlta submitted that a revision to any one component of the contribution calculation may require the whole calculation to be revisited.

Dow also contended that the Bypass Avoidance Rate was a reasonable compromise. If the cost analysis underlying the contribution was to be redone, many aspects would require adjustment. Among the adjustments that could be reconsidered are: certain tax consequences not currently reflected; capital cost and loss reductions due to the new location of G3; and the salvage value of the line at the end of the 24-year period.

Dow stated that it agreed to the Rider B proposal even though the design of the two contributions assumed the worst case scenario for line routing. It also pointed out that the capital and O&M

costs associated with the bypass would have been reduced by its subsequent decision to relocate G3. Therefore Dow suggested that the Bypass Avoidance Rate may already be higher than required from its point of view. Dow did not provide any indication that it would have been willing to increase the level of its contribution to TransAlta.

### **Positions of the Intervenors**

In general terms, EAL stated that a bypass avoidance rate be no lower than was absolutely necessary to retain load and, in the case of an industrial system, that all benefits and costs be considered.

The Firm Customers noted that they had no basis upon which to disagree with the capital costs included in Dow's contribution, but they challenged the methodology and assumptions used to derive the O&M component. They proposed that the O&M estimate be recalculated by: using a 24-year service period instead of 5; eliminating the division by two of the present value calculated; using the average Pool Price (approximately \$28 per Mwh) to calculate losses instead of the estimated price of approximately \$16 per Mwh; and inflating operating costs at 2 per cent per year. Accordingly, the Firm Customers submitted that the contribution level by Dow should be increased by \$2 million to ensure that the Bypass Avoidance Rate was no more attractive than necessary.

IPCAA stated the view that any recommendation to increase the amount of Dow's contribution should be rejected.

### **Board Findings**

The Board notes that the reasonableness of the capital portion of Dow's contribution was not challenged and that actual capital expended for the facilities serving the ASU2 load were close to the forecast amounts. The Board finds that the capital portion of the contribution is acceptable.

The Board notes that the O&M portion of the Dow contribution was determined through a process of negotiation involving trade-offs, which are not always, by their nature, easily substantiated by particular methodologies and assumptions. While the Board is not obligated or compelled to accept the outcome of a negotiation, it will generally have regard to its overall reasonableness in determining its acceptability.

With respect to the price used to estimate the value of losses, the Board considers that \$16 per Mwh is more reasonable than the average pool price of \$28 per Mwh suggested by the Firm Customers. Had Dow proceeded with the bypass, it would likely have assigned a value to losses equivalent to its own generation cost rather than the average pool price.

The other upward adjustments suggested by the Firm Customers appear on their face to have merit. However, the Board is persuaded that reflecting them in Dow's contribution would be of

consequence to Dow's willingness to accept a bypass avoidance so adjusted in lieu of pursuing its bypass. In this regard, the Board notes Dow's submissions regarding cost elements and other factors not captured in the calculation. On balance, the Board is satisfied that the O&M portion of the contribution is acceptable and that overall the Bypass Avoidance Rate is no more attractive than is reasonably required to avoid duplicate facilities.

#### **4.4 The Cost of Offering the Transmission Bypass Avoidance Rate Rider is Appropriately Shared Between Transmission Customers and TransAlta's Shareholders**

##### **Positions of Gridco, TransAlta and Dow**

TransAlta stated that it had negotiated a contract that allowed Dow to use that portion of TransAlta's transmission system capacity that was either spare or made redundant by Dow's decision to reduce its contracted demand at Dow's main load centre. In return, Dow had agreed to make a financial contribution, to TransAlta, for the use of that capacity. The contribution amount negotiated included 100 percent of the capital costs of Dow's physical bypass option plus a portion of the operating and maintenance costs, losses, and spare parts inventory. TransAlta proposed to use Dow's contribution to reduce TransAlta's transmission tariff, otherwise payable by the TA, over the 24-year length of the contract with Dow. TransAlta stated that the contribution provided an offset to the unavoidable loss of transmission revenue due to Dow's decision to self-generate. TransAlta submitted that this offset was to the benefit of all of the TA's customers.

TransAlta argued that by negotiating a significant contribution from Dow for the use of TransAlta's system, both TransAlta and the TA had made an appropriate response towards competition and had minimized the impacts on all parties. TransAlta also argued that if it or the TA were to be penalized for proposing a bypass avoidance rate that had been demonstrated to be to the benefit of all customers, then a perverse incentive would be created. That incentive would make it preferable for the two parties to let Dow build the physical bypass and forgo the Rider B revenue. TransAlta submitted that the parties should not be penalized for responding to a credible bypass threat.

TransAlta disagreed with the Firm Customers' contention that offering Dow the Rider B rate was the cause of reduced revenues from Dow. TransAlta stated the cause was the reduction in Dow's contracted load, due to Dow's plans to generate onsite. TransAlta stated that Dow had given TransAlta sufficient contractual notice of load reduction and TransAlta, in turn, gave the TA sufficient notice. TransAlta argued that besides being unrelated to Dow's decision to reduce contractual load, Rider B provided a contribution to the TA's fixed costs that would not otherwise be available if Dow were to build the physical bypass. This contribution would be to the benefit of the TA's other customers.

TransAlta argued that its existing transmission facilities are needed to supply the remaining contractual demand at Dow Chemicals, supply the contractual demand at Dow Hydrocarbons, to provide system switching, and serve other customers in the area. TransAlta argued that since its facilities were still required to provide service to the public, it should be permitted to continue recovering the full cost of those facilities and should not be expected to absorb any of the costs associated with the unavoidable loss of revenues due to contractual load reduction at Dow.

TransAlta refuted the Firm Customers' claim that it was not sufficiently motivated to maximize the Rider B rate and urged the Board to reject the Firm Customers' unfounded assertions in that regard.

Gridco believed the agreement negotiated under Rider B was an appropriate response by TransAlta to a credible bypass threat by Dow, and that the amount of the contribution negotiated was fair and reasonable. Gridco stated that Dow's contribution would lower costs for all customers on the transmission system. Gridco noted that the stakeholders who had been consulted preferred that the TA offer a bypass avoidance rate rather than see duplicate facilities built.

Dow noted that during consultations with them, stakeholders had expressed a preference for a solution which avoided the bypass of existing transmission facilities. Dow submitted that the negotiated solution was a competitive response to a credible bypass threat, was fair and reasonable, and was in the public interest.

### **Positions of the Intervenors**

The Firm Customers stated that there should be risk and cost sharing between customers and TransAlta shareholders, otherwise all other utility customers would have to assume the full impact of increased costs in their rates. Those increased costs would be the result of reduced revenues from Dow, which in turn were due to TransAlta offering Dow a discounted load retention rate.

However, the Firm Customers observed that TransAlta's lease costs submitted to the TA would reflect its total wire costs adjusted by any offsetting effect of the proposed \$5.1 million contribution from Dow. It disagreed with TransAlta's argument that all of TransAlta's transmission facilities around the Dow site would still be required to provide system access services, even if the Dow bypass were built. The Firm Customers submitted that there was no specific evidence on the record in support of the proposition.

The Firm Customers drew attention to the Board's Decision U97096 respecting NGTL's Load Retention Service. The Firm Customers noted that despite the fact that the NGTL facilities in question were required to provide ongoing service to all customers, the Board considered that NGTL and its shareholders should share in the revenue losses because they shared in the benefits from the load retention rate. Such cost sharing would recognize a small amount of risk

realization and provide the utility with the incentive to obtain the highest possible price for the load retention service. The Firm Customers observed that the Board concluded that it would be appropriate for NGTL's shareholders to bear 25 percent of the revenue shortfalls for the duration of its Cost Efficiency Incentive Settlement.

The Firm Customers questioned whether or not TransAlta Utilities had sufficient incentive to ensure the bypass rate had been maximized given TransAlta Energy's involvement as a participant in the proposed onsite generating unit.

The Firm Customers concluded that for the above mentioned reasons, it would be inappropriate for TransAlta to be kept entirely whole and that its shareholders should bear some portion of the foregone revenues from Dow both as risk realization and as an incentive to maximize load retention rates.

The Firm Customers noted that TransAlta, as a wire owner, leases transmission facilities to the TA who in turn uses them to provide customers with system access. The Firm Customers agreed that the TA should not be required to share in the risks and costs since the TA acts essentially as an agent to flow the wire owners' costs through to customers.

### **Board Findings**

The Board accepts that the revenue loss is due to Dow's decision to reduce its contracted load and generate more energy onsite. As such, the Rider B is a transmission bypass avoidance rate and is unrelated to the issue of load retention in this instance. Furthermore, the Board agrees that the contribution made by Dow, through Rider B, provides an offset to the TA's loss of transmission revenue and benefits all transmission customers. The Board agrees that the TA should not be required to make up any loss in transmission revenue caused by Dow's exercising its contractual rights to reduce its transmission demands.

The Board is satisfied that TransAlta's existing transmission facilities are required to serve remaining contractual commitments to Dow, serve other customers in the area, and ensure the reliable operation of the transmission system serving the Fort Saskatchewan area. The Board notes there appears to be no evidence of stranded assets, since TransAlta's facilities will still be required to serve Dow and the rest of the system into the future. Also, there appears, at this time, to be no new opportunities for TransAlta to serve future incremental load at Dow. Dow's financial contribution remains the single benefit derived from offering Rider B, and that benefit is flowed through to all transmission customers. Therefore, the Board believes that TransAlta should continue to be allowed to recover the full cost of these facilities in its revenue requirements.

The Board cannot substantiate the Firm Customers contention that TransAlta Energy would benefit in some unspecified way if TransAlta Utilities did not obtain the maximum load retention rate. The Firm Customers did not demonstrate any linkage between the matter of TransAlta

Utilities persuading Dow to avoid building a transmission bypass, and the matter of TransAlta Energy and Air Liquide contracting with Dow to build onsite generation. Therefore, the Board cannot accept the Firm Customers' assertions on this matter.

Respecting the Board's Decision U97096, the Board believes that the facts of this application are different from the facts of NGTL's application. The Board determined that NGTL's offer of a load retention rate was of strategic advantage to NGTL's shareholders. This was because the company, and hence its shareholders, would benefit both from the avoidance of stranded investment and the opportunity to increase rate base to serve incremental load that otherwise would have been lost. Given that situation, the Board decided that because the benefits of the load retention rate were ultimately shared by both NGTL's shareholders and NGTL's customers, it would be appropriate that the revenue loss caused by offering such a rate also be shared in suitable proportions.

## 5. OTHER ISSUES

### 5.1 Notice Provisions

#### Positions of Gridco, TransAlta and Dow

Dow expressed the view that the 36-month notice period for termination of Rider B was reasonable. Dow indicated however that it was willing to be bound by a termination notice period of 18 months during the first 12 months following passage of Bill 27, the *Electric Utilities Amendment Act, 1998*. After that time the required notice period would return to 36 months as per the Application.

Gridco accepted the 36-month notice period for termination of the Rider B service as reasonable, and did not specifically address the revision suggested by Dow. Gridco suggested that any refund of Dow's customer contribution be made at the end of the notice period.

TransAlta stated that Dow's willingness to revise and reduce the notice provisions from those previously applied for was reasonable.

#### Positions of the Intervenors

Noting that Bill 27 was currently before the Legislative Assembly, EAL suggested that any approval by the Board be subject to review and potential variation following its proclamation.

The Firm Customers suggested alternate notice requirements for reduction of contract demand. The notice requirements set out in the TA's draft terms and conditions of service dated 25 July 1997 would serve as a useful guide, according to the Firm Customers.

IPSSA did not question the notice period itself, rather it inquired about the timing of any refund of Dow's customer contribution and whether it would be at the end of the 36-month notice period.

### **Board Findings**

The Board accepts the suggestion by Dow to reduce the notice for termination to 18 months during the first 12 months following passage of Bill 27. Subsequently the Board considers the 36-month notice period for termination to be reasonable.

Regarding any future refund of Dow's customer contribution, the Board accepts Gridco's submission that any refund should be made at the end of the applicable notice period.

### **5.2 Effective Date for Rider B**

#### **Positions of Gridco, TransAlta and Dow**

Gridco noted that Rider B was intended to keep Dow neutral as between its bypass option and taking service through Rider B. Gridco suggested that Dow could have built the first segment of the bypass between the Chemicals location and ASU2 in time to meet the in-service date of the ASU2 load. Thus, the effective date of Rider B with respect to the connection between Chemicals and ASU2 should be at the expiration of the special short term contract. Gridco proposed that this portion of Rider B be available at 1 November 1998 as per the Application.

Gridco suggested a separate effective date regarding the second segment of transmission facilities, between the Hydrocarbons location and the Chemicals location. Gridco proposed that this portion of Rider B be available two months after Dow pays the second customer contribution to TransAlta. The timing of this contribution was linked to when the second segment of facilities would have been available had the bypass actually been constructed.

TransAlta supported the implementation dates of Rider B proposed by Gridco.

Dow argued that the Board should reject recommendations from intervenors with respect to the timing of Rider B. Dow submitted that the timing of Rider B should be based on the proposed availability of its bypass option, not on the availability of the proposed new generation plant.

#### **Positions of the Intervenors**

APL commented that there appeared to be little justification for making any discount rate available to Dow before late 1999.

The Firm Customers commented that service of the ASU2 load may be accomplished by extension of the current short term contract until the in-service date of G3. It pointed out that the construction of the two transmission segments was required to complete the proposed bypass. It accepted that the first segment could have been in place before the end of 1998, but it suggested that the second phase may not have been completed and functional until the construction of G3. The effective date for the implementation of Rider B was also compared to the 36-month notice period for termination, which was chosen as the maximum length of time for Dow to construct any necessary facilities.

For these reasons the Firm Customers submitted that Rider B not be effective until the in-service date of G3. An in-service date prior to that would provide Dow with rate relief sooner than it would have obtained by constructing the bypass.

### **Board Findings**

The Board notes the stated intention of Rider B, that Dow be kept neutral as between the bypass option and taking service under Rider B. With this in mind, the Board notes that Dow would have had to construct two separate transmission lines, one between the Chemicals location and ASU2, and one between the Chemicals location and the Hydrocarbons location. The Board agrees that the availability of those facilities should be reflected in the timing of Rider B. It appears to the Board that at least part of the bypass would likely have been available to Dow prior to the construction of G3. Therefore, the Board does not agree with parties that Dow should wait until completion of the construction of G3 before having access to Rider B.

The Board considers it reasonable that the timing of the implementation of Rider B reflect the timing of the service that would be available to Dow via the bypass option. The Board agrees that the revision to Rider B proposed by Gridco reflects the service and timing that would have been available to Dow through the bypass option and accepts the revised effective dates as proposed by Gridco.

## **5.3 Load Shedding Requirements**

### **Positions of the Applicants**

Gridco revised Rider B to include a new condition: "Dow will maintain in place and operate the necessary equipment such that it will trip loads with no intentional delays based on normal circuit breaker opening times, and that this response will consistently be under 10 cycles for any on-site generator problems."

Dow stated that it was prepared to commit to the new terms of Rider B as submitted by Gridco,

which addressed the use of load shedding equipment and the requirements thereof.

TransAlta maintained that this commitment by Dow should alleviate the concerns expressed by APL.

### **Positions of the Intervenors**

APL believed that the use of equipment with specifications to open circuit breakers with a 3 to 5 cycle response to any onsite generator problems did not amount to a commitment to shed load within that time frame. APL suggested that contractual arrangements be put in place and that a period of 12 cycles was a reasonable criterion, as per the Remedial Action Scheme requirements.

The FIRM Customers stated that load shedding within a 3 to 5 cycle response time should be a requirement for approval of any bypass avoidance rate for Dow. Further, non-compliance should result in an adjustment to Dow's interconnection contract demand.

### **Board Findings**

The Board notes the concerns raised by parties and agrees that Dow be required to respond to supply interruptions in a timely manner. The suggested period of 10 cycles is acceptable to the Board. The Board considers the revisions to Rider B proposed by Gridco are sufficient to address parties concerns about load shedding, and directs that they be incorporated into Rider B.

## **5.4 Rider B Reporting Requirements**

### **Board Findings**

The Board notes submissions by TransAlta that its future revenue requirements with regards to transmission costs will be lower due to Rider B. These reductions will be reflected in future transmission costs submitted to the TA, and will be reflected in the rates of all customers on the AIES. The Board accepts the mechanism proposed by TransAlta. In addition, the Board directs TransAlta to maintain records and accounts pertaining to Rider B. The Board expects that any future filing by TransAlta to the Board, or to the TA, with respect to Rider B will clearly indicate: the total revenue requirement impact; a detailed breakdown by category (e.g., amortization of contribution, return, income tax, etc.); all rates and assumptions used; and continuity schedule(s) of Rider B amounts by category.

## **6. BOARD ORDER**

THEREFORE IT IS ORDERED THAT:

The Grid Company of Alberta Inc., acting as the Transmission Administrator, to implement Rider B, as revised 1 April 1998, subject to the following conditions:

1. The Interconnection Contract Demand and the Measured Energy Transfer for each interval at 16601 and 90602 Points of Delivery shall be summed by the Transmission Administrator as one point of delivery, as described in Rider B, effective 1 November 1998.
2. The Interconnection Contract Demand and the Measured Energy Transfer for each interval at 16601 and 90602 and 25801 Points of Delivery shall be summed by the Transmission Administrator as one point of delivery, as described in Rider B, effective two months after Dow Chemical Canada Inc. pays the second customer contribution.
3. Schedule B1, attached to Rider B, shall be amended to show the effect of the second customer contribution at the time of the contribution, and filed with the Board.
4. During the 12 months following the proclamation of the *Electric Utilities Amendment Act, 1998* (30 April 1998), the notice period for termination of Rider B shall be 18 months, and 36 months thereafter.
5. Any refund of Dow Chemical Canada Inc. customer contributions shall be made at the end of the applicable notice period.
6. Load shedding provisions shall be as described in Term b of Rider B, as revised 1 April 1998.
7. Rider B reporting requirements by TransAlta to the Transmission Administrator shall be as described in Section 5.4 of this Decision.

Dated in Calgary, Alberta on 24 July 1998.

**ALBERTA ENERGY AND UTILITIES BOARD**

C. Bélanger  
Presiding Member

F. J. Mink, P.Eng. \*

Member

B. T. McManus, Q.C.  
Member

\* F. Mink was not available for signing but concurs with the contents and the issuance of this  
Decision