Canadian Radio-television and Telecommunications Commission
Conseil de la radiodiffusion et des télécommunications canadiennes

Telecom Decision CRTC 2012-226

PDF version

Ottawa, 19 April 2012

Bell Aliant Regional Communications, Limited Partnership and Bell Canada – Revised co-location power rates

File numbers: Bell Aliant Tariff Notice 380 and Bell Canada Tariff Notice 7326

In this decision, the Commission approves revised AC and DC power service rates charged by Bell Aliant and Bell Canada (collectively, the Bell companies) to service providers that co-locate in the Bell companies' central offices in Ontario and Quebec.

Introduction

1. The Commission received applications by Bell Aliant Regional Communications, Limited Partnership and Bell Canada (collectively, the Bell companies), dated 12 September 2011, in which the Bell companies requested that the Commission approve revised monthly rates for their direct current (DC) and alternating current (AC) wholesale power services in Ontario and Quebec. The Bell companies provide these services to competitors that co-locate in a Bell company central office (CO). The Bell companies filed a cost study in support of their proposed revised co-location power service rates. The companies' existing co-location power service rates were made interim in Telecom Order 2011-624, effective 27 September 2011.

2. Specifically, the Bell companies proposed rate increases for the following three monthly co-location power service rate[1] elements: -48 volt DC power service, which is used for the co-locator's telecommunications equipment; 120 volt AC unprotected power service, which is used by the co-locator for such things as test equipment; and 120 volt AC protected power service, which includes generator back-up should a power outage occur.

3. The Bell companies submitted that their proposed rates reflect increases in the power consumption rates charged by provincial electric power utilities from 2002 to 2010 in Ontario and Quebec. However, the Bell companies submitted that the co-location power service rates that they had been charging co-locators over the same period declined by approximately 9 percent due to the annual application of the I-X factor.[2]

The Bell companies also submitted that, since there was a significant difference

[1] Co-location power service rates are per fuse amp.
[2] I-X, which stands for "inflation less productivity," is a factor applied to some wholesale service rates. In such cases, in each year that I-X does not equal zero, the rate changes automatically.

in the average price per kilowatt hour (kWh) they paid in Ontario relative to the price they paid in Quebec, they proposed to implement different monthly rates for co-location power service in the two provinces.[3]

4. The Commission received comments on the Bell companies' applications from the Canadian Network Operators Consortium Inc. (CNOC), Globility Communications Corporation (Globility), and MTS Allstream Inc. (MTS Allstream)[4] [collectively, the competitors]. The public record of this proceeding, which closed on 22 December 2011, is available on the Commission's website at www.crtc.gc.ca under "Public Proceedings" or by using the file numbers provided above.

5. The Commission has identified the following issues to be addressed in its determinations:

   I. Are the Bell companies' proposed rates reasonable?

      i. Should the DC and AC power service rates be adjusted to reflect actual power consumption?

      ii. Are the proposed floor space costs included in the cost study appropriate?

      iii. Are the proposed bad debt, product management, and billing costs included in the cost study appropriate?

      iv. Are any changes required to address other cost issues raised by co-locators?

   II. What co-location power service rates would be just and reasonable?

   III. When should the final rates be applied?

   IV. Are the Commission's determinations consistent with the Policy Direction?

I. Are the Bell companies' proposed rates reasonable?

i. Should the DC and AC power service rates be adjusted to reflect actual power consumption?

6. The Commission notes that the Bell companies incur co-location power consumption costs[5] for DC and AC power only according to the power that co-locators actually consume. The Bell companies submitted that they do not currently measure a co-locator's actual DC or AC power consumption since doing so would require

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[3] The Commission notes that this is a departure from the existing rate structure, which is non-province-specific.

[4] As of early 2012, MTS Allstream Inc. became known as two separate entities, namely, MTS Inc. and Allstream Inc.

[5] "Power consumption costs" refer to service provisioning expenses, as provided by the Bell companies in their cost study.

provisioning changes and would increase the costs of providing power services. As a result, competitors are charged for power based on a pre-determined amount of power that they must purchase in advance.

DC power

7. The Commission notes that, consistent with Telecom Decision 2006-42, the Bell companies estimated DC power consumption costs based on the assumption that co-locators consume all the DC power capacity they purchase from the Bell companies.[6]

8. MTS Allstream submitted that this assumption results in an over-estimation of DC power costs and rates. The company provided data based on one month of actual circuit measurements for 72 of its co-location sites that demonstrated that it consumed, on average, only 34 percent of the available -48 volt DC power capacity purchased, with consumption ranging from 50 to 60 percent in a few sites, and lower than 34 percent in many other sites. MTS Allstream submitted that, based on the above, co-locators' consumption costs should be estimated assuming that co-locators consume an average of only 34 percent of the power capacity they purchase.

9. MTS Allstream also submitted that it is not practical for a co-locator to optimize power capacity ordered at a co-location site or to regularly order changes to capacity. MTS Allstream indicated that any savings resulting from reducing DC power capacity would be more than offset by the Bell companies' significant associated one-time charges,[7] and by the additional costs associated with managing power levels.

10. CNOC submitted that it supported MTS Allstream's proposal for estimating the Bell companies' costs associated with co-locators' DC power consumption, and that its members that co-locate in the Bell companies' COs consume between 7 and 30 percent of the DC power capacity they purchase.

11. In reply, the Bell companies submitted that co-locators are in the best position to know the power consumption of their own equipment and to determine the actual power capacity they require. The Bell companies also submitted that they will provision any capacity requested by a co-locator and that it is the co-locator's responsibility to ensure that it purchases the appropriate capacity.

Commission's analysis and determinations

12. The Commission notes the Bell companies' submission that requiring them to measure the amount of power that co-locators consume would increase power service costs. The Commission also notes that no party to this proceeding proposed that the Bell companies be required to measure the amount of DC power that co-locators consume.

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[6] References to DC and AC power consumption and to DC and AC power capacity purchased are in terms of fuse amps.

[7] MTS Allstream and Globility quoted one-time charges paid to the Bell companies ranging between $20K and $25K.

13. With respect to co-locators' estimation of their DC power requirements, the Commission considers that it is incumbent on the co-locators to optimize the DC power capacity they purchase in relation to their actual consumption requirements. However, the Commission also recognizes that there are practical constraints involved.

14. The Commission considers that purchasing DC power capacity that closely matches actual power consumption could require co-locators to make frequent changes to the amount of power capacity they purchase to meet varying levels of power consumption. However, the Commission considers that such frequent changes would not be cost-effective for co-locators, given the Bell companies' associated significant one-time charges. Accordingly, the Commission considers it reasonable for co-locators to purchase DC power capacity that exceeds their current consumption requirements in order to manage their current and future needs. The Commission also considers that the assumption approved in Telecom Decision 2006-42, namely that co-locators will consume 100 percent of the capacity purchased, is no longer valid.

15. The Commission considers, however, that MTS Allstream's proposed estimate of 34 percent for average DC power consumption is low. The Commission notes that the competitors provided no evidence demonstrating why the optimum power capacity consumed could not be higher than that proposed by MTS Allstream, given that even MTS Allstream's evidence indicated that it has consumed between 50 and 60 percent of the power capacity purchased at several of its co-location sites. The Commission therefore considers that a DC power consumption level of 75 percent would provide an appropriate balance between a co-locator having no excess power capacity available versus too much.

16. Accordingly, the Commission adjusts the Bell companies' proposed DC power consumption costs by reducing them to reflect DC power consumption equal to 75 percent of the DC power capacity purchased.

AC power

17. The Bell companies submitted that in their proposed costs for 120 volt AC protected and 120 volt AC unprotected power services, they had applied the assumption for AC power consumption of 50 percent of the AC power capacity purchased, as set out in Telecom Decision 2006-42, and that the competitors' request to revisit that determination has no merit.

18. MTS Allstream submitted that the only equipment it uses continuously is an Internet Protocol telephone, which consumes very little AC power. The company indicated that it does not use other equipment that consumes AC power continuously, such as fax machines and printers, in any of its co-location sites. Globility submitted that it uses AC power solely for equipment that consumes power for short durations. MTS Allstream and Globility submitted that AC power consumption should be assumed to be 2 percent of AC power capacity purchased. CNOC submitted that AC power consumption should be assumed to be no more than 1 percent.

Commission's analysis and determinations

19. The Commission notes that the Bell companies' proposed costs for 120 volt AC protected and 120 volt AC unprotected power services were developed based on the assumption for AC power consumption set out in Telecom Decision 2006-42. The Commission also notes that this decision took into account the fact that AC power is typically consumed by equipment that is plugged in continuously, such as fax machines, and test equipment that is used sporadically.

20. The Commission notes co-locators' submissions that they generally do not use equipment that consumes power continuously and that AC power consumption should be assumed to be negligible. The Commission also notes that the Bell companies did not challenge the submissions by MTS Allstream and Globility that the co-locators' use of AC power is low. Accordingly, the Commission considers it appropriate to reduce the AC power consumption costs proposed by the Bell companies to reflect a lower level of co-locators' power consumption.

21. The Commission considers, however, that the AC power consumption levels proposed by co-locators are low given that AC power is continuously available for co-locator use and that co-locators' AC power consumption is not measured.

22. Accordingly, the Commission has adjusted the Bell companies' proposed power consumption costs for their 120 volt AC protected and 120 volt AC unprotected power services by assuming that co-locators consume 25 percent of the AC power capacity they purchase.

ii. Are the proposed floor space costs included in the cost study appropriate?

23. In their cost study, the Bell companies proposed to include CO building costs. These costs were developed by applying building structure cost factors (SCFs)[8] to their proposed power equipment costs.

24. Globility submitted that the considerations involved in the Commission's determinations in Telecom Decision 2006-42 still apply to the Bell companies' current cost study and that the Commission should remove the proposed floor space costs from this cost study.

25. The Bell companies replied that the Commission has reviewed the Phase II cost procedures since Telecom Decision 2006-42 was published and that their approved regulatory economic studies manual (cost manual) permits the inclusion of floor space costs through the application of a CO building SCF.

[8] Building SCFs are used to estimate the costs of CO buildings and standardized outside plant housings associated with CO equipment in cost studies.

Commission's analysis and determinations

26. The Commission notes that the Bell companies' cost manual allows for the application of CO building SCFs in a cost study. However, with respect to co-location power services, the Commission is still of the view it expressed in Telecom Decision 2006-42, namely that there are no incremental costs associated with the use of CO floor space to house incremental CO power plant equipment required for co-location.

27. The Commission considers that the Bell companies did not provide any other rationale that would support changing the above-mentioned determination.

28. Accordingly, consistent with its determination in Telecom Decision 2006-42, the Commission has excluded the Bell companies' proposed floor space costs from the current cost study.

iii. Are the proposed bad debt, product management, and billing costs included in the cost study appropriate?

29. The following table identifies and describes the additional cost adjustments that the Commission has made to the Bell companies' proposed cost study.

Type of expense	Proposal	Commission adjustment	Rationale for adjustment
Bad debt	Include bad debt expenses estimated as a percentage of co-location revenues.	Exclude bad debt expenses.	The Bell companies provided no evidence regarding the appropriateness of departing from their previous co-location power cost study, in which bad debt expenses were not included. They also provided no evidence to demonstrate that they have incurred bad debt expenses caused by the provisioning of co-location power services.
Product management	Assign a percentage of total co-location-related product management expenses to co-location power service, based on a ratio of co-location power revenues relative to total co-location service revenues, for the year 2010.	Estimate product management expenses related to co-location power by assigning a lower percentage of total co-location product management expenses to co-location power service based on an assessment of the relative number of activities that directly relate to co-location power. Based on this analysis, reduce the proposed product management expenses by 67 percent.	The proposed methodology is inappropriate since there is no direct causal relationship between product management expenses and co-location service revenues.

Type of expense	Proposal	Commission adjustment	Rationale for adjustment
Billing	Assign a percentage of total co-location-related billing expenses to co-location power services, based on a ratio of co-location power revenues relative to total co-location service revenues, for the year 2010.	Estimate billing expenses related to co-location power based on a ratio of the estimated average number of co-location power bill line items relative to total co-location service bill line items. Based on this analysis, reduce the proposed billing expenses by 67 percent.	The proposed methodology is inappropriate since there is no direct causal relationship between billing expenses and co-location service revenues; co-location power billing expenses are better approximated using co-location service bill line item estimates.
Cost of capital	Calculate capital costs based on corporate average cost of capital.	Calculate capital costs based on province-specific cost of capital instead of corporate average cost of capital.	It is more appropriate to use province-specific cost of capital when cost studies and rates are province- specific. This is consistent with the methodology used by TELUS Communications Company (TCC).[9]

iv. Are any changes required to address other cost issues raised by co-locators?

30. The Commission considered a number of other cost issues raised by co-locators in this proceeding, including the following: (i) the possible double recovery of one-time capital or product management costs, (ii) the increase in the level of maintenance expenses over the level included in the Bell companies' previous cost study, (iii) whether the redundant feed method used by the Bell companies to deliver -48 volt DC power increases power consumption costs, and (iv) whether the Bell companies' method of estimating the average AC power unit cost per kWh of power purchased from electric power utilities is appropriate.

31. The Commission has analyzed each of these other issues and finds that, except for the cost adjustments set out in the previous sections, the Bell companies' proposed costing methodologies are appropriate and no further adjustments are warranted.

II. What co-location power service rates would be just and reasonable?

32. In light of the above, the Commission sets out the Bell companies' co-location power service rates in the table below, based on the Bell companies' Phase II cost study, adjusted to reflect the Commission's determinations in this decision plus a 15 percent mark-up.

[9] Refer to Appendix V of TCC's Regulatory Economic Studies Manual.

Bell Aliant and Bell Canada power service rates in Ontario and Quebec

	Ontario	Quebec
-48 volt DC per fuse amp	$10.99	$9.92
120 volt AC unprotected per fuse amp	$2.29	$1.45
120 volt AC protected per fuse amp	$6.31	$5.45

33. The Commission finds that the above-mentioned co-location power service rates are just and reasonable. Accordingly, the Commission **approves on a final basis** the above-mentioned rates.

34. The Commission directs the Bell companies to issue, within 20 days of the date of this decision, revised tariff pages for the -48 volt DC, 120 volt AC unprotected, and 120 volt AC protected co-location power service rates to reflect the Commission's determinations in this decision.

III. When should the final rates be applied?

35. The Bell companies requested that final co-location power service rates be made retroactive to the date the existing rates were made interim. They submitted that this is reasonable and appropriate since it would minimize the period during which the companies are not fully recovering their costs.

36. MTS Allstream submitted that if this request were granted, the discrepancy in rates would be unjustly advantageous to incumbent local exchange carriers and disadvantageous to competitors.

37. CNOC objected to the retroactive application of the revised co-location power service rates, arguing that retroactive adjustments only serve to increase risk and uncertainty for co-locators at a time when competition needs to be fostered and not impeded.

Commission's analysis and determinations

38. The Commission considers that, when it makes existing rates interim, there is a clear expectation that rates could be approved retroactively to the date they were made interim.

39. Based on the findings in this proceeding, the Commission considers that the revised proposed costs and rates have changed significantly from those approved in Telecom Decision 2006-42. The Commission therefore finds that it is appropriate to apply the final rates approved in this decision, as set out in paragraph 32 above, as of 27 September 2011.

40. In light of the above, the Commission directs the Bell companies to determine additional billings or rebates to applicable co-locators, and to bill or provide rebates accordingly within 90 days of the date of this decision, based on the approved final rates set out in paragraph 32 of this decision.

IV. Are the Commission's determinations consistent with the Policy Direction?

41. The Commission considers that its determinations in this decision will advance the policy objectives set out in paragraphs 7(*b*), 7(*c*), and 7(*f*)[10] of the *Telecommunications Act*. The Commission also considers that its determinations are consistent with the Policy Direction[11] requirements that (i) the measures in question are efficient and proportionate to their purpose and interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives, and (ii) the measures neither deter economically efficient competitive entry into the market nor promote economically inefficient entry.

Secretary General

Related documents

- *Bell Aliant Regional Communications, Limited Partnership and Bell Canada – Monthly co-location power rates*, Telecom Order CRTC 2011-624, 27 September 2011

- *Bell Canada and TCC – Co-location power service rates*, Telecom Decision CRTC 2006-42, 30 June 2006

[10] These objectives are the following: 7(*b*) to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada; 7(*c*) to enhance the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications; 7(*f*) to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective.

[11] *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives*, P.C. 2006-1534, 14 December 2006