

SECTION 7.0

Rate Design

1 **7.0 Rate Design**

2 Enbridge Gas New Brunswick (EGNB) continues to operate in the development period as a start-
 3 up utility facing numerous unique challenges as compared to traditional gas Local Distribution
 4 Companies (LDC). One of those challenges is found in addressing cost of service and rate
 5 design within the variety of constraints posed by the extent of its competitive markets, legislation
 6 and the regulatory compact. To understand the rate design proposals presented by EGNB, it is
 7 necessary to begin with a discussion of the current constraints and how they interact to adversely
 8 limit the range of rate design options. This evidence consists of three sections: Section One: The
 9 Rate Design Background, Section Two: Rate Design Tools and Issues and Section Three:
 10 Proposed Rate Designs for 2017.

11 **Section One: The Rate Design Background**

12 To understand the background for rate design, this section begins with the well-known concept
 13 of the regulatory compact as discussed in the filing for rates for the last several years. The
 14 regulatory compact can be summarized as a series of rights and obligations that represent the
 15 implied contractual relationship between the regulated utility and the regulatory authority.

OBLIGATIONS	RIGHTS
Obligation to serve.	Right to a reasonable return.
Provide safe and reliable service.	The provision of service is subject to reasonable rates, rules and regulations.
Charge non-discriminatory rates.	Receive protection from competition.
Charge just and reasonable rates.	Right of eminent domain.

16 None of these obligations are unlimited in the sense that the terms of service and rules and
 17 regulations place limits on the extent of the obligations through such things as line extension
 18 policies or policies related to shutting off customers for non-payment. As the list illustrates,

1 there are significant rights and obligations related to the issue of rate design. In this list, the
2 obligations to provide non-discriminatory rates and to charge just and reasonable rates are
3 imposed by the regulatory authority through the rate case process. Similarly, the rates approved
4 by regulation must satisfy three rights. First, the rates approved must provide the utility with a
5 reasonable opportunity to earn a return that is consistent with returns earned by the market for
6 entities with similar risks, i.e. the reasonable return. Second, the rates need to be reasonable
7 including recovering the revenue requirement and producing residual revenues after prudently
8 incurred costs sufficient to reward shareholders for the risk of the investment and to allow the
9 utility to attract capital on reasonable terms. Third, the rates must allow the utility to provide
10 competitive services at competitive prices while still satisfying the two previous rights. EGNB
11 has the difficult task of proposing rates that protect these rights, but in addition, must satisfy
12 legislative mandates that make this task very difficult.

13 Where some customers have competitive options, the regulator is not relieved of the obligation
14 to allow the utility an opportunity to earn the allowed return through rates that in total recover
15 the cost of service including a reasonable return. Essentially, this means that the rate revenues
16 from competitive customers plus the rate revenues from captive customers must equal the total
17 revenue requirement or the cost of service.

18 The issue of reasonable rates for customers who have no economic option to taking service from
19 the utility is neither new nor novel. The concept has been discussed in economics literature and
20 in regulatory decisions under several different descriptive terms such as “Constrained Market
21 Prices” or “Constrained Differential Pricing”. These concepts have been applied in a number of
22 regulatory settings. For example, the Interstate Commerce Commission, the predecessor
23 regulatory agency to the Surface Transportation Board, discussed the concept of CMP as a basis
24 for establishing reasonable rates for captive shippers. In doing so they established three clear
25 standards for assessing a reasonable level of rates: (1) revenue adequacy for the company; (2)
26 management efficiency for the service provided; and (3) the Stand Alone Cost (SAC) test. These
27 three tests represent fundamental rights and obligations of the regulator and the utility. The rates
28 proposed in this case satisfy these three principles. One, they produce the proposed revenue
29 requirement. Two, management has been efficient in finding practical and cost effective ways to
30 reduce the revenue requirement while maintaining a safe and reliable system. Finally, the

1 proposed rates meet the Stand Alone Cost Test for each class of customer. Where that test is not
2 satisfied for individual customers, EGNB has proposed a mechanism to allow them to reduce
3 rates to the competitive level to retain customers because even within a class, customers may
4 have different competitive constraints.

5 Among the binding constraints are the legislative mandates that Small General Service rates be
6 based on a target annual discount of 20% below the delivered cost of electricity. The essential
7 problem with this mandate is that it assumes that most customers have switched from electric
8 service to gas. The evidence is that almost twice as many residential customers switched from
9 oil to natural gas. This different impact in switching is not surprising given that the capital cost
10 of switching is higher for electric customers and electric costs are historically lower than the cost
11 of oil giving natural gas a more competitive advantage relative to oil. By setting the competitive
12 rate by regulation, EGNB is forced to provide much larger benefits for oil customers than is
13 warranted by competitive considerations. In providing these extra benefits, other customers must
14 make up for the shortfall in revenue requirement that impose additional risks on other classes of
15 service. In this case, the larger Mid General Service customers have also reached the
16 competitive price ceiling and have had the second block volumetric rates maintained.

17 Significantly, there is no opportunity under rates that are significantly volumetric based for
18 EGNB to have an opportunity to earn its allowed return. This occurs because rates are designed
19 on the basis of normal weather and a forecast of test year volumes that may or may not be
20 achieved. As actual weather varies from normal weather, EGNB's return is either higher than
21 allowed when weather is colder than normal or lower than required when weather is warmer than
22 normal. The end result of significant fixed cost recovery through volumetric rates is a level of
23 revenue stability that makes capital attraction difficult. This problem is made more difficult by
24 the ability of customers to switch from gas to an alternate fuel on a limited basis to avoid the
25 high commodity charges associated with market based gas commodity charges and fluctuating
26 prices for competitive fuels. The competitive fuels market is significantly impacted by the
27 relatively higher commodity prices of western Canadian gas in the New Brunswick market as
28 compared to other Eastern states where more gas is sourced from US shale gas sources such as
29 Marcellus Shale. Historically, EGNB had available a deferral account that made it indifferent to
30 weather, forecast error and even these competitive forces. Changes in regulation have eliminated

1 this tool that is widely used in other jurisdictions so that EGNB is adversely impacted by both
2 the competitive realities in the New Brunswick market and the significant volumetric based
3 recovery of fixed costs. Ultimately, EGNB is faced with the problem of constrained
4 optimization for recovery of its revenue requirement such that significant changes must occur in
5 the definitions of rate classes and the design of rates.

6 The issue of competitive markets is noted above in part by the residential dilemma of offering far
7 too much savings for customers who have shifted from oil while effectively eliminating any
8 ability to convert customers from electricity because even a twenty percent savings will be
9 inadequate to cause the customer to incur the added capital cost of the conversion without direct
10 conversion cash incentives. It will not be possible to obtain the necessary economies of scale to
11 create viable long-term competitive market prices absent significantly lower delivered costs of
12 the gas commodity. The competitive market issues can also arise in other classes of service as
13 the propane alternative has become economic for some customers, albeit temporarily. The issues
14 differ from class to class and the economics of alternative fuels are very different. For example,
15 oil and propane require onsite storage and payment on delivery whereas gas and electricity
16 deliver the service as needed and payment is in arrears. In particular, the MGS and LGS classes
17 have become subject to the cost of propane becoming a viable competitive option necessitating
18 that these rate classes must be managed within that additional constraint.

19 **Section Two: Rate Design Tools**

20 In this section, the particular rate design tools available to EGNB are discussed. Essentially,
21 EGNB uses a combination of customer, demand and volumetric charges to recover its revenue
22 requirement. For smaller customers, only customer and volumetric charges are practical based
23 on current meter technology. Further, there is a limit to the level of the customer charge in rate
24 design before it drives away customers who use small amounts of gas on a monthly basis. In
25 other words, raising the customer charge to promote revenue stability and closer tracking of costs
26 would result in exceeding the competitive price ceiling for a group of low use customers. The
27 reason is quite simple in that spreading a high monthly customer charge over very few GJs of
28 annual use results in charges that exceed the cost of another alternative.

29 The competitive effect on the smallest customers in a rate class precludes continuing to propose
30 large increases in the customer charge to benefit revenue recovery even though doing so would

1 reduce the intraclass subsidies associated with volumetric rates. Thus, the only available option
2 is to increase the volumetric charges and thereby decrease the revenue stability of EGNB.
3 Where demand charges are available, the utility cannot increase demand charges at will because
4 doing so creates potential adverse impacts on low load factor customers in the class. It is
5 necessary to review all of these issues for each rate design proposal that EGNB brings forward to
6 the Board. EGNB has worked diligently to design new rates that manage these constraints and at
7 the same time increases fixed cost recovery in fixed charges.

8 There are a number of other rate design and regulatory tools in use in Canada and the United
9 States that provide a better opportunity for regulated utilities to actually earn their allowed
10 return. These tools rely on deferral or variance accounts or rate riders that adjust rates for
11 changes in specific costs as identified in the riders. These tools are necessary based on a variety
12 of costs or revenues that are wholly or partially beyond the control of the management of a
13 utility. There is a long-established regulatory practice of according flow-through treatment to
14 unpredictable and uncontrollable costs so that customers pay the actual costs and there are no
15 windfall gains or losses.

16 In order for EGNB to remain a viable utility in the face of conflicting constraints, the rate design
17 tool kit must become more creative and more effective at providing a sound financial footing for
18 EGNB going forward. EGNB requires the opportunity to have much more rate flexibility that
19 can only come from legislative changes and from the Board encouraging innovative options to
20 meet both the revenue requirement and still providing the rate flexibility needed to operate in the
21 unique competitive environment in the Province.

22 **Section Three: Proposed Rate Designs for 2017**

23 The rate design process begins with the allocation of the revenue requirement among the various
24 classes. Since there is a mix of market-based and cost based rates, the first step is to determine
25 the market constraint on rates as it relates to the cost of service revenue requirement. In the case
26 of the SGS class as discussed below, the market-based rate produces revenue less than the cost of
27 service requirement. All other cost of service rates are below the applicable market-based rates
28 in total but not for every customer in the class. The following table compares the cost of service
29 revenue requirement to the equivalent market-based revenues.

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Table 2
Comparison of Market-Based Revenues to Cost of Service Revenues by Class of Service

	SGS	MGS	LGS	CGS	ICGS	OPS
Market based rates revenue	7,225,215	13,055,931	17,480,334	6,414,659	14,943,227	319,045
COS Revenue Requirement (RR)	15,633,310	12,977,851	6,572,845	3,731,649	5,037,434	87,241
Ratio of Market Based Revenue to COS RR	46%	101%	266%	172%	297%	366%

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As the table illustrates, the SGS class based on the required comparison to residential electric rates results in a substantial revenue shortfall from the cost of service revenue requirement.¹ For the MGS class, the same comparison to oil prices confirms the return of MGS to a cost of service class and rates are set accordingly. The other classes have seen minimal rate decreases sufficient to recover the remainder of the revenue requirement which is lower in the current proposal than last year’s revenue requirement. This lower revenue requirement is indicative of management’s commitment to efficient operations and prudent cost savings.

9 The EGNB rate design proposal consists of the following factors:

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1. Recognition that further increases in fixed charges is not practical because of the bill impact on low use customers within the class as the customer charge would begin to force smaller customers off the system;
 2. The SGS rate has the same customer charge as the current charge and a volumetric charge increase so that the rate remains at 20% below the cost of electricity;
 3. The MGS class has the same customer charges as the current charge and a volumetric increase.
 4. Volumetric charges have been held constant or decreased for the other rate classes where possible to still meet revenue requirement.

¹ This shortfall would be less if the rates were compared to current oil prices instead of residential electric service.

1 The proposed SGS rate is as follows:

Small General Service	Rate Design	Revenue
Customer Charge	\$18.00	\$1,764,720
Rate	\$9.4450	\$5,460,494

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3 The proposed MGS rate is as follows:

Mid General Service	Rate Design	Revenue
Customer Charge		
Maximum consumption up to 60 GJs / mth	\$20.00	\$1,084,951
Maximum consumption. greater than 60 GJs / mth	\$50.00	
Block 1	\$11.8805	\$10,929,233
Block 2	\$8.0820	\$963,644

4 The concept of graduated customer charges is not new and EGNB has recommended the use of
 5 graduated customer charges where costs differ based on the size of the customer. In particular,
 6 meter costs increase as the size of the customer increases. Graduated customer charges track
 7 those increases in cost. In addition, where customer charges recover less than the full customer
 8 related costs, the first rate block should be higher than the second block as in this proposal.

9 The definition of the LGS, CGS, ICGS and OPS rates remain the same. Each rate continues to
 10 use the same rate design elements approved in prior rate cases. With respect to the LGS class, a
 11 small reduction to Block 1 has been provided to improve competitiveness against propane. For
 12 the CGS and ICGS rate classes, stability is evident, the changes are minimal and a small Winter
 13 block charge decrease is noted. The OPS rate does not change.

14 EGNB believes that this comprehensive approach to addressing rate design produces rates that
 15 are just and reasonable.

1 Rate Design Elements and Monthly Charges

Rate Class	Min (Monthly Demand Peak)	Max (Monthly Demand Peak)	Customer Charge (\$/month)	Demand Charge (\$/GJ)
Small General Service	-	-	18.00	n/a
Mid-General Service (who do not qualify for SGS)	-	<250 GJ	For customers with max. consumption up to 60 GJs/month: 20.00 For customers with max. consumption greater than 60 GJs/month: 50.00	n/a
Large General Service	250 GJ	n/a	For customers with max. consumption up to 650 GJs/month: 275.00 For customers with max. consumption greater than 650 GJs/month: 375.00	n/a
Contract General Service	1,000 GJ	<10,000 GJ	n/a	19.00
Industrial Contract General Service	10,000 GJ	-	3,300.00	25.66
Off-Peak Service	n/a	n/a	50.00	n/a

2 A copy of the rate schedules are provided in Schedule 7.1 – Rate Schedules.