

## 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. Current propane market realities coupled with the winter supply  
 7 constraints for natural gas in the Province have changed the competitive dynamic significantly  
 8 since the 2015 rates were adopted. To understand the rate design proposals presented by EGNB,  
 9 it is necessary to begin with a discussion of the current constraints and how they interact to  
 10 adversely limit the range of rate design options. This evidence consists of four sections: Section  
 11 One: The Rate Design Background, Section Two: Rate Design Tools and Issues, Section Three:  
 12 Proposed Rate Designs for 2016 and Section Four: Flex Rates.

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

14 To understand the background for rate design, this section begins with the well-known concept  
 15 of the regulatory compact as discussed in the filing for rates for the last several years. The  
 16 regulatory compact can be summarized as a series of rights and obligations that represent the  
 17 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.

1 None of these obligations are unlimited in the sense that the terms of service and rules and  
2 regulations place limits on the extent of the obligations through such things as line extension  
3 policies or policies related to shutting off customers for non-payment. As the list illustrates,  
4 there are significant rights and obligations related to the issue of rate design. In this list the  
5 obligations to provide non-discriminatory rates and to charge just and reasonable rates are  
6 imposed by the regulatory authority through the rate case process. Similarly the rates approved  
7 by regulation must satisfy three rights. First, the rates approved must provide the utility with a  
8 reasonable opportunity to earn a return that is consistent with returns earned by the market for  
9 entities with similar risks, i.e. the reasonable return. Second, the rates need to be reasonable  
10 including recovering the revenue requirement and producing residual revenues after prudently  
11 incurred costs sufficient to reward shareholders for the risk of the investment and to allow the  
12 utility to attract capital on reasonable terms. Third, the rates must allow the utility to provide  
13 competitive services at competitive prices while still satisfying the two previous rights. EGNB  
14 has the difficult task of proposing rates that protect these rights but in addition must satisfy  
15 legislative mandates that make this task very difficult.

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

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

1 proposed in this case satisfy these three principles. They produce the proposed revenue  
2 requirement. Management has been efficient in finding practical and cost effective ways to  
3 reduce the revenue requirement while maintaining a safe and reliable system. Finally, the  
4 proposed rates meet the Stand Alone Cost Test for each class of customer. Where that test is not  
5 satisfied for individual customers, EGNB has proposed a mechanism to allow them to reduce  
6 rates to the competitive level to retain customers.

7 Among the binding constraints are the legislative mandates that Small General Service rates be  
8 based on a target annual discount of 20% below the delivered cost of electricity. The essential  
9 problem with this mandate is that it assumes that most customers have switched from electric  
10 service to gas. The evidence is that almost twice as many residential customers switched from  
11 oil to natural gas. Based on data for the twelve months ended in August 2015, 5439 customers  
12 switched from oil to natural gas and 2820 switched from electricity. This different impact in  
13 switching is not surprising given that the capital cost of switching is higher for electric customers  
14 and electric costs are historically lower than the cost of oil giving natural gas a more competitive  
15 advantage relative to oil. By setting the competitive rate by regulation, EGNB is forced to  
16 provide much larger benefits for oil customers than is warranted by competitive considerations.  
17 In providing these extra benefits, other customers must make up for the shortfall in revenue  
18 requirement that impose additional risks on other classes of service. In this case, the Mid  
19 General Service customers have also reached the competitive price ceiling and have had their  
20 volumetric rates reduced accordingly.

21 Significantly, there is no opportunity under rates that are significantly volumetric based for  
22 EGNB to have an opportunity to earn its allowed return. This occurs because rates are designed  
23 on the basis of normal weather and a forecast of test year volumes that may or may not be  
24 achieved. As actual weather varies from normal weather, EGNB's return is either higher than  
25 allowed when weather is colder than normal or lower than required when weather is warmer than  
26 normal. The end result of significant fixed cost recovery through volumetric rates is a level of  
27 revenue stability that makes capital attraction difficult. This problem is made more difficult by  
28 the ability of customers to switch from gas to an alternate fuel on a limited basis to avoid the  
29 high commodity charges associated with market based gas commodity charges and fluctuating  
30 prices for competitive fuels. The competitive fuels market is significantly impacted by the

1 relatively higher commodity prices of western Canadian gas in the New Brunswick market as  
2 compared to other Eastern states where more gas is sourced from US shale gas sources such as  
3 Marcellus Shale. Historically, EGNB had available a deferral account that made it indifferent to  
4 weather, forecast error and even these competitive forces. Changes in regulation have eliminated  
5 this tool that is widely used in other jurisdictions so that EGNB is adversely impacted by both  
6 the competitive realities in the New Brunswick market and the significant volumetric based  
7 recovery of fixed costs. Ultimately, EGNB is faced with the problem of constrained  
8 optimization for recovery of its revenue requirement such that significant changes must occur in  
9 the definitions of rate classes and the design of rates. Further, it may be necessary to consider  
10 additional rate design tools such as full decoupling of rates from volumetric recovery of fixed  
11 costs and that decoupling must occur in real time without deferral or variance accounting.

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

## 26 **Section Two: Rate Design Tools**

27 In this section, the particular rate design tools available to EGNB are discussed. Essentially,  
28 EGNB uses a combination of customer, demand and volumetric charges to recover its revenue  
29 requirement. For smaller customers, only customer and volumetric charges are practical based  
30 on current meter technology. Further, there is a limit to the level of the customer charge in rate

1 design before it drives away customers who use small amounts of gas on a monthly basis. In  
2 other words, raising the customer charge to promote revenue stability and closer tracking of costs  
3 would result in exceeding the competitive price ceiling for a group of low use customers. The  
4 reason is quite simple in that spreading a high monthly customer charge over very few GJs of  
5 annual use results in charges that exceed the cost of another alternative.

6 The competitive effect on the smallest customers in a rate class precludes continuing to propose  
7 large increases in the customer charge to benefit revenue recovery even though doing so would  
8 reduce the intraclass subsidies associated with volumetric rates. Thus, the only available option  
9 is to increase the volumetric charges and thereby decrease the revenue stability of EGNB. In the  
10 Small General Service class where the volumetric charge is effectively a residual charge to  
11 recover the difference in the competitive target for the bundled delivery cost of gas and the  
12 competitive alternative less the twenty percent annual savings, small increases in the customer  
13 charge are possible. In this case, it is also possible to increase the customer charge for the Large  
14 General class and to maintain the same volumetric charges as in the prior year. This change is  
15 part of the gradual approach to move the customer charge closer to the cost based customer  
16 charge. Finally, where demand charges are available, the utility cannot increase demand charges  
17 at will because doing so creates potential adverse impacts on low load factor customers in the  
18 class. It is necessary to review all of these issues for each rate design proposal that EGNB brings  
19 forward to the Board. EGNB has worked diligently to design new rates that manage these  
20 constraints and at the same time increases fixed cost recovery in fixed charges.

21 There are a number of other rate design and regulatory tools in use in Canada and the United  
22 States that provide a better opportunity for regulated utilities to actually earn their allowed  
23 return. These tools rely on deferral or variance accounts or rate riders that adjust rates for  
24 changes in specific costs as identified in the riders. These tools are necessary based on a variety  
25 of costs or revenues that are wholly or partially beyond the control of the management of a  
26 utility. There is a long-established regulatory practice of according flow-through treatment to  
27 unpredictable and uncontrollable costs so that customers pay the actual costs and there are no  
28 windfall gains or losses. Examples of these flow-through cost adjustments include Revenue  
29 Smoothing Mechanism (RSM) that is effectively a full decoupling provision, Pensions and  
30 Benefit Expenses, Tax Expenses and other non-controllable expense items such as gas costs and

1 pipeline charges. For example, revenue decoupling has been approved in British Columbia,  
 2 Alberta and Ontario. Further, Ontario is currently discussing the use of decoupling for electric  
 3 distribution and has stated a policy preference to develop decoupling through Straight Fixed  
 4 Variable rates for electric distributors.

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

11 **Section Three: Proposed Rate Designs for 2015**

12 The rate design process begins with the allocation of the revenue requirement among the various  
 13 classes. Since there is a mix of market-based and cost based rates, the first step is to determine  
 14 the market constraint on rates as it relates to the cost of service revenue requirement. In the case  
 15 of the redefined SGS and MGS classes as discussed below, the market-based rate produces  
 16 revenue less than the cost of service requirement. All other cost of service rates are below the  
 17 applicable market-based rates in total but not for every customer in the class. The following  
 18 table compares the cost of service revenue requirement to the equivalent market-based revenues.

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

3	SGS	MGS	LGS	CGS	ICGS	OPS
4 Market based rates revenue	6,162,930	12,334,877	14,484,469	6,765,281	13,167,693	241,519
5 COS Revenue Requirement (RR)	15,020,511	13,042,087	6,475,664	4,499,364	5,267,487	78,869
6 Ratio of COS RR to Market Based Revenue	41%	95%	224%	150%	250%	306%

19  
 20 As the table illustrates, the SGS class based on the required comparison to residential electric  
 21 rates results in a substantial revenue shortfall from the cost of service revenue requirement.<sup>1</sup>  
 22 Further, the table illustrates that the potential for the MGS class based on market conditions rates

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

1 must be adjusted to meet the competitive market test. As a result, the MGS class has seen a rate  
 2 decrease in its proposed volumetric rates to meet the competitive market test. The other classes  
 3 have seen minimal rate decreases sufficient to recover the remainder of the revenue requirement  
 4 which is substantially lower in the current proposal than last year’s revenue requirement.

1 **Table 3**  
 2 **Revenue Increases by Class and Percent**

3	SGS	MGS	LGS	CGS	ICGS	OPS
4 Dollar Change	1,371,642	(4,368,678)	(2,059,139)	1,609,367	645,470	33,414
5 Percent Change	29%	-26%	-15%	31%	10%	23%
6 Total Revenue	6,162,929	12,315,233	11,908,202	6,753,755	7,062,800	181,034

6 The dollar changes in the above table produce the target increase or decrease for the class  
 7 revenue requirement found in the total revenue line for each rate. The proposal represents the  
 8 most practical solution to meeting the EGNB revenue requirement given the numerous  
 9 constraints imposed on the rate design.

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

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

18



1 The SGS class is a residential class defined as follows:

- 2 • Dwellings: a private suite of rooms used for living purposes in which the occupants have
- 3 access to all rooms
- 4 • Dwelling out buildings
- 5 • Individually gas metered, self-contained dwelling units within an apartment building.

6 The proposed SGS rate is as follows:

<b>Small General Service</b>	<b>Rate Design</b>	<b>Revenue</b>
<b>Customer Charge</b>	<b>\$18.00</b>	<b>\$1,773,576</b>
<b>Block 1</b>	<b>\$7.2410</b>	<b>\$4,389.353</b>

7  
8 The MGS rate is applicable to all general service customers who use less than 250 GJ per month  
9 who do not qualify for the SGS rate. The proposed MGS rate is as follows:

<b>Mid General Service</b>	<b>Rate Design</b>	<b>Revenue</b>
<b>Customer Charge</b>		
Maximum consumption up to 60 GJs / mth	\$20.00	\$1,237,795
Maximum consumption. greater than 60 GJs / mth	\$50.00	
<b>Block 1</b>	\$10.3829	\$10,210,250
<b>Block 2</b>	\$8.0820	\$867,188

10 With the addition of commercial customers using less than 60 GJ in any month, it is necessary to  
11 continue graduated customer charges so that the smaller customers using less than 60 GJ in any  
12 month would not experience too large an increase as the result of the fixed charge. The concept  
13 of graduated customer charges is not new and EGNB has recommended the use of graduated  
14 customer charges where costs differ based on the size of the customer. In particular, meter costs  
15 increase as the size of the customer increases. Graduated customer charges track those increases  
16 in cost. In addition, where customer charges recover less than the full customer related costs, the  
17 first rate block should be higher than the second block as in this proposal.

18 The definition of the LGS, CGS, ICGS and OPS rates remain the same. Each rate continues to  
19 use the same rate design elements approved in the prior rate cases. With respect to the LGS  
20 class, the fixed components have been increased and the volumetric components have decreased  
21 to produce the proposed revenue requirement. For the CGS and ICGS rate classes, stability is  
22 evident, the changes are minimal and a small Winter block charge decrease is noted. The OPS  
23 rate increase is applied to the volumetric charge.

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

3 **Section Four: Flex Rates**

4 During the hearing in Matter 253, the concept of providing a special rate or discounted rates for  
5 certain groups of customers with competitive fuel options was discussed. Due to the possible  
6 threats from compressed natural gas (CNG) and some customers who may have special group  
7 pricing for propane and oil, the concept of special contracted rates was discussed. It was testified  
8 that maintaining a certain customer at a lower rate would be more beneficial to the natural gas  
9 system and the remaining customers than losing the customer and its revenue altogether. EGNB  
10 testified that it could entertain the potential for contracted rates if evidence existed to support  
11 lower rates for certain customers.

12 In its December 23<sup>rd</sup>, 2014 Decision, the Board indicated that it would also be open to the notion  
13 or concept of a flex rate or contracted rate.

14 EGNB reviewed different concepts and ideas for a discounted rate mechanism. As the public  
15 utility does not have any regulatory tools such as a deferral or variance account to recover the  
16 lost revenue from a discounted rate and legislation clearly prescribes the types of rates that are  
17 possible, very little flexibility is provided to the public utility in order to develop a discounted  
18 rate.

19 Considering the facts above, at this point, what is being proposed is a concept and steps as  
20 follows:

21 **Load Retention Rate:**

22 This rate shall be granted only in circumstances where it can be shown that:

- 23 • The customer's option to use an alternate supply of energy other than natural gas is  
24 both technically and economically feasible;
- 25 • Retaining the customer's load, at the price offered by this rate, is better for other gas  
26 distribution customers than losing the customer load in question;

- 1 • The revenue from service to a customer under this rate shall be greater than the
- 2 applicable incremental cost to serve such customer and shall make a significant
- 3 positive contribution to fixed costs; and
- 4 • This rate shall be available only to customers whose natural gas needs have been
- 5 supplied by EGNB for at least two consecutive years at the time of the request. It is
- 6 not available for new customers.

7 **Step 1:** Customer must apply in writing and provide all relevant details as required by EGNB.

8 Relevant details to be provided to EGNB should include but not be limited to:

- 9 • Details of location/accounts.
- 10 • Detailed and verifiable written information on alternative energy offers.
- 11 • Detailed and verifiable information on load profiles for energy offers.

12 **Step 2:** EGNB analyzes offers versus natural gas equivalent for the applicant's rate class.

13 **Step 3:** EGNB to prepare analysis, results to be filed as evidence for EGNB's next rate  
14 application.

15 **Step 4:** If feasible and appropriate to maintain the applicant, an alternative rate to be established  
16 and filed with the Board which provides the applicant with a savings deemed appropriate for  
17 both the applicant and EGNB. No more than 5% greater savings than the alternative fuel offer.  
18 The rate class will be abbreviated with LR referring to Load Retention. E.g.: MGS-LR, LGS-  
19 LR, CGS-LR, ICGS-LR. Lost revenues will be reallocated to other customers.

20 **Step 5:** All Load Retention Rates to be reviewed annually at a date to be predetermined.

21 Applicants to provide additional details as requested, if required, at this time.

22 Applicants to direct all written requests to:

23 Regulatory Affairs Manager  
24 Enbridge Gas New Brunswick  
25 440 Wilsey Road, Suite 101  
26 Fredericton, NB, E3B 7G5

1 Rate Design Elements and Monthly Charges

Rate Class	Min (Monthly Demand Peak)	Max (Monthly Demand Peak)	Customer Charge (\$/month)	Demand Charge (\$/GJ)
<b>Small General Service</b>	-	-	18.00	n/a
<b>Mid-General Service</b> (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
<b>Large General Service</b>	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
<b>Contract General Service</b>	1,000 GJ	<10,000 GJ	n/a	19.00
<b>Industrial Contract General Service</b>	10,000 GJ	-	3,300.00	25.66
<b>Off-Peak Service</b>	n/a	n/a	50.00	n/a

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