1 2 3 4 5	Q.	Please provide a list of all regulatory mechanisms currently in use, and proposed in this Application. The list should identify the mechanism, the year implemented, provide a brief description including the formula and show amounts in reserve currently and in each of the previous four years.			
6	A.	Ι.	Introduction		
7					
8		The t	erm regulatory mechanisms as used in the evidence refers to the principal		
9		mech	anisms established by the Board to provide for the efficient regulation of		
10		Newf	foundland Power's returns, and certain of its costs.		
11					
12		The e	existing mechanisms include the Automatic Adjustment Formula, the Excess		
13		Earni	ings Account, the Weather Normalization Reserve, the Rate Stabilization Account,		
14		and t	he Demand Management Incentive Account.		
15					
16		In thi	s Application, Newfoundland Power proposes the creation of a Pension Expense		
17		Varia	ance Deferral Account. In addition, Newfoundland Power has proposed to		
18		disco	ntinue use of the Automatic Adjustment Formula.		
19					
20					
21		11.	Existing Regulatory Mechanisms		
22		A			
23		Auton The	natic Adjustment Formula		
24 25		the C	Automatic Adjustment Formula (the Formula) provides for annual adjustment of		
25 26		Eorm	when we ariginally established pursuant to Order Neg. P.U. 16 (1008,00) and		
20			36 (1008,00). Continued use of the Formula was approved in Order Nos		
27		P II	19 (2003) and P II 32 (2007)		
20		1.0.	1) (2003) and 1.0. 32 (2007).		
30		The c	surrent operation of the Formula as well as the proposals in this Application to		
31		modi	fy the Formula is described in Section 3.3.4 of the Finance Evidence at pages 3-18		
32		to 3-1	19. There are no reserve amounts associated with the Formula.		
33		10 0			
34		Exces	s Earnings Account		
35		The E	Excess Earnings Account is credited with any earnings in excess of the upper limit of		
36		the all	lowed return on rate base as approved by the Board. ¹ Amounts credited to the Excess		
37		Earnii	ngs Account are subject to the Board's determination as to disposition. The current		
38		form	of the Excess Earnings Account was approved in Order No. P.U. 37 (1998-99).		
39					
40		The se	ole purpose of the Excess Earnings Account is to protect the customer interest by		
41		ensuri	ing that Newfoundland Power's earned returns do not materially exceed those		
42		appro	ved by the Board for ratemaking purposes.		

¹ Currently the upper limit on the allowed return on rate base as established by the Board in Order No. P.U. 19 (2003), is 18 basis points above that used for ratemaking purposes.

1	There were no balances credited to the Excess Earnings Account in the period 2004 to
2	2008. A balance was last credited to the Excess Earnings Account in 2001.
3	
4	A copy of the current definition of the Excess Earnings Account is provided in
5	Attachment A.
6	
7	Weather Normalization Reserve
8	The Weather Normalization Reserve acts to stabilize electricity rates to customers by
9	adjusting the Company's sales and power supply cost for variations related to hydrology
10	and weather. The Weather Normalization Reserve has two components: (i) a Hydro
11	Production Equalization Reserve approved in Order No. P.U. 32 (1968) and, (ii) a Degree
12	Day Normalization Reserve approved in Order No. P.U. 1 (1974).
13	
14	The balance in the Weather Normalization Reserve and the underlying calculations are
15	reviewed by the Board each year. Newfoundland Power's annual earnings reflect the
16	after-tax adjustments to this account.
17	
18	Table 1 provides the year-end balances in the Weather Normalization Reserve for the
19	period 2004 to 2008. The mechanics of the computation of adjustments are provided in
20	Attachment B.
21	
22	
	Table 1

Table 1 Weather Normalization Reserve Year-end Balances (\$millions)

	2004	2005	2006	2007	2008
Hydro Component	7.8	6.0	5.0	3.9	1.3
Degree Day Component	2.7	4.1	6.8	6.6	4.6
Total	10.5	10.1	11.8	10.5	5.9

23 24

25 Rate Stabilization Account

In Order No. P.U. 34 (1985), the Board approved the establishment, on January 1, 1986,
of a rate stabilization account (the "RSA") for Newfoundland Power.² This was in
response to the establishment of a rate stabilization plan (the "RSP") by Newfoundland
and Labrador Hydro ("Hydro") which enabled Hydro to flow through changes in fuel
costs to Newfoundland Power.

² Prior to 1986, a Fuel Adjustment Clause existed that adjusted rates monthly to recover both Hydro's and the Company's fuel costs that varied from the base fuel costs built into rates. This clause also factored in secondary energy purchases.

1	In Order No. P.U. 32 (2007), the Board approved a change to the Rate Stabilization
2	Clause to ensure reasonable recovery by Newfoundland Power of prudently incurred
3	energy supply costs. The Rate Stabilization Clause permits recovery through the Rate
4	Stabilization Account ("RSA") of the difference between the marginal energy supply cost
5	and the average energy supply cost (the "Energy Supply Cost Variance") for the period
6	2008 to 2010.
7	
8	The 2008 year-end Energy Supply Cost Variance in the RSA was \$388,672 credited to
9	customers. A report on the recovery of the Energy Supply Cost Variance is provided in
10	Energy Supply Cost Variance (Volume 2, Tab 9).
11	
12	Rate adjustments resulting from the operation of the RSA occur on July 1 st each year. In
13	addition to the adjustments for fuel resulting from the operation of Hydro's RSP and the
14	Energy Supply Cost Variance, adjustments are made to the RSA for municipal taxes,
15	excess fuel costs, secondary energy costs and mismatches due to Hydro price changes.
16	
17	Table 2 provides the year-end balances in the RSA for the period 2004 to 2008. The
18	mechanics of the RSA are set out in the Rate Stabilization Clause provided as
19	Attachment C.
20	
21	
	Table 2

Table 2 Rate Stabilization Account Year-end Balances (\$millions)

		2004	2005	2006	2007	2008	
	RSA	2.7	2.4	3.6	1.7	2.5	
22							
23							
24	Demand Managen	ient Incentiv	e Account				
25	In Order No. 32 (2	2007), the Bo	ard approv	ed a definit	ion of the D	emand Manag	ement
26	Incentive Account	(the "DMI A	Account") t	o be include	ed in the Co	mpany's Syste	em of
27	Accounts. ³ The optimized and	peration of th	ne DMI Aco	count came	into effect	in 2008. The a	pproved
28	definition includes	the followir	ng paramete	ers:			
29			• •				
30	(i) a range of	±1% of test y	ear wholes	ale demand	l costs for w	hich no accou	nt transfer
31	is required	(the Demand	d Managem	ent Incentiv	ve); and		
~ ~	-		-				

³²

³ The DMI Account replaced the Purchased Power Unit Cost Variance Reserve (the "PPUCVR") which adjusted power supply costs to reflect certain variations between actual and forecast purchased power costs. The PPUCVR was established at the time of the introduction of a demand and energy rate structure for power purchased from Hydro.

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(ii) the use of test year unit demand costs as the basis for comparison against actual unit demand costs in determining the Demand Supply Cost Variance for comparison to the Demand Management Incentive to determine if an account transfer is required.

The DMI Account is charged or credited with the amount by which the Demand Supply Cost Variance exceeds the Demand Management Incentive. The DMI Account, therefore, limits the impacts on the Company of variability in demand supply cost to ±1 percent of test year wholesale demand charges. The DMI Account provides a meaningful incentive for Newfoundland Power to undertake reasonable initiatives to minimize peak demand.

The 2008 year-end balance in the DMI Account was \$426,488.⁴ A report on the operation of the DMI Account is provided in *Demand Management Incentive Account (Volume 2, Tab 8)*.

III. Proposed Mechanism Changes

Automatic Adjustment Formula

In this Application, Newfoundland Power is effectively proposing to discontinue use of the Automatic Adjustment Formula.

In Order No. P.U. 32 (2007), the Board approved continued use of the Formula for not more than three years following 2008. Since this time financial market conditions have changed materially, which has affected the fairness of the returns on equity yielded by use of the Formula.

Given current financial conditions, this Application proposes discontinuing use of the
 Formula for the adjustment of the Company's rate of return on rate base and customer
 rates in years subsequent to the 2010 test year.

33 Pension Expense Variance Deferral Account

In this Application, Newfoundland Power is proposing the creation of a regulatory
 mechanism to ensure the fair recovery of pension expense in current financial market
 conditions.

The volatility of current financial market conditions has increased the unpredictability of
Newfoundland Power's annual pension expense. Newfoundland Power proposes the
creation of a Pension Expense Variance Deferral Account as a means to address this
increased unpredictability. The proposed Account will effectively provide for the
recovery of only that pension expense actually incurred by the Company.

⁴ The year-end transfers credited to customers to its predecessor account, the PPUCVR Account, for 2005 to 2007 were \$0, \$1.3 million and \$0.3 million respectively.

Current Definition of the Excess Earnings Account

Excess Earnings Account

This account shall be credited with any earnings in excess of the upper limit of the allowed range of return on rate base as determined by the Board. Disposition of any balance in this account shall be as determined by the Board. For 2008 and subsequent years, all earnings in excess of an 8.55% rate of return on rate base shall, unless otherwise ordered by the Board, be credited to this account.

Weather Normalization Reserve

Weather Normalization Reserve

1.0 BACKGROUND

Newfoundland Power's Weather Normalization Reserve (the "Reserve") consists of the following two components:

- i) the Hydro Production Equalization Reserve (the "Hydro Component") which normalizes Newfoundland Power's annual supply costs for variations in the Company's hydroelectric production due to abnormal precipitation levels;¹ and,
- ii) the Degree Day Normalization Reserve (the "Degree Day Component") which normalizes the Company's revenue and energy supply costs for the effects of abnormal weather conditions.²

The purpose of the Weather Normalization Reserve is to stabilize rates for customers. Newfoundland Power's annual revenue and purchased power expense on its financial statements are reflective of normal weather and normal stream-flows to its hydro plants.

The calculations supporting transfers to, or from, the Weather Normalization Reserve are reviewed annually by the Board. The Board has issued orders approving the balance in the reserve for each year from 1974 to present.

A summary of the mechanics to determine the monthly adjustment for each reserve component follows:

1.1 Mechanics of the Hydro Component

The Hydro Component enables Newfoundland Power to normalize its energy supply costs for annual variations in normal stream-flows to its hydro plants. If cumulative stream-flows are below normal for the year, the Reserve is debited in an amount equal to the cost of increased purchases from Hydro. Conversely, if cumulative stream-flows are above normal for the year, the Reserve is credited with an amount equal to the savings from reduced purchases from Hydro.

¹ The Hydro Production Equalization reserve was approved in Order No. P.U. 32 (1968).

² The Degree Day Normalization Reserve was approved in Order No. P.U. 1 (1974).

The calculation for the 2008 year-end adjustment to the Hydro Component is provided below:

Calculation of 2008 Hydro Component Transfer

Average Natural Flow (GWh)	425.8
Less: Actual Natural Flow (GWh)	<u>468.9</u>
Equals: Gross Variation (GWh)	(43.1)
Times the End block Purchased Power Rate (in mills) x 88.05	
Equals: Variation in Purchased Power Expense	\$3,796,716
Less: Income Tax @ 33.5%	<u>\$ 1,271,900</u>
Net Transfer (To) From Reserve	(<u>\$2,524,816)</u>

Because stream-flows were 43.1 GWh above normal in 2005, Newfoundland Power purchased 43.1 GWh less from Hydro. To offset the resulting impact on earnings, the after-tax effect of the reduced purchased power expense was credited to the Hydro Component.

1.2 Mechanics of Degree Day Component

The Degree Day Component enables Newfoundland Power to normalize its sales and purchases for annual variations in weather, specifically temperature and wind.

Econometric modelling is used to determine the change in customers' usage resulting from a unit variation in normal monthly weather.³ The factors derived for each rate class are referred to as normalization coefficients.

The equations below provide a summary of the calculations used in determining the monthly adjustments for each rate class:

Monthly Sales Adjustment (MWh) equals (Normal Weather minus Actual Weather) times Sales Normalization Coefficient

Monthly Purchases Adjustment (MWh) equals (Normal Weather minus Actual Weather) times Purchases Normalization Coefficient

The derived monthly kWh adjustments are used to determine weather normalized sales and purchases.

Weather Normalized Sales equals Actual Sales plus Monthly Sales Adjustment

Weather Normalized Purchases equals Actual Purchases plus Monthly Purchases Adjustment

³ The Company uses a degree-day variable to measure temperature and average daily wind speed to measure wind speed.

The monthly kWh adjustments are also used to determine the transfers to the Degree Day Component.

Monthly Revenue Adjustment equals Monthly Sales Adjustment (MWh) times Marginal Revenue

Monthly Purchased Power Cost Adjustment equals Monthly Purchases Adjustment (MWh) times Marginal Purchased Power Cost

Net Contribution Adjustment equals Monthly Revenue Adjustment minus Monthly Purchased Power Cost Adjustment

Degree Day Component Transfer equals Net Contribution Adjustment times (1 minus Income Tax Rate)

The Board approved an updated Degree Day Normalization methodology in 1995. The coefficients used in calculating adjustments are adjusted annually and provided to the Board in January of each year.

Rate Stabilization Clause Excerpt from Schedule of Rates Rules and Regulations

RATE STABILIZATION CLAUSE

The Company shall include a rate stabilization adjustment in its rates. This adjustment shall reflect the accumulated balance in the Company's Rate Stabilization Account ("RSA") and any change in the rates charged to the Company by Newfoundland and Labrador Hydro ("Hydro") as a result of the operation of its Rate Stabilization Plan ("RSP").

I. RATE STABILIZATION ADJUSTMENT ("A")

The Rate Stabilization Adjustment ("A") shall be calculated as the total of the Recovery Adjustment Factor and the Fuel Rider Adjustment.

The Recovery Adjustment Factor shall be recalculated annually, effective the first day of July in each year, to amortize over the following twelve (12) month period the annual plan recovery amount designated to be billed by Hydro to the Company, and the balance in the Company's RSA.

The Recovery Adjustment Factor expressed in cents per kilowatt-hour and calculated to the nearest 0.001 cent shall be calculated as follows:

Where:

- B = the annual plan recovery amount designated to be billed by Hydro during the next twelve (12) months commencing July 1 as a result of the operation of Hydro's RSP.
- C = the balance in the Company's RSA as of March 31st of the current year.
- D = the total kilowatt-hours sold by the Company for the 12 months ending March 31st of the current year.

The Fuel Rider Adjustment shall be recalculated annually, effective the first day of July in each year, to reflect changes in the RSP fuel rider applicable to Newfoundland Power. The Fuel Rider Adjustment expressed in cents per kilowatt-hour and calculated to the nearest 0.001 cent shall be calculated as follows:

RATE STABILIZATION CLAUSE

I. RATE STABILIZATION ADJUSTMENT ("A") (Cont'd)

Where:

- D = corresponds to the D above.
- E = the total kilowatt-hours of energy (including secondary energy) sold to the Company by Hydro during the 12 months ending March 31 of the current year.
- F = the fuel rider designated to be charged to Newfoundland Power through Hydro's RSP.

The Rate Stabilization Adjustment ("A") shall be recalculated and be applied as of the effective date of a new wholesale mill rate by Hydro, by resetting the Fuel Rider Adjustment included in the Rate Stabilization Adjustment to zero.

II. RATE STABILIZATION ACCOUNT ("RSA")

The Company shall maintain a RSA which shall be increased or reduced by the following amounts expressed in dollars:

- 1. At the end of each month the RSA shall be:
 - (i) increased (reduced) by the amount actually charged (credited) to the Company by Hydro during the month as the result of the operation of its Rate Stabilization Plan.
 - (ii) increased (reduced) by the excess cost of fuel used by the Company during the month calculated as follows:

Where:

- G = the cost in dollars of fuel and additives used during the month in the Company's thermal plants to generate electricity other than that generated at the request of Hydro.
- H = the net kilowatt-hours generated in the month in the Company's thermal plants other than electricity generated at the request of Hydro.

RATE STABILIZATION CLAUSE

II. RATE STABILIZATION ACCOUNT ("RSA") (Cont'd)

- P = the 2nd block base rate in dollars per kilowatt-hour paid during the month by the Company to Hydro for firm energy.
- (iii) reduced by the price differential of firmed-up secondary energy calculated as follows:

(P - J) x K

Where:

- J = the price in dollars per kilowatt-hour paid by the Company to Hydro during the month for secondary energy supplied by Deer Lake Power and delivered as firm energy to the Company.
- K = the kilowatt-hours of such secondary energy supplied to the Company during the month.
- P = corresponds to P above.
- (iv) reduced (increased) by the amount billed by the Company during the month as the result of the operation of the Rate Stabilization Clause calculated as follows:

<u>L x A</u> 100

Where:

- L = the total kilowatt-hours sold by the Company during the month.
- A = the Rate Stabilization Adjustment in effect during the month expressed in cents per kilowatt-hour.
- (v) increased (reduced) by an interest charge (credit) on the balance in the RSA at the beginning of the month, at a monthly rate equivalent to the mid-point of the Company's allowed rate of return on rate base.
- 2. On the 31st of December in each year, the RSA shall be increased (reduced) by the amount that the Company billed customers under the Municipal Tax Clause for the calendar year is less (or greater) than the amount of municipal taxes paid for that year.

RATE STABILIZATION CLAUSE

II. RATE STABILIZATION ACCOUNT ("RSA") (Cont'd)

3. The annual kilowatt-hours used in calculating the Rate Stabilization Adjustment to the monthly streetlighting rates are as follows:

	Fixture Size (watts)				
	<u>100</u>	<u>150</u>	<u>175</u>	250	<u>400</u>
Mercury Vapour	-	-	840	1,189	1,869
High Pressure Sodium	546	802	-	1,273	1,995

4. On December 31st, 2007, the RSA shall be reduced (increased) by the amount that the increase in the Company's revenue for the year resulting from the change in base rates attributable to the flow through of Hydro's wholesale rate change, effective January 1, 2007, is greater (or less) than the amount of the increase in the Company's purchased power expense for the year resulting from the change in the base rate charged by Hydro effective January 1, 2007.

The methodology to calculate the RSA adjustment at December 31, 2007 is as follows:

Calculation of increase in Revenue: 2007 Revenue with Flow-through (Q) 2007 Revenue without Flow-through (R) Increase in Revenue (S = Q $-$ R)	\$ <u>\$</u> \$	-
Calculation of increase in Purchased Power Expense: 2007 Purchased Power Expense with Hydro Increase (T) 2007 Purchased Power Expense without Hydro Increase (U) Increase in Purchased Power Expense (V = T – U)	\$ \$ \$	- - -
Adjustment to Rate Stabilization Account ($W = S - V$)	\$	-
Whore:		

Where:

Q = Normalized revenue from base rates effective January 1, 2007.

- R = Normalized revenue from base rates determined based on rates pursuant to the operation of the Automatic Adjustment Formula for 2007.
- T = Normalized purchased power expense from Hydro's wholesale rate effective January 1, 2007 (not including RSP rate).
- U = Normalized purchased power expense determined based on Hydro's wholesale rate effective January 1, 2006 (not including RSP rate).

RATE STABILIZATION CLAUSE

II. RATE STABILIZATION ACCOUNT ("RSA") (Cont'd)

5. On December 31st of each year from 2008 up to and including 2010, the Rate Stabilization Account (RSA) shall be increased (reduced) by the Energy Supply Cost Variance.

This Energy Supply Cost Variance identifies the change in purchased power cost that is related to the difference between purchasing energy at the 2nd block energy charge in the wholesale rate and the test year energy supply cost reflected in customer rates.

The Energy Supply Cost Variance expressed in dollars shall be calculated as follows:

Where:

- A = the wholesale rate 2^{nd} block charge per kWh.
- B = the test year energy supply cost per kWh determined by applying the wholesale energy rate to the test year energy purchases and expressed in ¢ per kWh.
- C = the weather normalized annual purchases in kWh.
- D = the test year annual purchases in kWh.
- 6. The RSA shall be adjusted by any other amount as ordered by the Board.

III. RATE CHANGES

The energy charges in each rate classification (other than the energy charge in the "Maximum Monthly Charge" in classifications having a demand charge) shall be adjusted as required to reflect the changes in the Rate Stabilization Adjustment. The new energy charges shall be determined by subtracting the previous Rate Stabilization Adjustment from the previous energy charges and adding the new Rate Stabilization Adjustment. The new energy charges shall apply to all bills based on consumption on and after the effective date of the adjustment.