

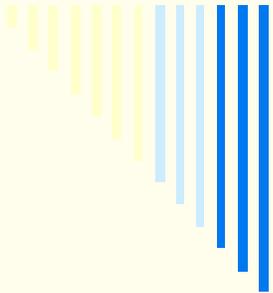
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# **Capital Module and Stretch Factor**

Presentation to the  
OEB Stakeholder Conference on  
3<sup>rd</sup> Generation Incentive Regulation  
August 5-8, 2008

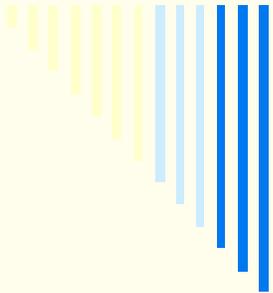
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*Jay Shepherd, School Energy Coalition*



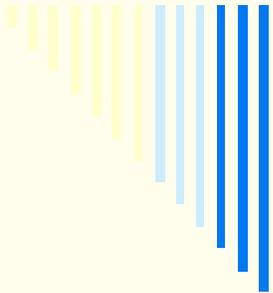
# Presentation Roadmap

- **Stretch Factor**
  - Principles
  - Numbers
- **Incremental Capital Module**
  - IRM Result
  - Historical Data



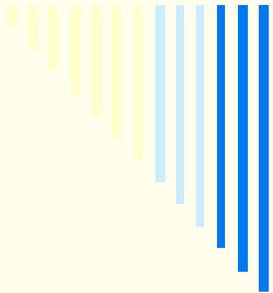
# Stretch Factor Principles

- **Ratepayer Benefit**
  - No ESM
  - Rebasing benefit unlikely
- **Meaningful Incentive**
  - Compare to Z Factor materiality
  - Regulatory precedent



# Stretch Factor Numbers

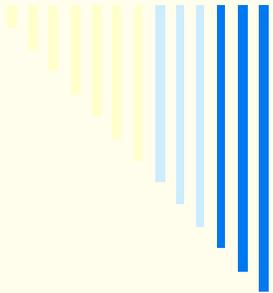
- **Materiality Threshold**
  - How much actually matters?
  - Z Factor analysis determines materiality
  - Difference between Group II and Group I Or III should be material, ie. 50 bp
- **Regulatory Precedent**
  - 0.5% is typical average stretch factor



# **Stretch Factor SEC Proposal**

## **Proposed Stretch Factors**

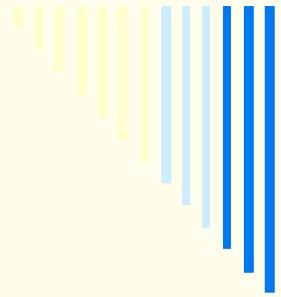
<b>Group I</b>	<b>-</b>	<b>0.0%</b>
<b>Group II</b>	<b>-</b>	<b>0.5%</b>
<b>Group III</b>	<b>-</b>	<b>1.0%</b>



# Capital Module

## IRM Result

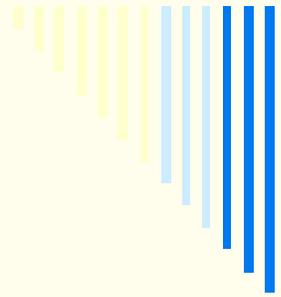
- **Components of Rev. Req.**
  - Operating expenses ~ 50%
  - Annual costs of capital ~ 50%
- **Annual Costs of Capital**
  - Old capital assets
  - New capital assets



# Capital Module

## IRM Result

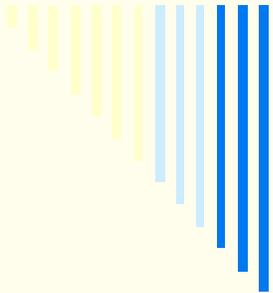
- **Old Capital Assets**
  - Depreciation
  - Interest
  - ROE
  - PILs
- **All Decrease Annually**
  - Decrease equals average depreciation rate
  - Simplify by assuming in-service on January 1



# Capital Module

## IRM Result

- **New Capital Assets**
  - Revenue Requirement 12.5% of capex
  - Capital budget about 8 times available RR
- **IRM provides funds three ways**
  - Reduced cost of old capital @ avg. dep. rate
  - Inflation Factor
  - Organic growth in revenues



# Capital Module IRM Result

$$\frac{P \times R \times (d+i+(g \times 1.5))}{(d+c)}$$

Where:

P = % of rev. req. capital driven (ie. R less OM&A)

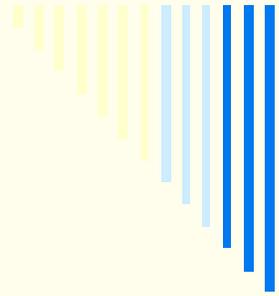
R = revenue requirement of prior year

d = depreciation exp. as % of rate base (avg. dep. rate)

i = inflation factor in IRM

g = organic growth in revenue

c = interest + ROE + PILs as % of rate base



# Capital Module

## IRM Result

### *Assumptions:*

P = 50%

I = 2%

d = 4%

c = 8.7%

2007 actual is 48.9%

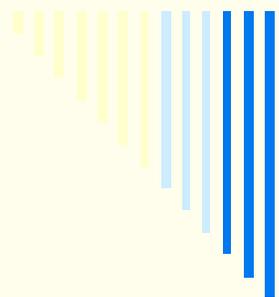
Bank of Canada target rate

2007 actual is 6.57%

6% interest on 60%, 8.5% ROE on 40%,  
33% combined income tax rate

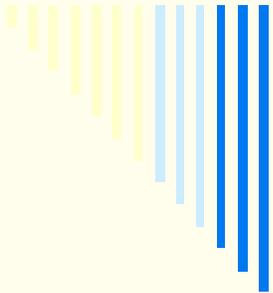
- **IRM provides capex budget of:**

- 24% of revenue requirement plus 6% for each 1% growth
- 148% of depreciation expense plus 36% for each 1% of growth



# Capital Module Historical Data

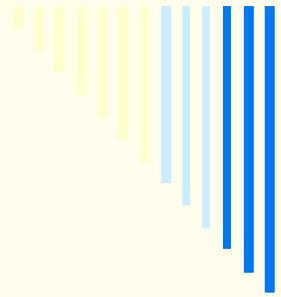
- **Average Capex 2005-2007**
  - 158.9% of depreciation expense
  - 39.3% of revenue requirement
- **Distribution for 2007 – 71 LDCs**
  - Based on 148% of depreciation +/- growth
  - 34% over the standard, 66% under
  - If capital module threshold at +33% of standard
    - 14% over (ie. +200% of depreciation +/- growth)
    - 21% under (ie. -100% of depreciation +/- growth)



# **Capital Module SEC Proposal**

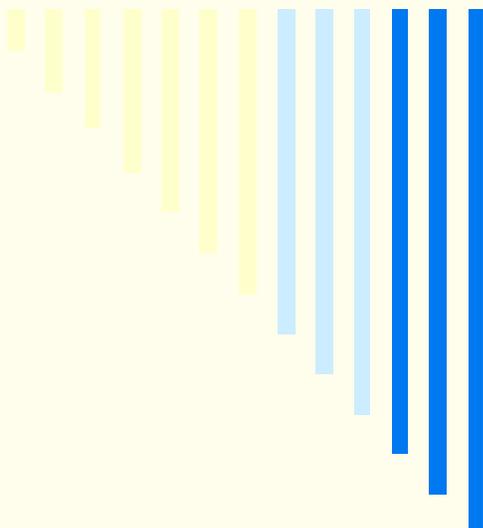
## **Proposed Threshold**

***Prior year depreciation expense, times  
200% plus/minus  
50 times the average three year  
% organic revenue growth***



# Capital Module Historical Data

- **Assymmetrical Result**
  - Threshold based on IRM calcs, plus one-third
  - +15% of utilities will still qualify for additional budget
  - Two-thirds of utilities will underspend and keep the extra money from ratepayers
  - Board should establish monitoring function to police underspending



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