Yukon Energy 2008/2009 General Rate Application

YUKON ENERGY

Summary and Overview of Application
January 6, 2009

Outline of Presentation

PART ONE - Overview
- Application Summary and YUB Process
- Context and Background
- Key Factors
- Rate Design Aspects of Application

PART TWO – Detailed Information
- Application Summary
- Yukon Energy's System
- Revenue Requirement
- Rates

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Application Summary – Filing

- Yukon Energy applied to the Yukon Utilities Board (YUB) on October 6, 2008 for approval of its 2008/2009 General Rate Application (GRA) to:
  - recover costs to supply customers in 2008 & 2009
    - Ongoing cost pressures (fuel, labour, hearings, rate base & return)
  - implement overall retail rate reductions
    - savings to retail ratepayers in 2009 of $1,334,000
    - reflects benefits from timely completion of Stage 1 of the Carmacks-Stewart Transmission Project (CSTP), connection of the Minto Mine to the grid, and added new firm sales of surplus hydro generation
  - begin process of restoring efficient price signals
    - focus rate reductions on first block energy charges
    - increase residential second block or "runoff" rates, and use all resulting revenues to reduce further the first block residential rate
  - implement other specific rate adjustments

YUB Process – YUB Jurisdiction –Rates

- Yukon Utilities Board (the "Board") authority under the Public Utilities Act (Act) to make orders:
  - Fixing rates, considering revenues and costs for the fiscal years covered by the Application, including determining a rate base and a fair return on that rate base
- Order-in-Council (OIC) rate policy directives under the Act (applicable to YEC and YECL rates):
  - OIC 1995/90 (Rate Policy Directive – addressing retail rate equalization, major industrial rates, wholesale rates, fuel cost adjustment to rates, and other matters); plus subsequent modifications:
    - OIC 1998/32 (Yukon Energy fair return on equity)
    - OIC 2007/94 (Major Industrial Customer Rate Directive – sets rates for major industrial customers until December 31, 2012)
    - OIC 2008/149 (Prior to January 1, 2013, retail rate adjustments must apply equally, when measured as percentages, to all retail classes)

YUB Process – Schedule - Order 2008-15

Yukon Energy GRA filed	October 6, 2008
Workshop/Pre-hearing	January 6/7, 2009
Information Requests to Yukon Energy	January 30, 2009
Yukon Energy Responses	February 27, 2009
Intervenor Evidence Filed	March 20, 2009
Information Requests to Intervenors	April 3, 2009
Intervenor Responses	April 17, 2009
YEC Rebuttal Evidence (if necessary)	April 24, 2009
Oral Hearing	May 5-7, 2009
Argument and Reply	May 22/June 5, 2009

Context and Background – Orderly Process

- Orderly Process
- 1st Stage of Orderly Process
- 2nd / 3rd Stages of Orderly Process
- Current YEC GRA

Context and Background – Orderly Process

- Yukon Energy in 2005 sought to initiate an "orderly process" to deal with key regulatory issues facing both utilities (YEC and YECL)
- YEC's application deferred firm retail rate changes
- In 2005, YEC noted the need in future to deal with the following regulatory issues:
  - Retail Rate matters:
    - restore efficient price signals for second block rates
    - Address the Board's direction relating to rate shift programs to target 90-110% Revenue:Cost ratios for all retail customer classes
  - Future industrial customer rates and wholesale rate setting
  - Consistent, simple approach to set ROEs for both utilities
  - Resource Plans, including new capacity planning criteria & future major capital bulk power supply options

Context and Background – 1st Stage of Orderly Process

- **First Stage 2005-2007/08:**
  - **Yukon Energy 2005 Application** addressed full update of Yukon Energy revenue requirement and operations since mid-90s
    - Continued YEC measures to prevent new retail rate increases
    - YUB Order (2005-12) set an approach to address YEC revenue requirements for 2005-2007, with 2008 needing a new revenue requirement review.
  - **Yukon Energy 20-Year Resource Plan -** major YUB review in 2006, including January 2007 Report and Recommendations:
    - New capacity planning criteria; near-term capacity required
    - First **"Regulated Project"** from Resource Plan (CSTP) subject of special YUB "Part III" review in 2007; Stage I now in service
    - The other major near term projects are now underway or in active planning
  - **Industrial Rates** reviewed as part of Minto PPA hearing (2007) and subsequent direction from Gov't (OIC 2007/94) through 2012
  - **YECL 2008-2009 GRA** has resumed YUB regulation of YECL revenues

Context and Background – 2nd/3rd Stages Orderly Process

- **Second Stage 2008-2011/12**
  - Focus on planning to address new energy-focused issues (as opposed to capacity, which was addressed in first stage):
    - need to plan for new energy supplies to offset future diesel fuel req'ts
    - rate design/efficiency signals, including updating price signals on 2nd block
  - This application is one major part of second stage:
    - implement rate reductions stemming from CSTP St. 1;
    - begin to address "runoff" price signals for residential, wholesale customers
  - Also will require attention to General Service (GS) rate class design jointly with YEC/YECL
- **Third Stage 2012/13 and beyond**
  - Non-industrial rate rebalancing and cost of service (COS)now deferred (retail per OIC 2008/149; industrial per OIC 2007-94) through 2013
  - The Application proposes that joint YEC/YECL preparation of a COS study be delayed towards 2012, when needed to set rates

Context and Background – Current YEC GRA

- The 2008-2009 Yukon Energy GRA provides for:
  - Overall rate reductions for all retail classes (all classes other than major industrial, wholesale and secondary sales)
  - For the first time since 1997, re-establishes where feasible "efficiency" price signals in runoff blocks (subject to OIC 2008/149):
    - Focuses rate reductions only in first energy block
    - Increase residential second block or "runoff" rates to reflect past YUB Orders and OIC 1995/90 rate directions, and use all resulting revenues to reduce further the first block residential rate
    - Re-establish Energy Reconciliation Adjustment (ERA) efficiency signal for wholesale rate schedule (when diesel is on the margin)
  - Yukon Energy needs to plan for the 2010 time period and beyond to address the likely need for new renewable energy supplies

Key Factors

- CSTP Connection of Minto Mine and Pelly Crossing Loads
- Oil Price Forecasts and Yukon Energy Retail Rate Revenues Requirements
- System Bulk Power Supplies
- Other Items

Key Factors – CSTP Connection of Minto Mine and Pelly Crossing Loads

- Application assumes Stage 1 CSTP connection of Minto Mine and Pelly Crossing at October 1, 2008 as well as interim rate reduction at November 1, 2008.
- As of mid-Sept., completion of Stage 1 and full service connection was expected by mid to late October 2008
  - Service to Minto Mine actually occurred November 22, 2008
    - Removes most of 2008 firm rate revenue reduction entitlement
  - Interim Rate Application reduction was delayed (for unrelated reasons) & actually implemented effective December 1, 2008
    - Reduces 2008 rate revenue reduction provided through interim rate change
- Faro Dewatering Account use proposed to address 2008 overall net revenue impacts due to the above delays

Key Factors Considered – Oil Price Forecasts and Yukon Energy Retail Rate Revenue Requirements

- Rider F deferral account protects YEC and YECL from actual fuel price variances from GRA forecasts
  - Retail customers currently subject to 1.86 c/kWh Rider F mostly for YECL isolated system diesel fuel
    - YEC variances from approved 2005 forecasts
    - YECL variance from approved 1997 GRA forecasts
  - Secondary sales price variances from YEC's 2005 application forecast also go to the Rider F deferral account, as offset
- Application assumes YEC Rider F account balances will be adjusted to reflect final 2008 and 2009 GRA fuel and secondary price forecasts approved for YEC by the YUB
  - Ongoing Rider F account thereafter will address new variances (until the next GRA, when similar Rider F-related adjustments will be repeated)

Key Factors – Oil Price Forecasts and Yukon Energy Retail Rate Revenue Requirements

- Oil price forecasts for GRA test years affect YEC forecast retail rate revenue requirement as follows:
  - Diesel fuel prices used to forecast diesel generation costs
  - Furnace oil prices used to forecast secondary sales revenues
  - Industrial Fixed Rider F, per YECL and YEC respective GRA approved diesel prices relative to November 20, 2006 forecasts
- YEC GRA oil price forecasts generally reflect the last Rider F adjustments by YEC/YECL as of August 1-08
  - Secondary sales rate for 2009 reflects rate for last quarter 08
  - High volatility in 2008 oil prices and uncertainty re 2009 prices
- Lower oil price forecasts would increase YEC's retail rate revenue requirements for 2009 (reduced rate reduction)

Key Factors – System Bulk Power Supplies

- Existing hydro generation surplus impacts from new loads
  - Hydro generation likely to be fully utilized within next few years
  - Requirement for new renewable supply sources to avoid high cost base load diesel generation
- Key long term implications commencing in test years
  - Customer Use
    - Secondary Sales – will be basically eliminated
    - Relevance of 2nd block efficiency price signals
  - Future Rate Pressures when no hydro surplus
    - Ongoing increases in load will be upward rate driver for all customers
    - Runoff rate structures required to reflect appropriate efficiency signals (OIC 1995/90)
    - Initial efforts incorporated into application for residential and wholesale rates
  - Planning Costs to address need for new generation
    - Budgets begin to include material expenditures for next generation of power projects
    - Remain in WIP and do not affect current GRA amortization or rate base costs

Key Factors Considered – Other Items

- WAF Capacity - Mirrlees Refurbishment and Minto Diesels
  - In 2006 YEC faced significant pending capacity shortfalls
  - Since Resource Plan hearing - YEC has secured cost effective options for 25.4 MW of WAF diesel capacity in staged and flexible manner over period to 2012
    - total cost of $5,855,000 by 2009 for 16.4 MW
- Faro Dewatering Account “regulatory liability”
  - Application does not seek to extend earlier annual withdrawals
  - Seeks approval to apply $463,000 to Reserve for Injuries and Damages (RFID)
  - Balance of $728,000 available to address specific contingencies
- Reserve for Future Removal and Site Restoration
  - In 2005 Board directed YEC cease annual appropriation and advise when account reached $2 million (balance then of about $5.6 million)
  - Account has not reached $2 million (remains in excess of $5 million)
  - No new appropriations to this reserve are sought

Key Factors Considered – Other Items (2)

- Risks related to low water
  - Loads are reaching levels where very low flow conditions could once again have adverse financial impact on Yukon Energy
  - No provision in Diesel Contingency Fund (DCF) to address sustained interruption of secondary sales due to low water
  - If low water affects secondary sales after 2008, YEC will come back to YUB to seek relief (likely use Faro Dewatering Account)
- Future Joint YEC/YECL Applications re: Rate Design and COS
  - Future joint YEC/YECL action needed to address rate design options for General service rate classes is required as soon as practicable
  - Given OIC 2008/149, joint YEC/YECL cost of service study is a lower priority in near term, with delayed timing as appropriate

Rate Design Aspects of Application

- Overview
- First Block
- Second Block

Rate Design Aspects of Application - Overview

- Yukon Energy's GRA addresses retail rate adjustments
- Rate reduction implementation today for retail classes to avoid further reliance on an across-the-board rate rider:
  - Current run-off rates send inefficient price signals and do not reflect requirements in OIC 1995/90 (basically reflect short-term incremental diesel generation costs from 1996/97 GRA)
  - When adjusting firm rates, requirement to begin now to restore efficient price signals by increasing run-off or 2nd block rates (need to move closer to 2008/2009 incremental diesel generation costs)

Rate Design Aspects of Application - Overview (2)

- Past GRA practice in Yukon shows the efficiency to address revenue & rate design issues in same hearing
  - Run-off rates in past GRAs driven by OIC rate directives and diesel fuel generation incremental costs (not based on past COS studies).
  - Rate changes in this GRA limited to what necessary & practicable
  - Designed to prevent rate shifts between retail classes per OIC
  - Avoid cost inefficiencies caused by a separate hearing, especially if it is premature for Phase 2 COS hearing
- Past GRA practice also noted bill impacts re: YG Rate Stabilization Fund (RSF)
  - During test years, also facing RSF changes - OIC's 2007/58 & 2008/70 extend a reduced RSF to June 30, 2009

Rate Design Aspects of Application – First Block

- Retail class rate adjustments in the GRA provide material bill savings for most retail customers in Yukon:
  - Reduce 1st block energy charges (after all related impacts):
    - By 17.8% for residential non-government customers
      - Most (over 75%) of this saving tied to revenues from higher 2nd block rate
    - By 13.5% for general service non-government customers
    - Most Yukoners stay within the 1st block of 1,000 kilowatt hours per month for residential and 2,000 kW.h/month for general service
      - 70% of all monthly residential non-gov't bills (YEC & YECL)
      - 67% of all monthly general service non-gov't bills (YEC & YECL)
  - Residential non-government customers see some overall savings for use up to slightly more than about 1,300 kW.h/month
    - 84% of non-government residential monthly bills not exceed 1,300 kW.h

Rate Design Aspects of Application – 2nd Block

- 2nd block rate changes in the GRA are restricted to customers in the residential class
  - General need to begin moving retail 2nd block rates up for all classes to reflect efficient diesel generation price signals
  - Feasible rate change today for residential class due to low share (20%) of residential class energy sales in 2nd block
  - Similar rate change not feasible today for general service class where over 70% of energy sales are in 2nd block (joint YEC/YECL study proposed to develop proposals as soon as practicable)
- Modest step to reflect recent incremental diesel costs
  - Non-gov't 6.70 c/kW.h increase (after all related impacts)
  - Overall 2nd block pre-GST cost of 21.04 c/kWh in hydro zone
    - Remains below run-off rate that would reflect 1996/97 GRA principles (e.g., about 37.4 c/kW.h run-off rate based on GRA diesel price forecasts at $1.17 per litre – 21.04 c/kW.h would reflect diesel prices of about 64 c/litre)

Detailed Information

Review of Supporting Documents from Application

Detailed Information - Overview

- Application Summary
- Yukon Energy's System
- Revenue Requirement
- Rates

Application Summary - Orders Requested

1. Approval of forecast 2008 and 2009 Revenue Requirement ($29.217 million and $31.599 million)
   a. Fuel & Purchased Power costs (2009 at $582,000):
      - adjust diesel prices for new forecasts (change from 2005 approvals)
   b. Non-Fuel Operating & Maintenance Costs (2009 at $13,228,000):
      - apply $463,000 of remaining Faro Dewatering Account in 2008 against current outstanding balance in Reserve for Injuries and Damages (RFID)
      - Increase annual RFID appropriation in 2009 to $150,000 (current $50,000)
   c. Depreciation & Amortization Expenses (2009 at $6,930,000):
      - Includes depreciation related changes approved & directed by YUB in 2005
      - Regulatory costs for current hearing, and past hearings (Resource Plan, Minto PPA, and CSTP regulatory reviews)
   d. Mid-year 2008 and 2009 Rate Base (2009 at $151,416,000)
   e. Return on Rate Base (2009 placeholder estimate $10,860,000)
      - An allowed rate of return on equity (ROE) of 8.64% for 2008, same placeholder for 2009.

Application Summary - Orders Requested (2)

2. Approval of 2009 rate adjustments
   a. Retail Rates – combination of residential base rate adjustments and rate reduction Rider U that varies by retail customer class
   b. Wholesale Rate and Energy Reconciliation Adjustment (ERA)
   c. Major Industrial Rates (RS 39) and related Rider F provisions
   d. Adjust Secondary Energy Rate (RS 32) terms & baseline
3. Interim refundable rates now addressed
   - Orders 2008-16 and 17 – denied interim rate as requested, & ordered interim refundable rate effective Dec 1 2008 by amending Rider J to apply 3.48% decrease to all Residential, General Service & Lighting customers
4. Additional Faro Dewatering Account uses to address:
   - specified income forecast deficiencies, if any, related to final 2008 retail rate revenues (to offset any net revenue losses due to delays in final connection timing of Minto mine and Pelly Crossing)
   - secondary sales revenue losses, if any, due to below average water flows

Yukon Energy's System

- Overview
- Industrial Sales
- Diesel Generation
- Wholesale Firm Loads

Yukon Energy's System - Overview

- Rates are based on recovering the costs of designing, constructing, owning, operating and maintaining the assets required to serve Yukon Energy's customers.
- Yukon Energy is the main generator and transmitter of electrical energy in the Yukon
  - accounts for over 90% of annual generation
  - most sales are at a wholesale level to YECL
  - Yukon Energy directly services 1900 retail customers, or 11% of all retail customers in the Yukon
  - Services industrial customers in Yukon (i.e., Minto mine)
- Operates two main "grids", the Whitehorse-Aishihik-Faro and the Mayo-Dawson. Both are supplied by primarily hydro generation.

Yukon Energy's System – Industrial Sales

- Major Industrial Sales arise in test years
  - Between 2005 and 2007 no Major Industrial customers on system
  - With completion of Stage 1 CSTP service to Minto mine under RS 39 (forecast 6,845 MWh in 2008 and 29,023 MWh in 2009)
  - No other industrial loads forecast for test years; further mine loads expected after test years
- Diminishing hydro surplus and effect on secondary sales
  - In 2009 availability of surplus power expected to decrease with increased firm loads (including new industrial load)
  - YEC has rules in place (RS 32) that interrupt secondary sales as required to ensure they are not served by high cost diesel
    - Interruptions for peaking diesel operations
    - Interruptions based on water availability - not anticipated in test years

Yukon Energy's System – Diesel Generation

- Peaking diesel operation
  - Lower available surplus hydro in test years
    - On WAF system approx. 37 GWh in 2008; 11 GWh in 2009; (72 GWh surplus after secondary sales in 2005)
    - On MD system approx. 13 GWh and 9 GWh available surplus in 2008 and 2009 (20 GWh surplus after secondary sales in 2005)
  - When peak loads exceed Hydro capacity (54-58 MW on WAF in winter) diesel is dispatched to serve firm loads and secondary sales are interrupted pursuant to RS 32
    - MD peak capacity (5 MW) not expected to exceed existing hydro generation capability on that system and no diesel generation or secondary sales interruptions are forecast
- Water availability
  - At average water all forecast WAF firm and secondary loads can be met in test years; use stored water at Aishihik over winter
    - In event of extreme drought secondary sales may be curtailed as storage of water at Aishihik is prioritized

Yukon Energy's System – Wholesale Firm Loads

- Forecast wholesale firm loads for test years vary from forecasts prepared by YECL
  - Secondary sales losses
    - initial forecasts included conservative assumptions that no secondary sales in 2009 load forecast outside of limited sales in summer months (3,052 MWh and 9,020 MWh below YEC's current YEC forecasts for YECL secondary sales in 2008 and 2009)
    - YECL's Secondary Sales Losses are supplied at wholesale (RS 42); this accounts for 189 MWh and 560 MWh of additional forecast firm wholesale in 2008 and 2009 compared to YECL's GRA forecast
  - 2008 Actuals to date
    - YEC's load forecast for 2008 incorporates actual sales through June 2008
  - 2009 forecast load growth
    - YEC forecasts markedly higher than YECL GRA forecasts
    - YEC has used growth in range of 2.39% as basis for estimating load increases from 2008 to 2009 based on evidence of experienced longer term load trends

Revenue Requirement

- Overview
- Fuel and Purchased Power
- Non-fuel Operating and Maintenance Costs
- Depreciation
- Mid-year 2008 and 2009 Rate Base
- Major Projects in Rate Base
- Planning Costs
- Return on Rate Base

Revenue Requirement - Overview

	Actual 2005 ($Million)	Forecast 2008 ($Million)	Forecast 2009 ($Million)
Fuel & Purchased Power	0.185	0.487	0.582
Non-fuel O&M	11.233	12.362	13.228
Deprec. & Amort.	5.379	6.403	6.930
Return on Rate Base	9.619	9.965	10.860
Total Revenue Req.	26.416	29.217	31.599

Revenue Requirement – Overview (2)

Cost changes from 2005 to 2009:

	Change ($ million)	% increase	Share of total costs in 2009
Fuel & Purchased Power	0.397	215%	8%
Non-fuel O&M	1.995	18%	38%
Deprec. & Amort.	1.551	29%	30%
Return on Rate Base	1.241	13%	24%
Total	**5.183**	**19.6%**	**100%**

Revenue Requirement – Fuel and Purchased Power

- Costs of $0.582 million (2009)
  - 65% of increase since 2005 due to diesel fuel price increase
  - Quantity of diesel generation relatively constant since 2005
    - 0.6 GWh to 1.7 GWh range since 2005;1.3 GWh forecast for 2009
- Forecast diesel fuel cost increases reflect the biggest percentage growth from 2005 to 2009 (215%)
  - Includes incorporating diesel fuel price increases in forecast costs of diesel fuel consumed
    - 2005 revenue req. based on fuel prices forecast at 60 cents/litre
    - GRA forecast prices for Whitehorse: $1.15/litre in 2009
  - Total Forecast fuel consumption for 2009 is 451,300 litres at average price of $1.170/litre

Revenue Requirement – Non-Fuel Operating and Maintenance Costs

- Non-Fuel Operating and Maintenance Costs
  - Total Non-Fuel 2009 Operating and Maintenance costs increase $1.995 million over the period 2005 to 2009
    - Overall labour costs up by $1.244 million;
    - Only $248,000 (20%) of this increase between 2007-2009; approx. 1.9%/ year
    - Non-labour costs up by $751,000; approx. 3.2% per year and within range of inflation experienced since 2005
- Higher annual appropriation to Reserve for Injuries and Damages (RFID) (increase to $150,000 from $50,000):
  - Apply $463,000 from Faro Dewatering Account against the current outstanding balance in the RFID in 2008
  - Increase annual RFID appropriation in 2009

Revenue Requirement - Depreciation

- In 2005 YEC sought approval to reduce Yukon Energy's depreciation rates for fixed assets
  - Longer service lives ($510,000) and changes in grouping procedures from Equal Life Group approach to Average Service Life ($660,000 impact) supported by Gannett-Fleming depreciation study
- Order 2005-12 approved proposed changes
- YUB also directed changes to Future Removal and Site Restoration (FRSR) accounting
  - Board directed termination of further appropriations to FRSR (reduction in annual depreciation expense of $533,000) until account balance reached $2 million
- 2008/2009 YEC GRA
  - No change to depreciation rates; retain ASL method
  - No change to FRSR depreciation or accounting

Revenue Requirement - Mid-year 2008 and 2009 Rate Base

- Total mid-year 2008 and 2009 forecast rate base:
  - $145.212 million and $151.416 million respectively
  - increase in 2009 of $11.865 million from 2005 mid year actual
- In test years over 80% of spending on capital works ($51.210 million) is on 5 major projects ($42.578 million); not all in service in test years
- Major Projects:
  - Each project's total costs exceed $1 million
  - Each project previously reviewed by Board
  - These 5 major projects undertaken since 2005 have total projected costs of $48.488 million by the end of 2009; projected customer contributions offset $39.639 million

Revenue Requirement – Major Projects in Rate Base

Project	Total ($Million)	Contribution ($Million)	Net effect on rate base ($Million year end)
CSTP Stage 1	38.383	34.639	3.744
Minto Diesels	3.190	NA	3.190
Whitehorse Mirrlees (WD3) Rebuild	1.100	NA	1.100
Faro Mirrlees (FD1) Recomm.	1.565	NA	1.565
Aishihik 3rd Turbine	4.250	5.000	(0.75)
Total	**48.488**	**39.639**	**8.849**

Revenue Requirement - Planning Costs (1)

- Significant initiatives in test years related to planning and feasibility activities:
  - Continuing load increases (new mines) and material reduction in Hydro surplus after test years
  - Strong economic and environmental rationale for pursuing new renewable generation and transmission vs. baseload diesel
  - Deferred cost expenditures averaged under $2 million per year from 2005-2007 but are projected at $4.1 million for 2008 and $15.1 million for 2009
  - Most 2009 spending does not affect revenue requirement in test years
    - in work in progress for planning, engineering, permitting and potential tendering activities

Revenue Requirement - Planning Costs (2)

- Major Deferred Cost Projects (over $1 million) – not affect test year amortization expenses or net rate base
  - Mayo B ($8.2 million over test years)
    - Near term Hydro generation expansion opportunity to displace up to 38 GWh of baseload diesel generation required with additional industrial loads
    - Test year budgets address planning, engineering, YESAA/ permitting and potential tendering activities to protect earliest feasible in service date
  - Other Generation Feasibility ($7.6 million over test years)
    - Address planning, engineering, YESAA/ permitting and potential tendering activities to protect earliest feasible near term in service dates
      - Gladstone Diversion project (18 GWh/yr), small scale Atlin storage project (18 GWh/yr), Marsh lake fall/winter storage project (7.7 GWh/yr)
      - Pre-feasibility and feasibility studies for potential longer term (circa 2015) and larger scale generation options, i.e. 100-300 GWh/yr) (geothermal, Hoole)
  - Western Copper Grid Connection (no net cost)
  - CSTP Stage 2 ($1.0 million in 2009 for design and contracting)
    - Budget and timing subject to ongoing review.

Revenue Requirement - Return on Rate Base

- Return on Ratebase reflects mid year ratebase and capital structure (60% debt and 40% equity)
- Cost of Debt in 2009 is forecast at 6.19%
  - Increase from 5.18% in 2005
- Yukon Energy's long-term debt consists of :
  - Unsecured advances from YDC - $40.032 million at end of 2007
    - Forecast interest rates based on spread over long Canada bonds of 120 basis points – forecast additional advances of approx. $8.6 million in test years;
    - Long Canada bond forecast of 4.08% - new long term debt costs of 5.28%
  - Obligation re: Minto Mine re: diesels
    - Based on PPA$2.24 million over 7 years at 7.5% interest
  - 7% Flex Term Note
    - Interest costs forecast to increase with increased WAF sales to Minto & others
    - average interest rate increases from 4.1% in 2005 to 6.6% in 2009
  - YDC Flexible Promissory Note (for Mayo Dawson Project)
    - Forecast balance of $15.157 million in 2009; full face interest 6.55%
  - TD Canada Trust Note
    - Balance $6.471 million in 2009 - effective interest rate of 7.81%

Revenue Requirement – Return on Rate Base (2)

- Return on equity: $5.017 million in 2008 and placeholder estimate of $5.233 million in 2009
  - Simplified approach to ROE in 2005 based on BCUC benchmark approach (2005 low risk benchmark utility at 9.03%)
    - Fair ROE for Yukon Energy 9.55% (includes equity risk premium of 0.52%)
    - 0.50% deduction as directed by OIC 1998/32
  - Maintain simplified BCUC approach for 2008/09
    - 2008 BCUC low risk benchmark of 8.62%
    - Provides for 2008 an allowed ROE of 8.64% (with added equity risk premium of 0.52% and 0.50% deduction directed by OIC 1998/32)
    - Used as placeholder ROE for 2009
  - Recently updated BCUC low risk benchmark for 2009 of 8.47%
    - Provides for 2009 an allowed ROE of 8.49% (with added equity risk premium of 0.52% and 0.50% deduction directed by OIC 1998/32)
    - Will update revenue requirement prior to hearing

Rates

- Overview
- Secondary Energy rate Design
- Major Industrial Rates
- Firm Retail Rate Design & Policy
- Runoff (2nd Block) Rate Considerations
- Rate Changes Proposed
  - Revenue Reduction Rider U
  - Revenue Neutral Base Rate Revision
  - Wholesale Rates
  - Faro Dewatering Account

Rates - Overview

- Basis for Rate Reduction:
  - The current level of firm rates provides $0.359 million in excess revenue in 2008 and $1.334 million in 2009

Yukon Energy Revenue Required from Rates ($000s)

	2008	2009
Revenue Requirement (from Table 3.1)	$29,217	$31,599
Less: Non-rate Revenues	$125	$125
Less: Secondary rate revenues (section 4.2)	$1,396	$1,369
Revenue Required from Firm Rates	$27,696	$30,105
Less: Revenues from Firm Sales at Existing Rates (including Rider J and "Fixed" component of industrial Rider F) (section 4.3)	$28,055	$31,439
Firm Rate Reduction Proposed	($359)	($1,334)

Rates – Secondary Energy Rate Design

- Secondary sales revenues lower required level of retail rates for firm power ($1.396 million in 2008; $1.369 million in 2009)
  - Rate based on 66.7% of equivalent cost oil heating; adjusted quarterly
  - YEC secondary sales revenue forecast for 2008 and 2009 based on updated oil prices: 6.79 cents/kWh in 2008 and 8.2 cents/kWh for 2009;
  - Absent increased oil price forecast secondary sales rate revenues would be reduced by $0.526 million in 2008 and $0.681 million in 2009
- Amendments to Retail Secondary Sales Rate (RS 32)
  - GRA seeks to adjust terms of Rate Schedule 32 interruptions – further diesel requirements are to be reviewed based on 5 day weather and load forecasts rather than current 7 day forecast
- Low Grade Ore Processing Secondary Energy Rate (RS 35)
  - Rate approved on interim basis in PPA hearing; audit and control measures to be developed by YEC and Minto and approved by Board
    - Audit and control measures not yet proposed by Minto and available power for service under RS 35 is very limited, so no approvals sought in this application

Rates - Major Industrial Firm Rates

- OIC 2007/94 provides:
  - Board must ensure that the rates charged to Major Industrial Customers from January 1, 2008 until December 31, 2012 conform to Rate Schedule 39 per OIC 2007/94
  - Rider F for major industrial customers set to $0.0 for fuel price forecast filed November 20, 2006
    - August 25,2008 YEC applied to have RS 39 approved by Board; approved as final by Order 2008/13
  - Implementation of Rider F requires different baseline regime
    - Fixed Rider F amount of 0.585 cents/kWh to bring industrial customers to level basis with rate established following GRA for all other customers;
    - Variable Rider F amount will vary in future exactly the same as applies to other customers
    - Fixed portion recorded as YEC revenue and variable portion credited against YEC/YECL Rider F account
      - Revenues for 2008 and 2009 ($0.040 million and $0.170 million) assume Minto grid connection as forecast and approval of fuel price forecasts included in Application for YEC and YECL

Rates – Retail Firm Rate Design Policy Framework

- Government Policy (OIC 1995/90) provides for equalization of rates in Yukon for each non-gov't retail customer class (for all YEC and YECL customers) with provision for variable runoff rates to provide for "economy and efficiency"
- Runoff Rate block for consumption in excess of a specified level
  - Set at no less than 1,000 kWh/ month for residential and 2000 kWh/ month for general service
- OIC 2008/149 amends OIC 1995/90 and provides
  - Prior to January 1, 2013, the Board must ensure that rate adjustments for retail customers as defined in OIC 1995/90 apply equally, when measured as percentages, to all classes for retail customers

Rates - Firm Retail Rate Design & Policy

- Increased revenues issuing from provision of service to Minto Mine through Stage 1 of CSTP provide an opportunity for a reduction in rates in 2008 and 2009
- Implementing a rate reduction requires consideration of, and adherence to, government rate policy est'd by OIC 1995/90 and amendments thereto:
  - Need to ensure runoff (2nd) block continues to provide for economy and efficiency (reduction in 2nd block would be counterintuitive and would not provide required price signal)
  - Need to ensure no rate rebalancing between classes
- Solution
  - Apply Rider U decrease only to 1st block where feasible, with varying percent reduction by customer class
  - Modestly increase 2nd block for retail residential non-gov't rates applying added revenues to 1st block for same class

Rates - Runoff (2nd Block) Rate Considerations

- Base runoff rates have not changed since 1997; oil prices have increased dramatically
  - Current effective Hydro zone runoff rate is only 14.39 cents/kWh
    - residential non-government base rates plus Rider F, J, R, excl. tax rebate, RSF and GST
  - Applying same design approach approved by Board in 1996/97 would target Hydro zone runoff rates of 37.37 cents/kWh (oil price in GRA)
- Practical to begin to correct residential runoff price signal now:
  - Minority of residential sales in 2nd block (<20% of energy sold for non-gov't class and 23% for gov't class)
- Issues need to be addressed prior to being able to implement changes to general service rates
  - predominantly 2nd block sales (71% non-gov't and 87% gov't)
  - Relatively non-homogenous group of customers
  - General Service changes not feasible without further joint YEC and YECL study of rate design options

Rates - Revenue Reduction Rider U

- Substantial overall rate reductions available would equal an overall average 3.48% retail rate reduction for 2009
- Applying this reduction as an across-the-board rider would result in reduction of both 1st block and 2nd block runoff rates
  - 2nd Block rates do not provide appropriate price signals
  - to further reduce 2nd block runoff rates by 3.48% would be contrary to policy in OIC 1995/90 and would send the wrong price signal
- Focusing rate reduction on 1st Block mitigates concerns with lowering 2nd block
  - Adjust Rider U percent reduction in 1st block rate for each retail class to avoid rate shifts among these classes

Rates – Revenue Reduction Rider U

- Proposed Adjustments:
  - **Residential Non-government:** negative 0.496 cents/kW.h on first block energy (5.03% of the present first block energy rate of 9.86 cents/kW.h)
  - **Residential Government:** negative 0.715 cents/kW.h on first block energy (5.01% of the present first block energy rate of 14.29 cents/kW.h)
  - **General Service Non-government and Municipal Government:** negative 1.50 cents/kW.h on first block energy (18.04% of the present first block energy rate of 8.31 cents/kW.h)
  - **General Service Fed and Terr. Government***:* negative 3.96 cents/kW.h on first block energy (22.71% of the present first block energy rate of 17.45 cents/kW.h).
  - **Street lighting and Private lighting:** negative 3.48% of total base rate revenues.

Rates – Revenue Neutral Base Rate Revision

- Revenue neutral base rate revision for residential classes as first step in raising runoff rates without rebalancing overall revenues from each class:
  - **Residential Non-government:** A revenue-neutral increase of 5.61 cents/kW.h in the second block base rates, offset by a decrease of 1.36 cents/kW.h in the first block base rates. The same cents/kW.h adjustment applies to all zones.
  - **Residential Government:** A revenue-neutral increase of 5.61 cents/kW.h in the second block base rates, offset by a decrease of 1.66 cents/kW.h in the first block base rates. The same cents/kW.h adjustment applies to all zones.
- Proposed new residential runoff rate is modest increase relative to 1996/97 GRA principles, OIC 1995/90 requirements and GRA forecast incremental diesel fuel generation costs

Rates – Wholesale Rates

- The wholesale rate to YECL must meet the requirements of OIC 1995/90, which include the following:
  - Must recover for Yukon Energy its costs that are not recovered from other customers
  - Shall include appropriate provisions to ensure Yukon Energy will recover its costs with adoption of the rates for retail and industrial customers consistent with the OIC.
  - The current wholesale rate is an “energy-only” (per kW.h) rate.
- Proposed Changes:
  - Increase Wholesale Rate charged to YECL throughout Yukon by 0.011 cents/kWh to reflect retail rate change impacts to maintain revenue neutrality to YECL re: base rate revisions.
  - Starting in 2009, adjust the Energy Reconciliation Adjustment provisions of RS 42 to 37.37 cents/kWh to reflect forecast incremental cost of WAF diesel generation.

Rates - Faro Dewatering Account

- Approval to address any specified income forecast contingencies related to final 2008 retail rate revenue requirements and offset any net revenue losses due to:
  - Specified income forecast contingencies related to final 2008 retail rate revenue requirements: i.e., delays in the final connection timing of Minto mine and Pelly Crossing loads to the CSTP from October 1, 2008 connection date assumed in the Application
    - As of filing, Stage 1 of CSTP was expected to be in service with commencement of service to Minto mine expected by mid to late October 2008.
    - Transmission project was commissioned and available to provide grid electricity to Minto mine November 22, 2008
    - Board Order 2008/16 (amended by 2008/17) filed mid November 2008, rejected YEC's interim rate application, as filed, and directed YEC to implement effective December 1, 2008 an interim rate by amending Rider J and applying a 3.48% decrease to the base rates of all Residential (Non-Government and Government), General Service (Non-Government and Government) and Lighting customers.
  - any secondary sales losses arising due to below average water flows in any year after 2008

Appendix – Supporting Information

Rate Examples

Impact on Rates

Appendix - Rate Examples - Residential Non-Government Rates Today

		Residential Non-Government					
		Customer Charge	First Block Energy	Second Block Energy			
		all zones $/month	all zones ¢/kW.h	Hydro ¢/kW.h	Lg Diesel ¢/kW.h	Sm Diesel ¢/kW.h	Old Crow ¢/kW.h
Base Rate		$11.90	$0.0986	$0.1045	$0.1045	$0.1236	$0.2577
Rider F (kW.h)	$0.0186		$0.0186	$0.0186	$0.0186	$0.0186	$0.0186
Rider J (%)	14.93%	$1.78	$0.0147	$0.0156	$0.0156	$0.0185	$0.0385
Interim Rider R (%)	5.00%	$0.60	$0.0049	$0.0052	$0.0052	$0.0062	$0.0129
Effective rate before Tax rebate, RSF and GST		$14.27	$0.1369	***$0.1439***	$0.1439	$0.1668	$0.3277
Income Tax Rebate (%)	-0.50%	-$0.06	-$0.0005	-$0.0005	-$0.0005	-$0.0006	-$0.0013
RSF Cust Charge ($/month)	-$1.19	-$1.19					
RSF Energy (1st block kW.h)	-$0.0174		-$0.0174				
Total before GST		$13.02	$0.1190	$0.1434	$0.1434	$0.1662	$0.3264

Appendix - Rate Examples - General Service Non-Gov't Rates Today

		GS Non-Government					
		Demand Charge	First Block Energy	Second Block Energy			
		all zones $/month	all zones ¢/kW.h	Hydro ¢/kW.h	Lg Diesel ¢/kW.h	Sm Diesel ¢/kW.h	Old Crow ¢/kW.h
Base Rate		$6.00	$0.0831	$0.1045	$0.1045	$0.1236	$0.2577
Rider F (kW.h)	$0.0186		$0.0186	$0.0186	$0.0186	$0.0186	$0.0186
Rider J (%)	14.93%	$0.90	$0.0124	$0.0156	$0.0156	$0.0185	$0.0385
Interim Rider R (%)	5.00%	$0.30	$0.0042	$0.0052	$0.0052	$0.0062	$0.0129
Effective rate before Tax rebate, RSF and GST		$7.20	$0.1183	$0.1439	$0.1439	$0.1668	$0.3277
Income Tax Rebate (%)	-0.50%	-$0.03	-$0.0004	-$0.0005	-$0.0005	-$0.0006	-$0.0013
RSF Energy (1st block kW.h)	-$0.00798		-$0.00798				
Total before GST		$7.17	$0.1099	$0.1434	$0.1434	$0.1662	$0.3264

Appendix - Impact on Rates

- A reduction in 1st block retail rate energy charge as follows (after all current riders, rebates and subsidies):

Class	Cents/kW.h Change Rider U + Base Rate impacts	Overall % Change
Res. Non-Gov	(0.496)+(1.624) =(2.12)	(17.8%)
Res. Gov	(0.715)+(1.991) =(2.71)	(14.2%)
GS Non-Gov	(1.50) +0 =(1.50)	(13.7%)
GS Mun. Gov	(1.50) +0 =(1.50)	(13.5%)
GS Fed/Terr Gov	(3.96) +0 =(3.96)	(17.4%)

- Increase in 2nd block residential charge with forecast 2nd block revenues applied to reduce 1st block base rates

Appendix - Impact on Rates (2)

- Overall impacts on non-government residential customer monthly bills before GST will depend on average monthly use levels (overall savings occur for all such customers with use of up to slightly more than 1,300 kW.h per month – in 2007, 84% of non-government residential monthly bills used no more than 1,300 kW.h):
  - At 500 kW.h/month: Saving of $10.60/month (14.6% of current overall bill)
  - At 1,000 kw.h/month: Saving of $21.20/month (16.1% of current overall bill)
  - At 1,300 kW.h/month: Saving of $1.10/month (0.6% of current overall bill)
  - At 1,500 kW.h/month: Increase of $12.30/month (4.2% to 6.0% of current bill)
  - At 2,000 kW.h/month: Increase of $45.80/month (10.0% to 16.6% of current bill)
  - At 3,000 kW.h/month: Increase of $112.80/month (14.4% to 26.9% of current bill).