



Foothills Pipelines Limited Shipper Meeting

November 16, 2009



Agenda



- **Measurement Canada Bulletin G-14 Tariff Amendments**
- **Green House Gas Emissions Update**
- **TransCanada Supply/Demand Outlook**
- **Maintenance/Capability Update**
- **2010 Interim Rates**
- **Update on Service Flexibility Initiative**



Measurement Canada Bulletin G-14 Tariff Amendments

Measurement Canada Bulletin G-14



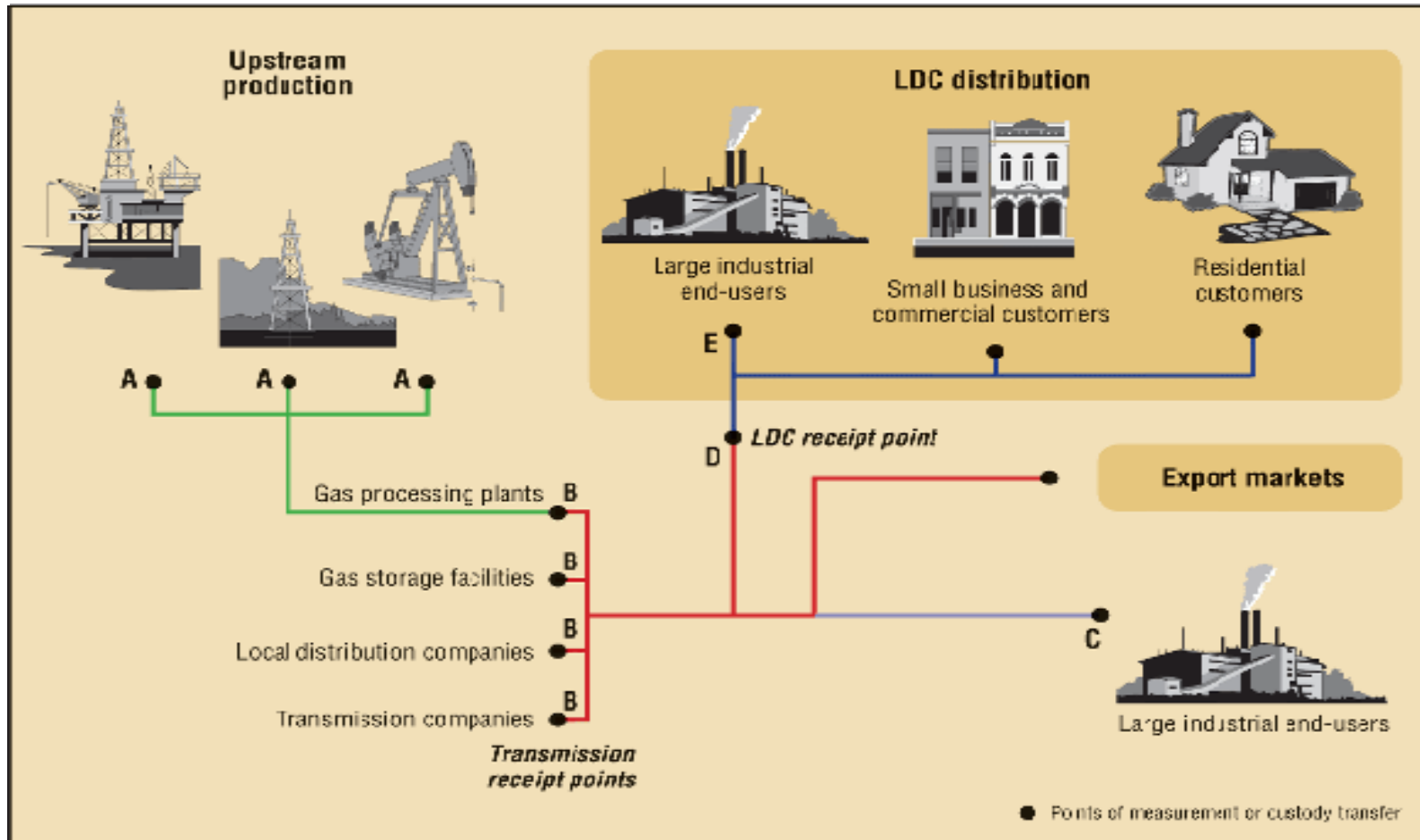
- **Bulletin G-14 Revision 4, effective June, 2009**

Policy on Granting Conditional Permission for Using Gas Meters in Service without Verification and Sealing at the Low Intervention Trade Transaction Level of the Natural Gas Market

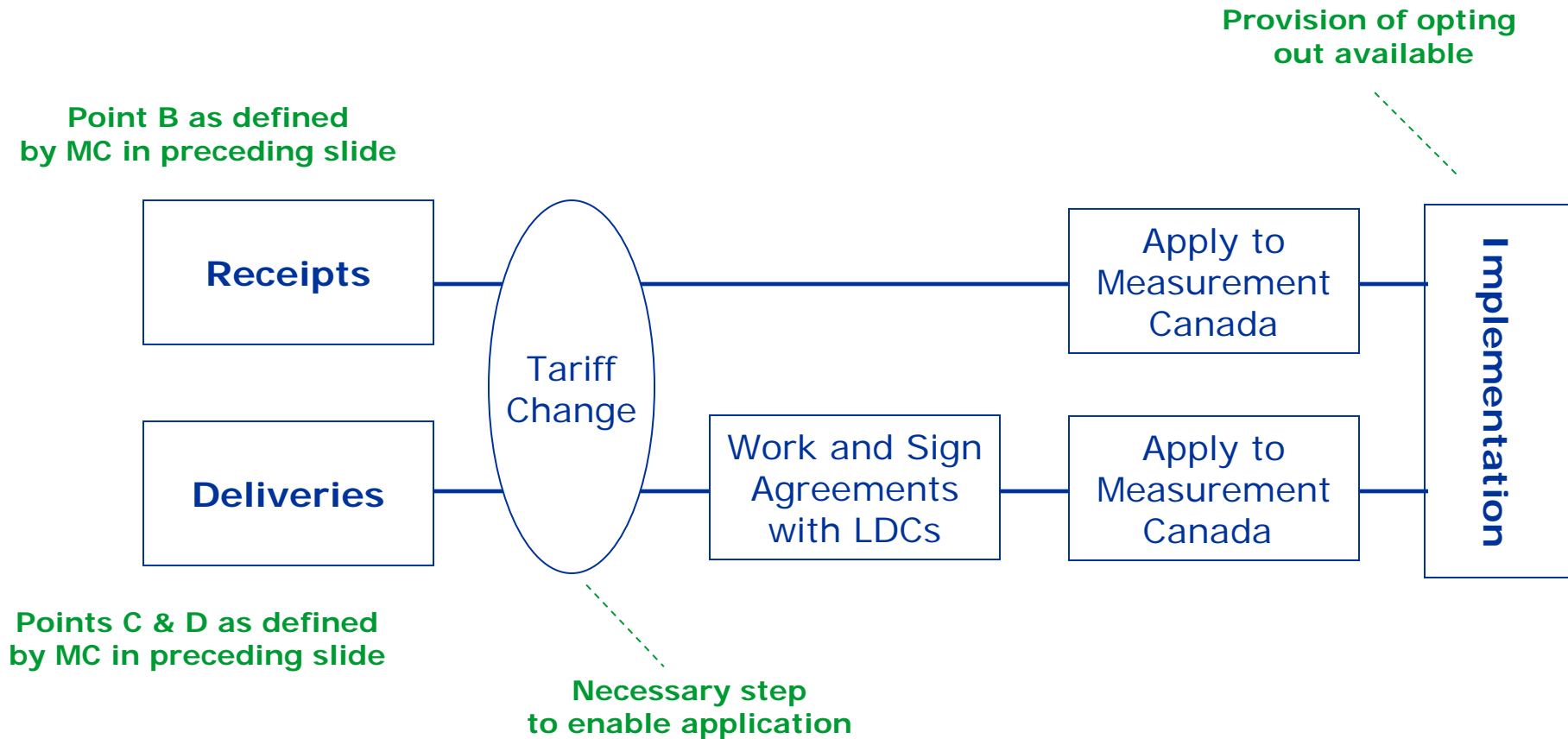
- **Sets out the terms and conditions under which meter owners can apply for and obtain permission from Measurement Canada to implement low intervention measurement procedures**
- **Includes requirement for certain provisions to be added to the Tariff**

www.ic.gc.ca/eic/site/mc-mc.nsf/eng/lm00035.html

Measurement Canada Intervention Levels



Steps for G-14 Implementation



G-14 - What does it all mean?



- **Allows Foothills to implement condition based best practices instead of prescriptive, time based practices**
- **Apply for LLI at Transmission Receipt Points**
- **Negotiate agreements with LDCs to implement LLI**
- **File for amendments to the Foothills Tariff to incorporate G-14 Bulletin (*attached to end of this presentation*)**
 - New Section added to Section 3 Measurement and Measuring Equipment titled “3.13 Low Intervention Trade Transaction Level”
 - Other housekeeping amendments
 - NEB approval received for Alberta System Tariff amendments



Green House Gas Emissions Update

Green House Gas Emissions



- **November 2008, Foothills presented information related to both provincial and federal emissions legislation**
- **At that time, Foothills indicated that the draft Federal regulations could result in the need for a facility solution**
 - Foothills was exploring electric drive units as a method to reduce emissions costs
 - Potential for application in Q2 2009
- **UPDATE – Federal regulations too uncertain to proceed with any facility solution at this time**
 - Foothills will continue to monitor regulations and provide updates as necessary
- **BC Carbon Tax remains in place**



TransCanada Supply/Demand Outlook

Key Messages



North America

- Recessionary impact in the short-term.
- Gas prices: growing to 7 \$US/MMBtu and then flat over the longer-term (NYMEX Henry Hub).
- Growth in supply due to unconventional production in Mid-continent, Rockies gas, and B.C. unconventional gas.
- LNG supply in the mix but at a much lower level.

Western Canada

- WCSB supply relatively flat in the next decade (between 14 Bcf/d and 16 Bcf/d) with growth in unconventional production.
- Oil Sands gas demand continues to grow although at a slower pace than previous forecasts. Project delays are incorporated into the forecast, however Proponents' outlooks are higher.

Eastern Canada

- Demand growth driven by Ontario's "Off-coal" program partially off-set by declining industrial demand.

WCSB Supply Trends

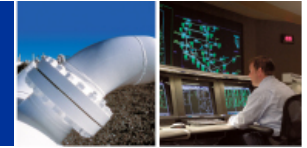


WCSB Supply forecast to decrease, flatten and then increase

- Short term – a decrease of approximately 1.5 Bcf/d (2008 - 15.7 Bcf/d to 14.2 Bcf/d - 2010)
- Mid term (2011-2012) – stabilization
- Long term (2012 and beyond) – potential for increase due to incremental shale production. By 2015, Montney at 1.5 Bcf/d and Horn River at 1 Bcf/d
- Northern gas offers further upside

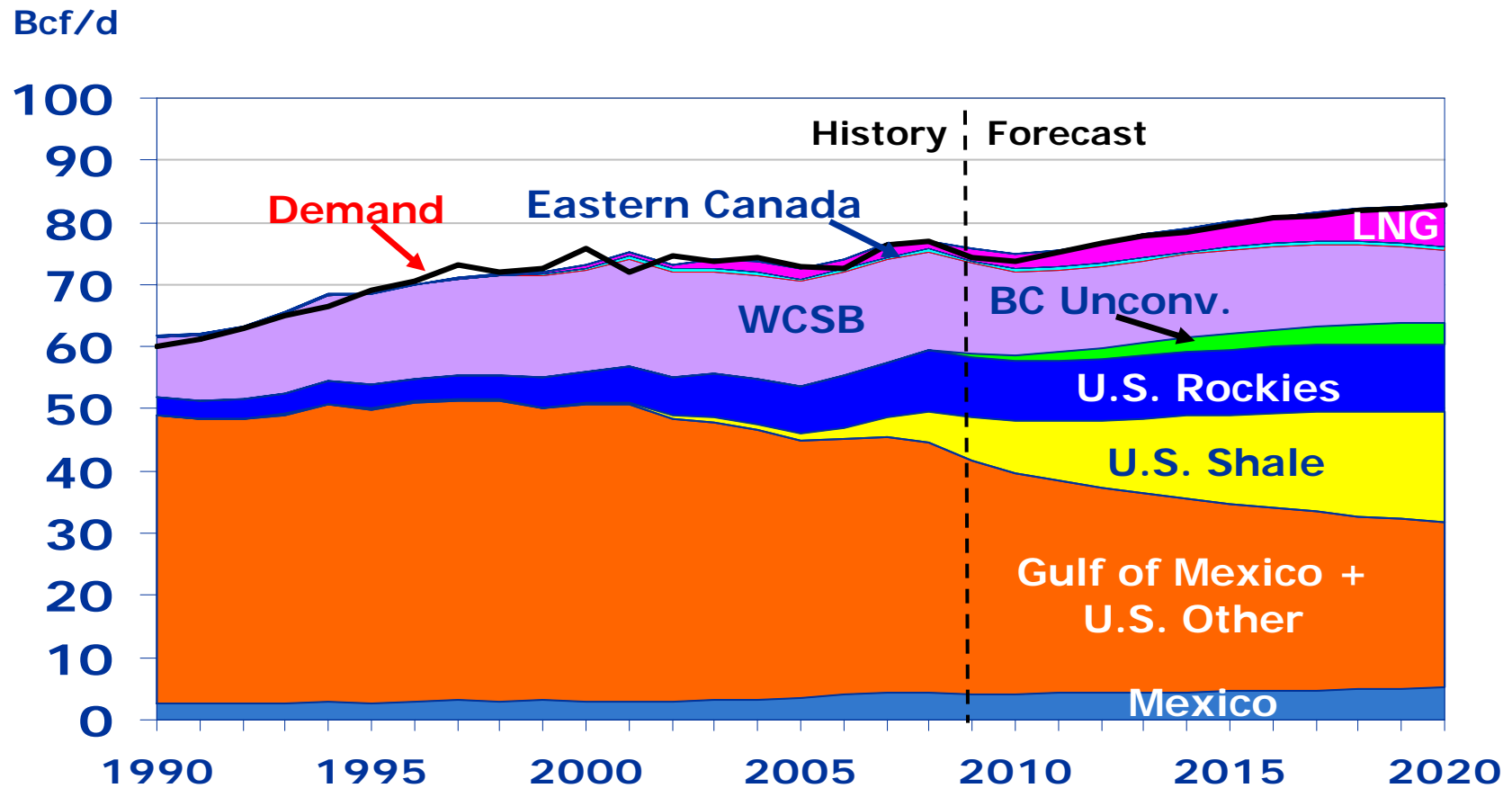
Western Canadian Supply (unconventional potential) increases lead to export recovery post 2012

WCSB Observations

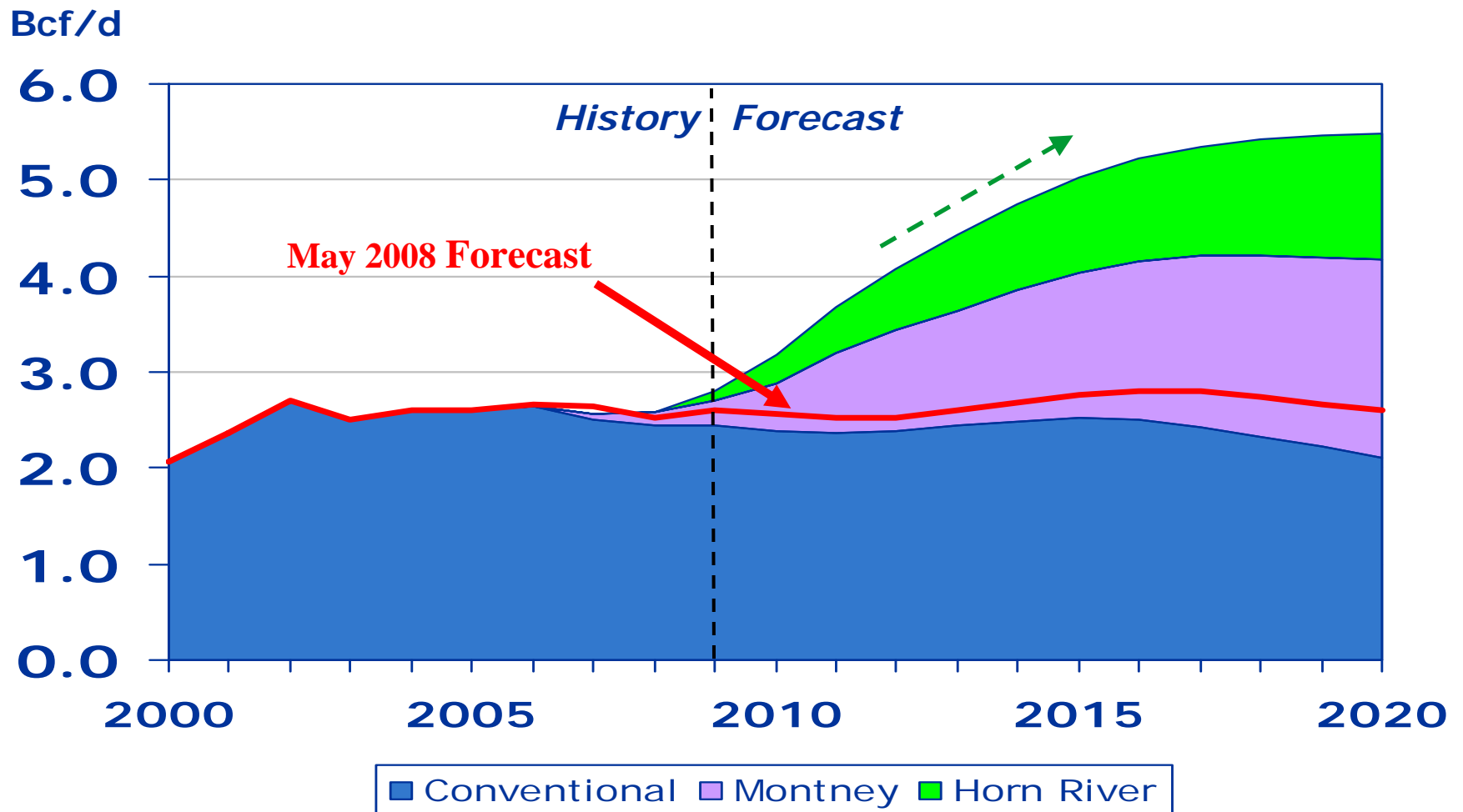


- **Lowest drilling rig activity this past summer in at least 17 years**
 - This winter's drilling activity to be similar to last winter due to low prices and continuing access to capital issues
- **Lowest summer AECO/NIT gas prices in 10 years**
 - Caused by declining demand due to the recession, high storage levels, and continuing high U.S. domestic supply
- **Record storage continues to march higher**
 - WCSB and US storage at record levels
- **Exports down by about 1.2 Bcf/d this summer**
 - Reduced demand in Eastern Canada and US due to recession, mild summer, and high storage levels

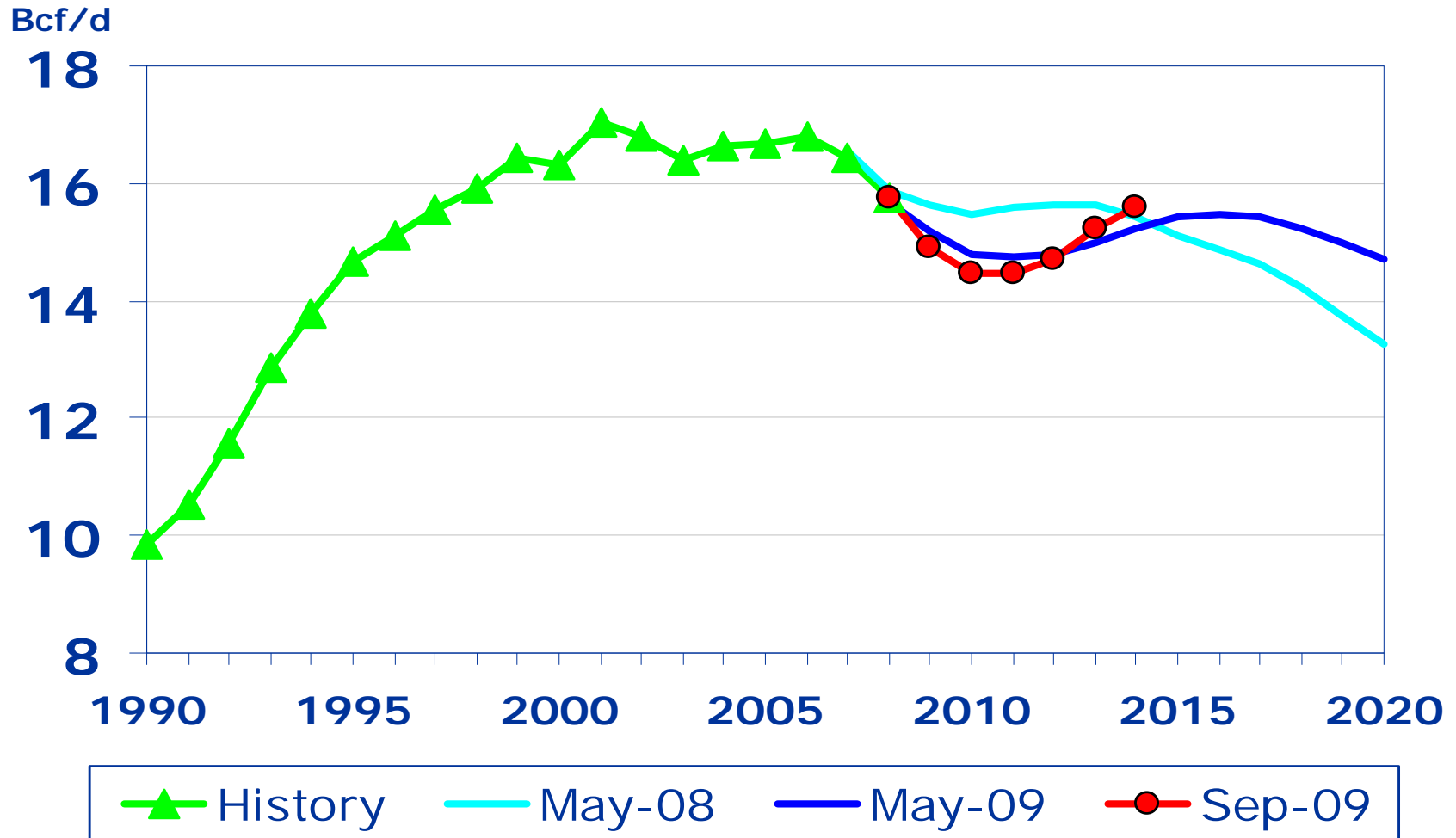
North American Supply/Demand Balance



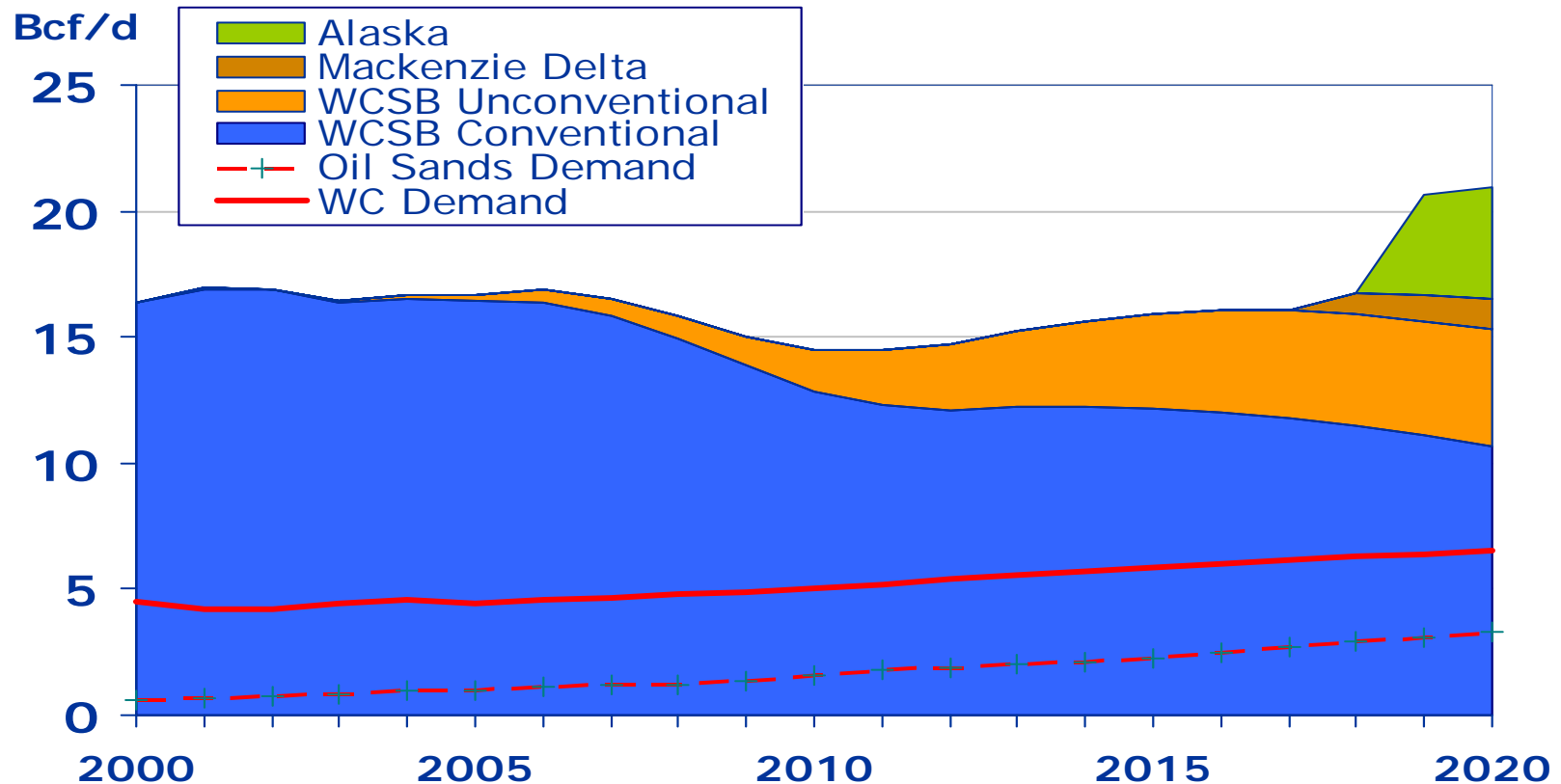
B.C. Production Forecast



WCSB Production (Conventional & Unconventional)

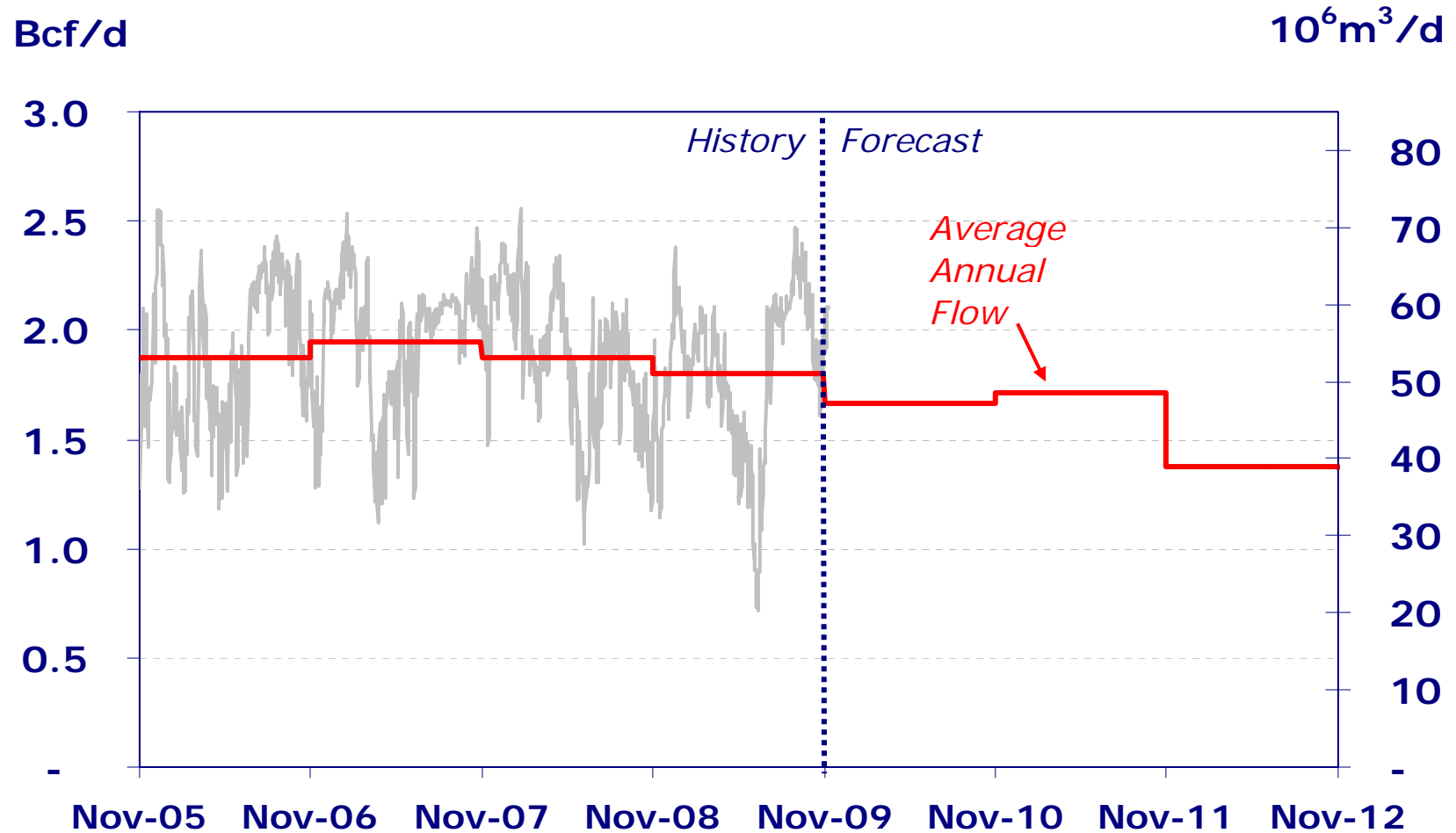


WCSB and North Supply Potential

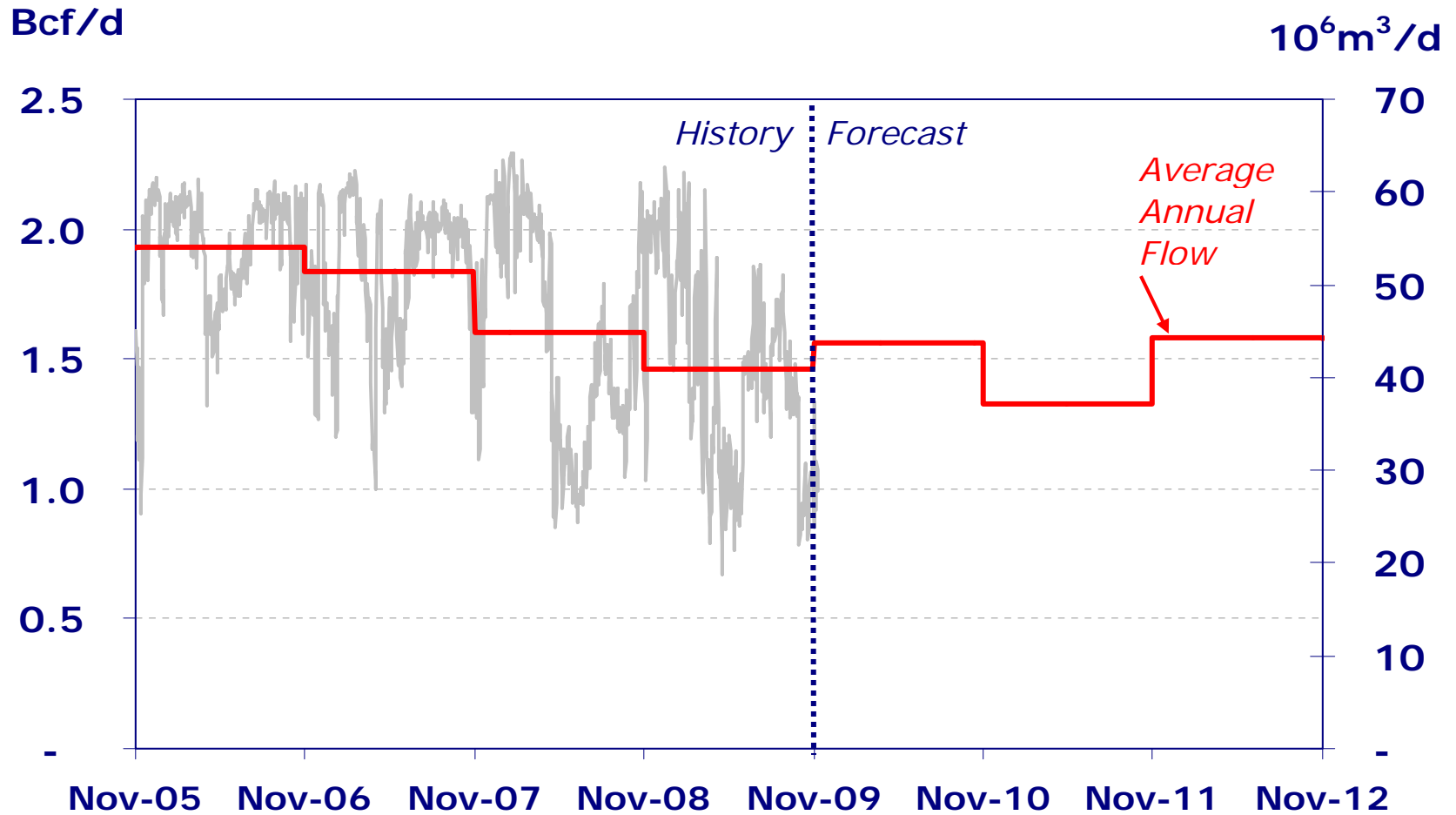


- WC demand is forecast to increase by ~ 1.7 Bcf/d (2008 to 2020) with the majority related to Oil Sands development
- Exports from the region forecast to increase as unconventional supply increases over the medium-term

Kingsgate Flows



Monchy Flows



Summary Messages



- WCSB Supply
- Supply declining into 2010-2011 and then increasing with growth coming from the Montney and Horn River areas post 2011
- Overall level fairly flat at about 15 Bcf/d out till 2020

- Western Canada Demand
- Oilsands project delays have reduced gas demand forecast from previous outlook, but an increase of ~ 1.7 Bcf/d still expected by 2020
- Fertilizer and petrochemical demand forecasts lower

- Western Canada Exports
- Updated supply and demand outlooks lead to stronger medium to long term exports from Western Canada than previous forecasts
- Ruby Pipeline reduces flow on GTN



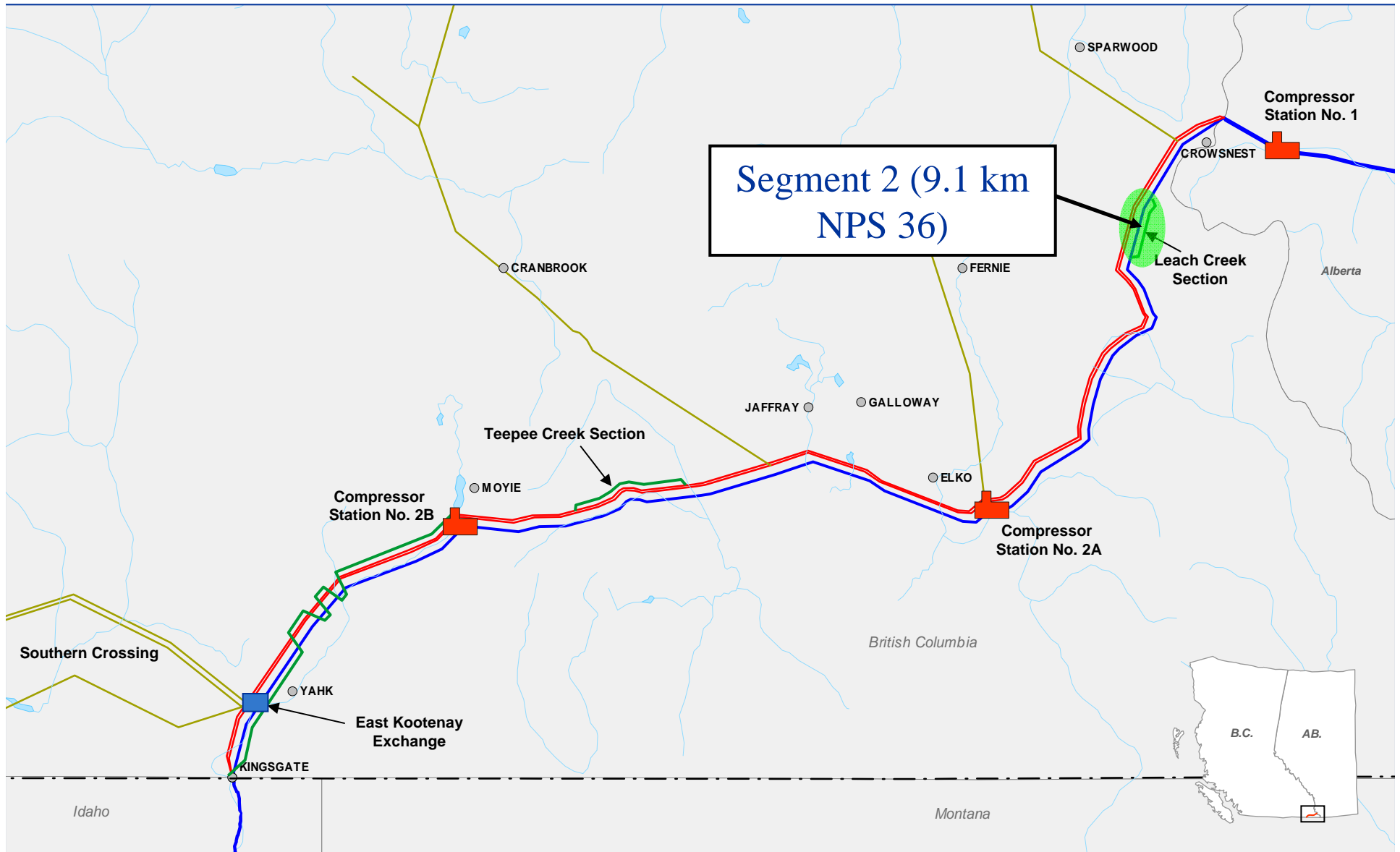
Maintenance/Capacity Update

Pipe Integrity Summary



- **Foothills continues to manage the SCC and corrosion risk on the Foothills NPS 36 tape coated line (1981 install) using extensive in-line inspection (ILI), excavations and repairs:**
 - Foothills Zone 8 Segment 2 is section of most concern for corrosion and SCC due to tape coat and difficult access
 - SCC digs and corrosion ILI continue 2010 to 2012
 - No outages for repairs anticipated, but pressure restrictions typically required for excavating and repairing in-service pipe

Foothills BC System Map



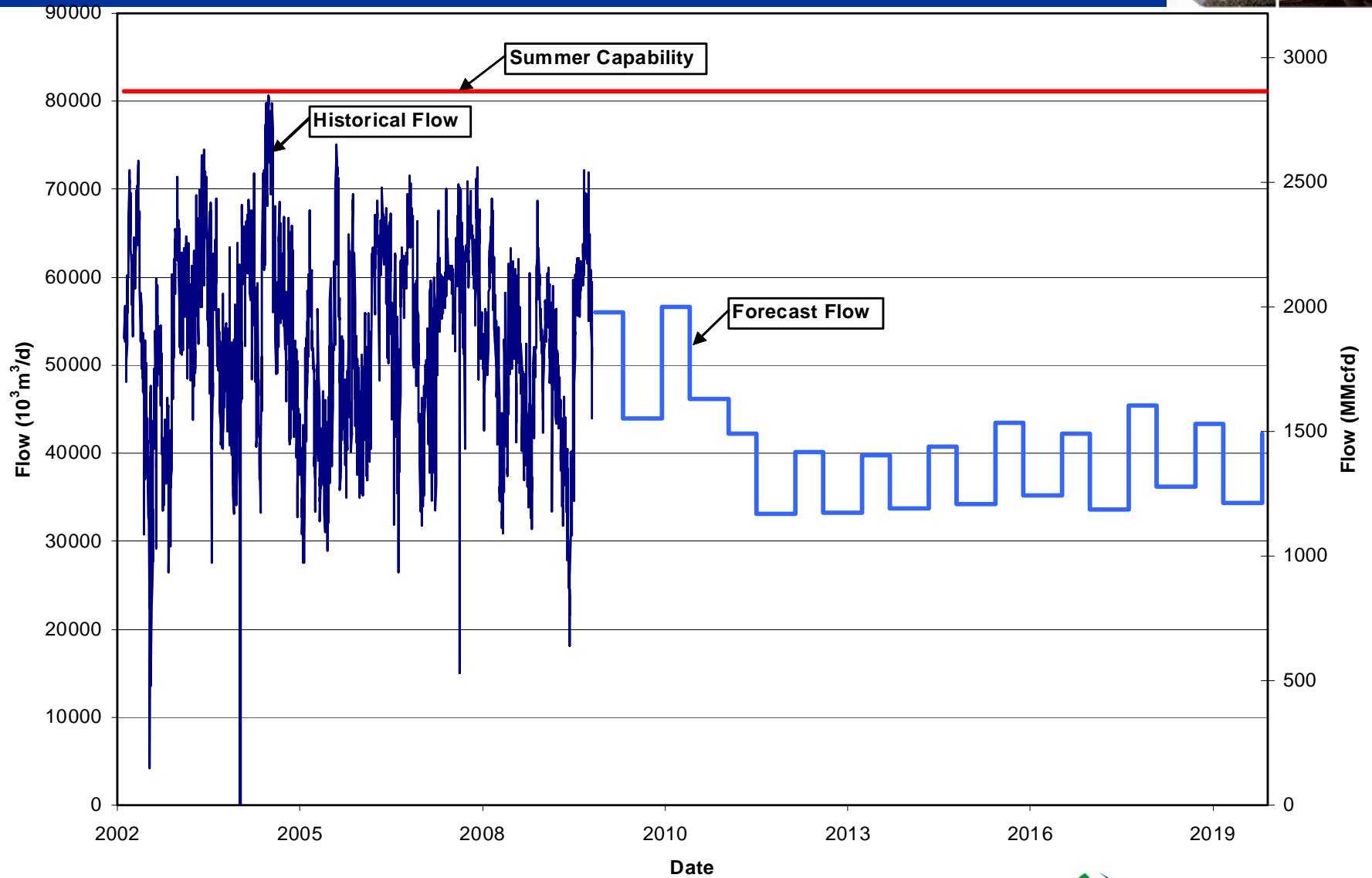
Foothills Zone 8 Segment 2



- **9.1 km 914 mm (NPS 36)**
 - 2 Foothills segments parallel this segment – NPS 36 and NPS 48
- **Three options to mitigate integrity concern:**
 - Continue to maintain (ILI, investigative digs and repair)
 - Deactivate/Abandon
 - Replacement
- **No loss of capability without Segment 2**
- **No capital expansion expected in forecast period**

TransCanada is continuing to assess these options and Foothills shippers will be notified of the results soon

Foothills Zone 8 Capability and Flow Forecast



Alberta System Capacity Update



http://www.transcanada.com/Customer_Express/capacity/capacity_ab.html

TransCanada - Customer Express - Design Capabilities and Firm Requirements - Microsoft Internet Explorer

Address: http://www.transcanada.com/Customer_Express/capacity/capacity_ab.html

2009/2010 Capabilities and Firm Requirements Table

The Capabilities and Firm Requirements Table is provided to customers for information purposes and is accurate for the date published. Firm Requirements will be updated regularly, while Capabilities will be updated annually.

ALBERTA SYSTEM

| Area | Capabilities | | Firm Requirements |
|---------------------------------------|--------------------------------|-----------------------------|--------------------|
| | Published on Nov. 4, 2009 | | As of Nov 01, 2009 |
| | Winter 2009/10 (Design) MMcf/d | Summer 2010 (Design) MMcf/d | Winter MMcf/d |
| | | | Nov 01, 2009 |
| Alberta System (at 14.65 psia) | | | |
| WESTERN GATE TOTAL | 2,849 | 2,757 | 2,372 |
| Alberta/BC Border (A/BC) | 2,769 | 2,677 | 2,308 |
| Alberta/Montana Border | 80 | 80 | 64 |
| EASTERN GATE TOTAL | 7,207 | 7,392 | 2,510 |
| - Empress | 4,964 | 5,149 | 1,902 |
| - McNeill | 2,243 | 2,243 | 608 |

For current capacity information, please refer to the Open Season links on the Pipeline Capacity section of Customer Express.

Foothills Sask. Capability Update



http://www.transcanada.com/Customer_Express/capacity/capacity_fh.html

TransCanada - Customer Express - Design Capabilities and Firm Requirements - Microsoft Internet Explorer

Address: http://www.transcanada.com/Customer_Express/capacity/capacity_fh.html#BC

TransCanada
In business to deliver

2009/2010 Capabilities and Firm Requirements Table

[Foothills-Saskatchewan](#) | [Foothills-BC](#)

customerExpress
Your connection to commercial information

The Capabilities and Firm Requirements Table is provided to customers for information purposes and is accurate for the date published. Firm Requirements will be updated regularly, while Capabilities will be updated annually.

FOOTHILLS - SASKATCHEWAN

| Area | Capabilities | | Firm Requirements |
|---|--------------------------------|-----------------------------|--------------------|
| | Published on Jan 05, 2009 | | As of Nov 01, 2009 |
| | Winter 2009/10 (Design) MMcf/d | Summer 2010 (Design) MMcf/d | Winter MMcf/d |
| Foothills-Saskatchewan (at 14.73 psia) | | | Nov 01, 2009 |
| Foothills-Saskatchewan | 2,190 | 2,190 | 361 |
| Alberta System (at 14.65 psia) | | | |
| McNeill | 2,243 | 2,243 | 608 |

For current capacity information, please refer to the Open Season links on the [Pipeline Capacity](#) section of [Customer Express](#).

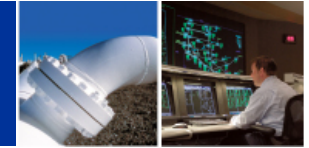
Notes:

- For the purpose of this table, Foothills-Saskatchewan and McNeill capability is established based upon the summer takeaway capability on the downstream pipeline.
- On the Foothills-Saskatchewan, the Firm Requirements are the firm contract quantities that include STFT.
- On the Alberta System, the Firm Requirements are the firm contract quantities at McNeill and include FT-D, LRS and STFT.
- Note that daily "Operational Capability" will vary from "Design Capability" based upon a number of factors, including: equipment availability, pipeline related outages such as pigging, ambient air and ground temperature variations, system linepack, flow distribution, receipt or delivery flow to connected storage locations and border delivery pressures.

For daily operational capability, see the transcanada.com website at the following address:

Foothills-Saskatchewan: [Daily Nominations](#)

Foothills B.C. Capacity Update



http://www.transcanada.com/Customer_Express/capacity/capacity_bc.html

TransCanada - Customer Express - Design Capabilities and Firm Requirements - Microsoft Internet Explorer

Address: http://www.transcanada.com/Customer_Express/capacity/capacity_bc.html

2009/2010 Capabilities and Firm Requirements Table

The Capabilities and Firm Requirements Table is provided to customers for information purposes and is accurate for the date published. Firm Requirements will be updated regularly, while Capabilities will be updated annually.

BC SYSTEM

| Area | Capabilities | | Firm Requirements |
|---------------------------------------|--|--------------------------------------|-----------------------------|
| | Design Capabilities Published on Nov 4, 2009 | | As of Nov 01, 2009 |
| | Winter 2009/10 (Design) MMcf/d | Summer 2010 (Design) MMcf/d | Winter 2009/10 MMcf/d |
| BC System (at 14.73 psia) | | | |
| BC System | 3,000 | 2,866 | 2,228 |
| Alberta System (at 14.65 psia) | | | |
| Alberta/BC Border (A/BC) | 2,769 | 2,677 | 2,308 |

For current capacity information, please refer to the Open Season links on the Pipeline Capacity section of Customer Express.

Notes:

1. On the BC System, the Firm Requirements are the firm contracts that include FS-1 and STFT contract quantities.
2. On the Alberta System, the Firm Requirements are the firm contract quantities that include FT-D, LRS and STFT.
3. Note that daily "Operational Capability" will vary from "Design Capability" based upon a number of factors, including: equipment availability, pipeline related outages such as pigging, ambient air and ground temperature variations, system linepack, flow distribution, receipt or delivery flow to connected storage locations and border delivery pressures.

For daily Operational capability, see the transcanada.com website at the following address:

Maintenance/Capability Contacts



- **Commercial – Bruce Newberry**

403-920-5579

bruce_newberry@transcanada.com

- **System Design – Gord Toews**

403-920-5903

gord_toews@transcanada.com



2010 Interim Rates

2010 Interim Rates



- **Foothills applying for 2010 Interim Rates to be effective January 1, 2010**
 - NEB Review of Multi-Pipeline Cost of Capital Decision (RH-2-94), Letter Decision, October 8, 2009
 - RH-2-94 Decision will not continue to be in effect
- **Foothills will convene process for determination of cost of capital**
- **Foothills 2010 Interim Rates are based on the 2009 Revenue Requirement adjusted for:**
 - Previous year over/under collections
 - 2010 billing determinants
- **For Zone 8, the Calpine Settlement amount has been fully refunded and is no longer reflected in rates for 2010**

Zone 9 – Overview of 2010 Interim Rates



The Revenue Requirement:

- 2010 – \$57.2 Million (2009 Rate Filing: \$64.3 Million)

Total Throughput:

- 2010 – 1,597 TJ/d (2009 Rate Filing: 1,563 TJ/d)

Results in an FT Rate of:

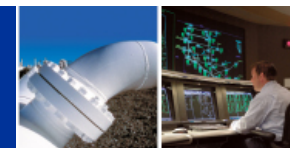
- 2010 – 9.5 ¢/GJ (2009 Rate: 10.9 ¢/GJ)

Zone 9 – Revenue Requirement (\$000)



| | 2010 Rate Filing |
|---------------------------------------|-----------------------------|
| 2009 Revenue Requirement | 64,267 |
| Adjustments | |
| Less: 2008 (Over) Under | 7,148 |
| Plus: 2009 (Over) Under | 116 |
| 2010 Total Revenue Requirement | 57,235 |
| Other Revenue | |
| Less: STFT | 27,356 |
| Less: IT & SGS | 16,465 |
| Firm Revenue Requirement | 13,414 |

Zone 9 - MDQ and Throughput (TJ/d)



| | 2009 Rate Forecast | 2010 Rate Forecast | Difference |
|--|-----------------------|-----------------------|------------|
| Firm Contract Demand ¹ | 559 | 387 | (172) |
| Throughput to Services: | | | |
| Firm Volumes | 537 | 381 | (156) |
| Interruptible Volumes | 328 | 431 | 104 |
| STFT Volumes | 698 | 785 | 87 |
| Total | <u>1,563</u> | <u>1,597</u> | <u>35</u> |

1. Annualized contract demand quantity.

Zone 9 Rate Sensitivity – Rule of Thumb



- A \$1 million dollar increase (decrease) in revenue requirement results in approximately a 0.2 ¢/GJ increase (decrease) in the Firm Transportation rate
- A 100 TJ/d increase (decrease) in IT throughput results in approximately a 0.6 ¢/GJ decrease (increase) in the Firm Transportation rate

Zone 8 – Overview of 2010 Interim Rates



The Revenue Requirement:

- 2010 – \$65.1 Million (2009 Rate Filing: \$65.9 Million)

Total Firm Contract Demand:

- 2010 – 2,297 TJ/d (2009 Rate Filing: 2,267 TJ/d)

Results in an FT Rate of:

- 2010 – 7.6 ¢/GJ (2009 Annual Rate: 5.2 ¢/GJ¹)

1. 2009 Rate includes Calpine refund of \$22.3M as a revenue credit.

Zone 8 – Revenue Requirement (\$000)



| | 2010 Rate Filing |
|---------------------------------------|-----------------------------|
| 2009 Revenue Requirement | 65,887 |
| Adjustments | |
| Less: 2008 (Over) Under | (4,751) |
| Plus: 2009 (Over) Under | (5,490) |
| 2010 Total Revenue Requirement | <u>65,148</u> |
| Other Revenue | |
| Less: STFT | 1,386 |
| Less: IT | 81 |
| Firm Revenue Requirement | <u><u>63,681</u></u> |

Zone 8 Rate Sensitivity – Rule of Thumb



- A \$1 million dollar increase (decrease) in revenue requirement results in approximately a 0.1 ¢/GJ increase (decrease) in the average Firm Transportation rate

- A 100 TJ/d increase (decrease) in contract level results in approximately a 0.3 ¢/GJ decrease (increase) in the average Firm Transportation rate

2010 Filing Timeline



- **Review 2010 Interim Rates on November 16th**
 - Posted on web site with NrG notification:
www.transcanada.com/Foothills/industry_committee/index.html
- **File for 2010 Interim Rates by December 1, 2009**
 - Notification to be provided via email and NrG notification

2010 Interim Rates – Contacts



- **Penelope Echenagusia**

403.920.5396

penelope_echenagusia@transcanada.com

- **Mike Ritsch**

403.920.6826

michael_ritsch@transcanada.com



Update on Service Flexibility Initiative

Service Flexibility



- **As presented November 2008, Foothills had been asked to consider whether opportunity existed for further alignment of services between BC and Sask**
 - Ability to offer service enhancements or flexibility (e.g. Alternate Access or FT-RAM mechanism)
- **Foothills proposed to kick-off task force discussions (early 2009) to explore opportunities**
- **UPDATE**
 - Limited interest in pursuing at the time
 - Foothills remains open to discussion and consideration of this issue based on Shipper interest

Contacts



Wendy West, Manager Collaboration

403-920-7162

Bruce Newberry, Account Manager

403-920-5579

Dan Ronsky, Manager Commercial West, Markets

403-920-5581



ATTACHMENT - Blackline Tariff Amendments

- Measurement Canada Bulletin G-14
- Housekeeping Items

- 1.26** “Existing Term” shall have the meaning attributed to it in subsection 10.2 of Rate Schedule FT, Firm Transportation Service.
- 1.27** “Expansion Capacity” shall have the meaning attributed to it in subsection 4.3.1 of the Capacity Allocation Procedures.
- 1.28** “Expansion Capacity Open Season” shall have the meaning attributed to it in subsection 4.3.1 of the Capacity Allocation Procedures.
- 1.29** “Financial Assurance” shall have the meaning attributed to it in subsection 5.8 of these General Terms and Conditions.
- 1.30** “First Billing Month” shall mean relative to Shipper the Billing Month in which such Shipper’s Billing Commencement Date occurs.
- 1.31** “Foreign Exchange Rate” shall mean for any day that rate for the currency in question as published at 12:00 Eastern Standard Time, by the Bank of Canada in the City of Ottawa.
- 1.32** “Forward Haul” shall mean service where gas delivered at Shipper’s Forward Haul Delivery Point is received into Company’s facilities at Shipper’s Forward Haul Receipt Point located upstream of Shipper’s Forward Haul Delivery Point.
- 1.33** “FT Rate” shall mean the FT Rate in the Table of Effective Rates which has been set by the Company for service under Rate Schedule FT, Firm Transportation Service.
- 1.34** “G-14” shall mean Measurement Canada’s Bulletin G-14, as may be amended from time to time.
- ~~**1.341.35**~~ “Gas” shall mean natural gas, manufactured, artificial or synthetic gas, or any mixture or combination thereof.
- ~~**1.351.36**~~ “Gas Plant In Service” shall mean the original cost of the gas plant of Company excluding plant that is entirely distinct from and is not operated in connection with the gas transportation service provided pursuant to this Gas Transportation Tariff.

1.361.37 “Gas Transportation Tariff” shall mean the compilation on file with the National Energy Board of Company’s rate schedules, General Terms and Conditions and related Service Agreements with Shipper as in effect from time to time.

1.371.38 “General Terms and Conditions” shall mean, at any time, these General Terms and Conditions as amended or supplemented from time to time.

1.381.39 “GIA” shall mean the Electricity and Gas Inspection Act, Chapter E-4 of the Revised Statutes of Canada, 1985 or as amended, and all regulations issued pursuant to it~~have the meaning attributed to it as set out in subsection 3.1.~~

1.391.40 “GJ” shall mean 10^9 Joules.

1.401.41 “Gross heating value” shall mean the total Joules obtained by complete combustion at constant pressure of one cubic metre of gas with air, the gas to be free of all water vapour and the temperature of the gas, air and products of combustion to be at standard temperature and all water formed by the combustion reaction to be condensed to the liquid state.

1.411.42 “Interconnecting Pipeline Open Season” shall have the meaning attributed to it in subsection 4.1.3 of the Capacity Allocation Procedures of this Gas Transportation Tariff.

1.421.43 “IT Rate” shall mean the IT Rate in the Table of Effective Rates which has been set by the Company for service under Rate Schedule IT, Interruptible Transportation Service.

1.431.44 “J” shall mean Joule(s), the base unit for energy as defined by The International System of Units (SI).

1.441.45 “km” shall mean kilometre(s) as defined by The International System of Units (SI).

1.451.46 “kPa” shall mean kilopascal(s) of pressure.

1.461.47 “Leave to Open” shall mean that a leave has been granted under Part III of the National Energy Board Act to Company to open the pipeline.

1.471.48 “Line Pack Change” shall mean for any period the difference between the total quantity of line pack gas contained in a Zone of Company’s pipeline at the beginning and end of such period, as computed by Subsidiary Company.

1.481.49 “Line Pack” for any Zone at any time shall mean that quantity of gas which is calculated by Subsidiary Company as the total quantity of gas required as line pack for the efficient operation of its pipeline in such Zone.

1.50 “Low Intervention Trade Transaction” shall have the meaning attributed to it in G-14, as may be amended from time to time.

1.491.51 “Make-Up Gas” shall have the meaning attributed to it in subsection 9.2 of the Rate Schedule FT, Firm Transportation Service.

1.501.52 “Maximum Daily Delivery Quantity” or “MDDQ” shall mean relative to a Delivery Point of Shipper for any day the quantity of gas as specified in Appendix A to such Shipper’s Service Agreement.

1.53 “MC” shall mean Measurement Canada, an Agency of Industry Canada.

1.511.54 “mg” shall mean milligram(s) as defined by The International System of Units (SI).

1.521.55 “Minimum Term” shall have the meaning attributed to it in subsection 3.3.1 of the Capacity Allocation Procedures.

1.531.56 “Month” shall mean a period of time beginning at 09:00 CCT on the first day of a calendar month and ending at 09:00 CCT on the first day of the next calendar month.

1.541.57 “National Energy Board” or “NEB” or “Board” shall mean the National Energy Board of Canada or any other tribunal which may hereafter exercise the functions now exercised by that Board with respect to the regulation of gas pipelines.

2.5 Quality Tests

Company shall establish reasonable methods and procedures, including instrumentation, for making tests to determine whether gas tendered by Shipper to Company for transportation or delivered by Company to Shipper, meets the specifications set forth in this section 2.

3. MEASUREMENT AND MEASURING EQUIPMENT

Subject to section 4 hereof Company shall cause to be furnished, installed, maintained and operated at each Receipt and Delivery Point all equipment, devices and material necessary to determine gas volume, pressure, temperature, gross heating value, quality, specific gravity and super-compressibility. Company or Company's agent shall be responsible for the aforesaid measurements and measuring equipment, and Company and Shipper shall in conjunction with affected parties establish necessary metering, dispatch and operating procedures to provide information required by Company, Shipper or such affected parties. The following shall apply to measuring equipment measuring gas tendered by Shipper to Company for transportation, or delivered by Company to Shipper unless otherwise agreed upon.

3.1 Compliance with Regulations

All measuring equipment, devices and material required shall be compatible with the quantities to be metered at the particular point, and shall be of a type approved for their intended use under the provisions of the ~~GIA Gas Inspection Act being Chapter E-4 of the Revised Statutes of Canada, 1985 or as amended~~ (hereinafter referred to as "GIA"), where such approvals are applicable.

3.2 Check Measuring Equipment

At each Shipper's Receipt Point, and Delivery Point, Shipper, or Shippers affected, at its or their own expense, may cause to be furnished, installed, maintained and operated check measuring equipment, provided that such equipment does not interfere with the

operations of the measuring equipment installed or caused to be installed by Company and the transportation of gas hereunder.

3.3 Calibration

The accuracy of Company's measuring equipment shall be verified at such intervals as may be appropriate for such equipment. Advance notice of the time and nature of each test shall be given to allow Shipper a reasonable amount of time to arrange for a representative to observe the test and any adjustments resulting from such tests. If, after notice, Shipper fails to have a representative present, the results of the test shall nevertheless be considered accurate until the next test.

3.4 Correction

If, as a result of any such tests any of the measuring equipment is found to be out of service, or registering inaccurately with the result that a significant measurement error has occurred, such equipment shall be adjusted as soon as practicable to read as accurately as possible and the previous readings of such equipment shall be adjusted to correct for such significant error for a period definitely known or agreed upon, or if not known or agreed upon, for a period of 1/2 of the elapsed time since the last test. The quantity of gas delivered during such period shall be determined by Company using one of the following four methods which in the opinion of Company will provide the best results:

- (a) By using the data recorded by any check measuring equipment if installed and accurately registering; or
- (b) By correcting the error if ascertainable by calibration test or mathematical calculation; or
- (c) By estimating the quantity delivered based upon deliveries under similar conditions during a period when the equipment was registering accurately; or

- (d) By calculation of the balance between Company's receipts and deliveries over the period.

3.5 Expense of Special Tests

If Shipper requests a special test of the accuracy of any measuring equipment and upon testing the equipment the inaccuracy of the equipment is found to be less than 2%, Shipper shall bear the expense of the special test.

3.6 Inspection of Equipment and Records

Shipper or Shipper's agent shall have the right to inspect measuring equipment installed or furnished by Company and measurement or test data of Company at all times during normal business hours, but the reading, calibration and adjustment of such equipment shall be done only by Company or Company's agent.

3.7 Unit of Measurement

The unit of volume for purposes of measurement shall be 10^3m^3 . The unit of quantity for purposes of measurement shall be GJ.

3.8 Applicable Procedures

All measurements, calculations, and procedures used in determining the quantity delivered at any point shall be in accordance with GIA and all applicable regulations issued pursuant thereto. Provided, however, that correction for deviations from ideal gas laws shall be determined from data contained in Report No. 8 as published by the American Gas Association, or the latest revision thereof acceptable to Company.

3.9 Atmospheric Pressure

For the purposes of measurement, the atmospheric pressure, at any Receipt Point or Delivery Point, shall be established by a recognized formula applied to the nearest 0.1 kPa increment and deemed to be a constant for that point.

3.10 Gas Characteristics

The gas characteristics, including gross heating value, specific gravity, and nitrogen and carbon dioxide content, of the gas tendered by Shipper to Company for transportation or delivered by Company at the Delivery Point shall be determined, where applicable, by continuous recording equipment, approved for this use under the provisions of the GIA, or by standard laboratory equipment where a continuous sampler or spot sampler is used or spot samples are taken.

The gas characteristics used in computing gas measurement, depending upon the method utilized, shall be:

- (a) The actual “real time” value determined when continuous analyzing equipment supplies live data of the gas characteristic to the real time measurement computer; or
- (b) The arithmetical average recorded each day or part thereof if continuous recording equipment is used; or
- (c) Where sampling is utilized, determinations available from analyses of such samples.

3.11 Access to and Exchange of Metering Data

Company and Shipper shall exchange, upon request of either party, copies of all measuring and testing data and information as soon as practicable for any such requests.

3.12 Preservation of Measurement Records

Company and Shipper shall preserve all original test data and other similar records in such party’s possession for a period of at least six years or such lesser period as may be compatible with record retention rules of any governmental agencies having jurisdiction thereover.

3.13 Low Intervention Trade Transaction Level

If, pursuant to the GIA and G-14, Company has received from MC, conditional permission for the use of gas metering equipment without verification and sealing, at the Low Intervention Trade Transaction level, then the following shall apply:

- (a) The Low Intervention Trade Transaction shall be subject to the provisions and conditions listed in G-14, as published on MC's website (or any replacement thereof);
- (b) Shipper agrees that the gas metering equipment has been initially calibrated and will be periodically recalibrated (and reprogrammed where necessary) in accordance with a process and procedure acceptable to Shipper;
- (c) Any measurement disputes arising between Company and Shipper shall be resolved in accordance with the provisions of subsection 3.4 of these General Terms and Conditions;
- (d) Company and Shipper acknowledge and agree that the conditional permission granted by MC may restrict MC's ability to successfully conclude a measurement dispute investigation, if MC involvement has been requested; and
- (e) Company and Shipper agree to the implementation of the Low Intervention Trade Transaction in accordance with G-14 and either Company or Shipper has the right to request a revocation of the conditional permission for the Low Intervention Trade Transaction in accordance with G-14.

4. NON-COMPANY EQUIPMENT

All non-Company measuring equipment, devices and material required shall be compatible with the quantities to be metered at the particular point, and shall be of a type approved for their intended use under the provisions of GIA where such approvals are applicable.

APPENDIX A
to the Service Agreement, Firm Transportation Service
Dated _____ Between

Foothills Pipe Lines Ltd.

AND

_____ **(Shipper)**

- 1. Receipt Point: _____
- 2. Delivery Point: _____
- 3. Shipper's Haul Distance _____ Km
- 4. Applicable Company Zone _____
- 5. Maximum Day Delivery Quantity (MDDQ) _____ GJ/d
- 6. Service Commencement Date _____
- 7. Service Termination Date _____
- 8. Surcharge Amount: _____
- 9. Appendix A Effective Date _____

Shipper
~~Limited~~ Ltd.

~~TransCanada~~ Foothills Pipe Lines

(signature)

(signature)

(name/title)

(name/title)

(signature)

(signature)

(name/title)

(name/title)

APPENDIX A
to the Service Agreement, Interruptible Transportation Service
Dated _____ Between

Foothills Pipe Lines Ltd.

AND

(Shipper)

1. Receipt Point: _____
2. Delivery Point: _____
3. Shipper's Haul Distance _____ Km
4. Applicable Company Zone _____
5. Service Commencement Date _____
6. Service Termination upon 60 days prior written notice of either party.

Shipper
~~Limited~~ Ltd.

~~TransCanada~~ Foothills Pipe Lines

(signature)

(signature)

(name/title)

(name/title)

(signature)

(signature)

(name/title)

(name/title)

APPENDIX A
to the Service Agreement, Small General Service
Dated _____ Between

Foothills Pipe Lines Ltd.
AND
_____**(Shipper)**

- 1. Receipt Point: _____
- 2. Delivery Point: _____
- 3. Shipper's Haul Distance _____ Km
- 4. Applicable Company Zone _____
- 5. Maximum Day Delivery Quantity (MDDQ) _____ GJ/d
- 6. Service Commencement Date _____
- 7. Appendix A Effective Date _____

Shipper
~~Limited~~Ltd.

~~TransCanada~~ Foothills Pipe Lines

(signature)

(signature)

(name/title)

(name/title)

(signature)

(signature)

(name/title)

(name/title)