

# Orr&Reno

**Douglas L. Patch**

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Admitted in NH and MA

June 6, 2014

**Via Email**

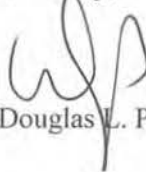
Barry Needleman, Esquire  
McLane, Graf, Raulerson & Middleton Professional Association  
11 South Main Street, Suite 500  
Concord, New Hampshire 03301

***Re: DE 11-250, Public Service Company of New Hampshire, Investigation of Scrubber  
Costs and Cost Recovery –Supplemental Responses PSNH Data Requests***

Dear Barry:

Attached are the supplemental responses of TransCanada Power Marketing and TransCanada Hydro Northeast Inc., intervenors in this docket, to Public Service Company of New Hampshire's data requests 34a, 52, 74b and 75c. Also enclosed is a copy of the letter that we are filing with the Commission today concerning these responses.

Sincerely,



Douglas L. Patch

Service list in DE 11-250

DLP/lbr  
1160946\_1

**Question:**

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a. As enumerated by the Commission in Order No. 25,663, at 7: "TransCanada must produce fuel price forecasts for natural gas and coal (not oil), that were produced by or were in the possession of TransCanada affiliates during the period January 1, 2005, through December 31, 2008, and that were long term forecasts that included prices for 2012 or beyond."

**Answer:**

a. The Companies [which has been previously defined as "TransCanada Power Marketing Ltd. and TransCanada Hydro Northeast Inc.", the intervenors in this docket] previously objected to this request. Notwithstanding the objection and without waiving the same, as indicated in the Motion for Reconsideration and/or Clarification of Order No. 25,663 dated May 19, 2014 the Companies contacted two vendors that provided forecasts to the Companies in this time frame, Ventyx and ESAI (Energy Security Analysis, Inc.). Attached are forecasts the Companies had in their possession during the time period. These vendors have authorized the Companies to provide them in this case. A letter from Ventyx is attached indicating the extent of its authorization. ESAI indicated that while it would permit disclosure of the gas price forecasts it did not agree to the release of the analysis sections of the reports because they contain proprietary information on the methods and practices behind the forecasts. The ESAI report has been redacted accordingly. In addition, in a letter to the Commission dated June 6, 2014 the Companies have explained in further detail the extent of its response to this question.

Provided by: Michael Hachey

Ventyx, an ABB Company  
400 Perimeter Center Terrace  
Suite 500  
Atlanta, GA 30346

(t) 1.678.830.1117  
www.ventyx.com

June 5, 2014

Mike Hachey  
TransCanada Power  
110 Turnpike Rd., Suite 300  
Westborough, MA 01581

Dear Mr. Hachey,

This letter serves as formal notice that Ventyx Inc. as successor in interest to Global Energy Decisions ("Ventyx") has approved your written request to disclose the natural gas and coal fuel forecasts contained in Appendix C to The Electricity & Fuel Price Outlook - Northeast / Spring 2006 report (the "Forecasts") in response to a discovery request in New Hampshire PUC docket DE 11-250, Investigation of Scrubber Costs and Cost Recovery (the "Docket"). The Forecasts were received by TransCanada Corporation and its affiliates ("TransCanada") under its subscription with Ventyx.

TransCanada is hereby authorized to provide the Forecasts in connection with the Docket. Ventyx acknowledges that the contents of the Forecasts may be discussed and referenced in the Docket hearings, pleadings and related proceedings, which are open to the public. The Forecasts may be disclosed as long as any information from Ventyx includes the following Ventyx disclaimer language:

*The information contained in the attached forecasts is provided on an as-is basis without warranty.*

Best Regards,

  
Duane Sheffield  
Director, Advisors

*Ventyx Disclaimer: The information contained in the attached forecasts is provided on an as-is basis without warranty.*

# Appendix C Fuel Forecasts

Table C-1  
Henry Hub Natural Gas Prices  
Constant 2006 \$/MMBtu

| Year | Jan   | Feb   | Mar   | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Annual Average |
|------|-------|-------|-------|------|------|------|------|------|------|------|------|------|----------------|
| 2006 | 8.86  | 8.88  | 7.14  | 6.90 | 7.06 | 7.20 | 7.33 | 7.42 | 7.48 | 7.57 | 8.62 | 9.61 | 7.84           |
| 2007 | 10.26 | 10.24 | 10.03 | 8.29 | 8.10 | 8.14 | 8.19 | 8.24 | 8.24 | 8.30 | 8.88 | 9.40 | 8.86           |
| 2008 | 9.79  | 9.77  | 9.58  | 7.36 | 6.93 | 6.71 | 6.52 | 6.34 | 6.19 | 6.11 | 6.29 | 6.48 | 7.34           |
| 2009 | 6.03  | 5.67  | 5.29  | 4.58 | 4.37 | 4.26 | 4.19 | 4.18 | 4.21 | 4.30 | 4.46 | 4.67 | 4.68           |
| 2010 | 4.98  | 4.73  | 4.53  | 4.40 | 4.32 | 4.29 | 4.32 | 4.39 | 4.52 | 4.69 | 4.92 | 5.20 | 4.61           |
| 2011 | 4.97  | 4.73  | 4.55  | 4.42 | 4.35 | 4.32 | 4.34 | 4.42 | 4.55 | 4.72 | 4.95 | 5.23 | 4.63           |
| 2012 | 4.81  | 4.59  | 4.41  | 4.29 | 4.21 | 4.18 | 4.21 | 4.28 | 4.40 | 4.58 | 4.80 | 5.07 | 4.49           |
| 2013 | 4.97  | 4.74  | 4.56  | 4.43 | 4.35 | 4.32 | 4.35 | 4.42 | 4.55 | 4.73 | 4.95 | 5.23 | 4.63           |
| 2014 | 5.35  | 5.10  | 4.91  | 4.77 | 4.68 | 4.65 | 4.68 | 4.76 | 4.90 | 5.09 | 5.34 | 5.64 | 4.99           |
| 2015 | 4.94  | 4.71  | 4.53  | 4.40 | 4.32 | 4.29 | 4.32 | 4.39 | 4.52 | 4.69 | 4.92 | 5.20 | 4.60           |
| 2016 | 5.43  | 5.18  | 4.98  | 4.84 | 4.75 | 4.72 | 4.75 | 4.83 | 4.97 | 5.16 | 5.41 | 5.72 | 5.06           |
| 2017 | 5.25  | 5.00  | 4.81  | 4.68 | 4.59 | 4.57 | 4.59 | 4.67 | 4.80 | 4.99 | 5.23 | 5.53 | 4.89           |
| 2018 | 5.37  | 5.12  | 4.93  | 4.79 | 4.70 | 4.67 | 4.70 | 4.78 | 4.92 | 5.11 | 5.36 | 5.66 | 5.01           |
| 2019 | 5.23  | 4.99  | 4.80  | 4.66 | 4.58 | 4.55 | 4.58 | 4.66 | 4.79 | 4.98 | 5.22 | 5.51 | 4.88           |
| 2020 | 5.62  | 5.36  | 5.16  | 5.01 | 4.92 | 4.89 | 4.92 | 5.00 | 5.15 | 5.35 | 5.61 | 5.92 | 5.24           |
| 2021 | 5.74  | 5.48  | 5.27  | 5.12 | 5.03 | 5.00 | 5.03 | 5.11 | 5.26 | 5.46 | 5.73 | 6.05 | 5.36           |
| 2022 | 5.87  | 5.59  | 5.38  | 5.23 | 5.14 | 5.10 | 5.13 | 5.22 | 5.37 | 5.58 | 5.85 | 6.18 | 5.47           |
| 2023 | 5.99  | 5.71  | 5.49  | 5.34 | 5.24 | 5.21 | 5.24 | 5.33 | 5.48 | 5.70 | 5.97 | 6.31 | 5.58           |
| 2024 | 6.02  | 5.74  | 5.53  | 5.37 | 5.27 | 5.24 | 5.27 | 5.36 | 5.51 | 5.73 | 6.01 | 6.35 | 5.62           |
| 2025 | 6.12  | 5.84  | 5.62  | 5.46 | 5.36 | 5.33 | 5.36 | 5.45 | 5.61 | 5.83 | 6.11 | 6.45 | 5.71           |
| 2026 | 6.23  | 5.94  | 5.71  | 5.55 | 5.45 | 5.42 | 5.45 | 5.54 | 5.70 | 5.92 | 6.21 | 6.56 | 5.81           |
| 2027 | 6.33  | 6.03  | 5.80  | 5.64 | 5.54 | 5.51 | 5.54 | 5.63 | 5.79 | 6.02 | 6.31 | 6.67 | 5.90           |
| 2028 | 6.43  | 6.13  | 5.90  | 5.73 | 5.63 | 5.60 | 5.63 | 5.73 | 5.89 | 6.12 | 6.42 | 6.78 | 6.00           |
| 2029 | 6.54  | 6.24  | 6.00  | 5.83 | 5.73 | 5.69 | 5.72 | 5.82 | 5.99 | 6.22 | 6.52 | 6.89 | 6.10           |
| 2030 | 6.71  | 6.30  | 6.06  | 5.89 | 5.79 | 5.75 | 5.78 | 5.88 | 6.05 | 6.28 | 6.58 | 6.95 | 6.17           |



Table C-2  
**MAAC East Natural Gas Prices**  
 Constant 2006 \$/MMBtu

| Year | Jan   | Feb   | Mar   | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec   | Annual Average |
|------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|----------------|
| 2006 | 13.24 | 10.78 | 8.02  | 7.55 | 7.62 | 7.80 | 8.10 | 8.19 | 8.08 | 8.22 | 9.62 | 11.06 | 9.02           |
| 2007 | 15.76 | 15.09 | 11.63 | 9.05 | 8.86 | 8.90 | 8.95 | 9.00 | 9.00 | 9.06 | 9.89 | 10.87 | 10.51          |
| 2008 | 12.71 | 13.47 | 11.20 | 8.12 | 7.68 | 7.43 | 7.22 | 7.01 | 6.84 | 6.75 | 8.00 | 8.15  | 8.72           |
| 2009 | 8.06  | 7.53  | 6.98  | 5.31 | 5.01 | 4.81 | 4.71 | 4.65 | 4.66 | 4.75 | 5.27 | 5.50  | 5.60           |
| 2010 | 6.79  | 6.20  | 5.67  | 5.25 | 4.96 | 4.78 | 4.70 | 4.71 | 4.83 | 5.03 | 5.34 | 5.75  | 5.33           |
| 2011 | 6.77  | 6.17  | 5.69  | 5.31 | 5.03 | 4.84 | 4.75 | 4.77 | 4.89 | 5.10 | 5.41 | 5.83  | 5.38           |
| 2012 | 6.60  | 6.03  | 5.56  | 5.19 | 4.90 | 4.72 | 4.64 | 4.66 | 4.77 | 4.98 | 5.29 | 5.69  | 5.25           |
| 2013 | 6.82  | 6.24  | 5.75  | 5.36 | 5.07 | 4.88 | 4.80 | 4.81 | 4.93 | 5.15 | 5.46 | 5.88  | 5.43           |
| 2014 | 7.37  | 6.74  | 6.21  | 5.79 | 5.48 | 5.28 | 5.19 | 5.20 | 5.33 | 5.56 | 5.91 | 6.36  | 5.87           |
| 2015 | 6.76  | 6.18  | 5.70  | 5.31 | 5.02 | 4.84 | 4.76 | 4.77 | 4.89 | 5.09 | 5.41 | 5.83  | 5.38           |
| 2016 | 7.44  | 6.80  | 6.26  | 5.84 | 5.52 | 5.32 | 5.23 | 5.25 | 5.37 | 5.60 | 5.95 | 6.41  | 5.92           |
| 2017 | 7.26  | 6.62  | 6.11  | 5.70 | 5.39 | 5.20 | 5.10 | 5.12 | 5.24 | 5.47 | 5.80 | 6.25  | 5.77           |
| 2018 | 7.42  | 6.78  | 6.25  | 5.83 | 5.51 | 5.31 | 5.22 | 5.23 | 5.36 | 5.60 | 5.94 | 6.40  | 5.90           |
| 2019 | 7.25  | 6.63  | 6.11  | 5.69 | 5.39 | 5.19 | 5.11 | 5.12 | 5.24 | 5.47 | 5.81 | 6.25  | 5.77           |
| 2020 | 7.80  | 7.12  | 6.57  | 6.12 | 5.79 | 5.58 | 5.49 | 5.50 | 5.64 | 5.88 | 6.25 | 6.72  | 6.21           |
| 2021 | 7.93  | 7.25  | 6.68  | 6.23 | 5.90 | 5.68 | 5.58 | 5.59 | 5.73 | 5.98 | 6.35 | 6.83  | 6.31           |
| 2022 | 8.07  | 7.37  | 6.79  | 6.34 | 6.00 | 5.77 | 5.67 | 5.69 | 5.83 | 6.08 | 6.46 | 6.95  | 6.42           |
| 2023 | 8.20  | 7.49  | 6.90  | 6.44 | 6.09 | 5.87 | 5.77 | 5.78 | 5.92 | 6.19 | 6.56 | 7.07  | 6.52           |
| 2024 | 8.37  | 7.65  | 7.06  | 6.58 | 6.22 | 5.99 | 5.89 | 5.90 | 6.04 | 6.31 | 6.70 | 7.22  | 6.66           |
| 2025 | 8.51  | 7.78  | 7.17  | 6.68 | 6.32 | 6.09 | 5.98 | 6.00 | 6.15 | 6.42 | 6.81 | 7.33  | 6.77           |
| 2026 | 8.65  | 7.91  | 7.28  | 6.79 | 6.43 | 6.19 | 6.08 | 6.10 | 6.25 | 6.52 | 6.92 | 7.45  | 6.88           |
| 2027 | 8.79  | 8.03  | 7.40  | 6.90 | 6.53 | 6.29 | 6.18 | 6.20 | 6.34 | 6.63 | 7.03 | 7.58  | 6.99           |
| 2028 | 8.93  | 8.16  | 7.52  | 7.01 | 6.64 | 6.40 | 6.28 | 6.30 | 6.45 | 6.74 | 7.16 | 7.70  | 7.11           |
| 2029 | 9.08  | 8.30  | 7.65  | 7.13 | 6.75 | 6.50 | 6.38 | 6.40 | 6.56 | 6.84 | 7.27 | 7.82  | 7.22           |
| 2030 | 9.14  | 8.36  | 7.71  | 7.19 | 6.81 | 6.56 | 6.44 | 6.46 | 6.62 | 6.90 | 7.33 | 7.88  | 7.28           |

Table C-3  
**MAAC West Natural Gas Prices**  
 Constant 2006 \$/MMBtu

| Year | Jan   | Feb   | Mar   | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec   | Annual Average |
|------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|----------------|
| 2006 | 9.73  | 9.47  | 7.79  | 7.49 | 7.60 | 7.73 | 7.85 | 7.94 | 8.00 | 8.09 | 9.27 | 10.26 | 8.44           |
| 2007 | 10.91 | 10.89 | 10.68 | 8.85 | 8.86 | 8.70 | 8.75 | 8.80 | 8.80 | 8.86 | 9.55 | 10.07 | 9.46           |
| 2008 | 10.46 | 10.44 | 10.25 | 7.85 | 7.41 | 7.19 | 7.00 | 6.81 | 6.66 | 6.58 | 6.84 | 7.03  | 7.88           |
| 2009 | 6.62  | 6.25  | 5.86  | 5.07 | 4.86 | 4.74 | 4.66 | 4.65 | 4.68 | 4.78 | 4.97 | 5.19  | 5.19           |
| 2010 | 5.50  | 5.23  | 5.01  | 4.87 | 4.78 | 4.75 | 4.78 | 4.86 | 5.00 | 5.18 | 5.42 | 5.71  | 5.09           |
| 2011 | 5.49  | 5.23  | 5.04  | 4.91 | 4.83 | 4.80 | 4.82 | 4.90 | 5.04 | 5.22 | 5.47 | 5.76  | 5.13           |
| 2012 | 5.33  | 5.10  | 4.90  | 4.78 | 4.69 | 4.66 | 4.69 | 4.77 | 4.89 | 5.09 | 5.32 | 5.61  | 4.99           |
| 2013 | 5.50  | 5.26  | 5.07  | 4.93 | 4.84 | 4.81 | 4.84 | 4.92 | 5.06 | 5.25 | 5.48 | 5.78  | 5.15           |
| 2014 | 5.82  | 5.56  | 5.36  | 5.21 | 5.12 | 5.09 | 5.12 | 5.20 | 5.35 | 5.55 | 5.81 | 6.12  | 5.44           |
| 2015 | 5.40  | 5.15  | 4.97  | 4.83 | 4.75 | 4.72 | 4.75 | 4.82 | 4.96 | 5.13 | 5.38 | 5.67  | 5.04           |
| 2016 | 5.93  | 5.67  | 5.46  | 5.31 | 5.22 | 5.18 | 5.22 | 5.30 | 5.45 | 5.65 | 5.91 | 6.24  | 5.55           |
| 2017 | 5.79  | 5.53  | 5.33  | 5.19 | 5.09 | 5.07 | 5.09 | 5.18 | 5.32 | 5.52 | 5.77 | 6.09  | 5.41           |
| 2018 | 5.82  | 5.56  | 5.36  | 5.22 | 5.12 | 5.09 | 5.12 | 5.21 | 5.35 | 5.55 | 5.81 | 6.12  | 5.44           |
| 2019 | 5.73  | 5.47  | 5.27  | 5.13 | 5.04 | 5.01 | 5.04 | 5.13 | 5.26 | 5.46 | 5.72 | 6.02  | 5.36           |
| 2020 | 6.17  | 5.90  | 5.69  | 5.53 | 5.43 | 5.40 | 5.43 | 5.52 | 5.68 | 5.89 | 6.16 | 6.49  | 5.77           |
| 2021 | 6.31  | 6.04  | 5.81  | 5.66 | 5.56 | 5.53 | 5.56 | 5.64 | 5.80 | 6.02 | 6.30 | 6.64  | 5.91           |
| 2022 | 6.46  | 6.17  | 5.94  | 5.78 | 5.69 | 5.64 | 5.68 | 5.77 | 5.93 | 6.15 | 6.44 | 6.79  | 6.04           |
| 2023 | 6.60  | 6.30  | 6.07  | 5.91 | 5.80 | 5.77 | 5.80 | 5.90 | 6.06 | 6.29 | 6.58 | 6.94  | 6.17           |
| 2024 | 6.63  | 6.33  | 6.11  | 5.94 | 5.83 | 5.80 | 5.83 | 5.93 | 6.09 | 6.32 | 6.62 | 6.98  | 6.20           |
| 2025 | 6.74  | 6.44  | 6.20  | 6.03 | 5.93 | 5.90 | 5.93 | 6.02 | 6.19 | 6.43 | 6.73 | 7.09  | 6.30           |
| 2026 | 6.85  | 6.55  | 6.30  | 6.13 | 6.02 | 5.99 | 6.02 | 6.12 | 6.29 | 6.52 | 6.83 | 7.21  | 6.40           |
| 2027 | 6.96  | 6.64  | 6.40  | 6.23 | 6.12 | 6.09 | 6.12 | 6.22 | 6.39 | 6.63 | 6.94 | 7.32  | 6.51           |
| 2028 | 7.07  | 6.75  | 6.50  | 6.32 | 6.22 | 6.18 | 6.22 | 6.32 | 6.49 | 6.74 | 7.06 | 7.44  | 6.61           |
| 2029 | 7.18  | 6.86  | 6.61  | 6.43 | 6.32 | 6.28 | 6.31 | 6.42 | 6.60 | 6.84 | 7.16 | 7.56  | 6.71           |
| 2030 | 7.25  | 6.92  | 6.67  | 6.49 | 6.38 | 6.34 | 6.37 | 6.48 | 6.66 | 6.90 | 7.22 | 7.62  | 6.78           |



Table C-4  
Maritimes Natural Gas Prices  
Constant 2006 \$/MMBtu

| Year | Jan   | Feb   | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Annual Average |
|------|-------|-------|------|------|------|------|------|------|------|------|------|------|----------------|
| 2006 | 8.27  | 8.77  | 7.65 | 7.09 | 7.19 | 7.32 | 7.44 | 7.53 | 7.59 | 7.69 | 8.57 | 9.56 | 7.89           |
| 2007 | 10.15 | 10.13 | 9.92 | 8.46 | 8.27 | 8.31 | 8.36 | 8.41 | 8.41 | 8.47 | 9.02 | 9.54 | 8.95           |
| 2008 | 9.90  | 9.88  | 9.69 | 7.74 | 7.33 | 7.13 | 6.95 | 6.77 | 6.62 | 6.53 | 6.79 | 6.94 | 7.69           |
| 2009 | 6.64  | 6.31  | 5.95 | 5.24 | 5.04 | 4.93 | 4.81 | 4.78 | 4.78 | 4.83 | 4.96 | 5.09 | 5.28           |
| 2010 | 5.73  | 5.53  | 5.36 | 5.25 | 5.17 | 5.12 | 5.11 | 5.13 | 5.19 | 5.28 | 5.41 | 5.58 | 5.32           |
| 2011 | 5.79  | 5.59  | 5.43 | 5.31 | 5.23 | 5.18 | 5.16 | 5.19 | 5.25 | 5.34 | 5.48 | 5.64 | 5.38           |
| 2012 | 5.64  | 5.46  | 5.30 | 5.18 | 5.10 | 5.05 | 5.04 | 5.06 | 5.12 | 5.22 | 5.34 | 5.51 | 5.25           |
| 2013 | 5.83  | 5.64  | 5.48 | 5.36 | 5.27 | 5.22 | 5.21 | 5.23 | 5.29 | 5.39 | 5.51 | 5.69 | 5.43           |
| 2014 | 6.29  | 6.08  | 5.91 | 5.78 | 5.68 | 5.62 | 5.61 | 5.64 | 5.71 | 5.81 | 5.96 | 6.14 | 5.85           |
| 2015 | 5.78  | 5.59  | 5.43 | 5.31 | 5.22 | 5.17 | 5.16 | 5.18 | 5.24 | 5.33 | 5.47 | 5.64 | 5.38           |
| 2016 | 6.34  | 6.13  | 5.95 | 5.82 | 5.72 | 5.67 | 5.66 | 5.68 | 5.75 | 5.85 | 6.00 | 6.18 | 5.90           |
| 2017 | 6.19  | 5.97  | 5.81 | 5.68 | 5.58 | 5.54 | 5.52 | 5.54 | 5.60 | 5.71 | 5.85 | 6.04 | 5.75           |
| 2018 | 6.31  | 6.10  | 5.93 | 5.80 | 5.70 | 5.65 | 5.64 | 5.66 | 5.73 | 5.83 | 5.98 | 6.16 | 5.87           |
| 2019 | 6.18  | 5.97  | 5.80 | 5.67 | 5.58 | 5.52 | 5.51 | 5.54 | 5.60 | 5.71 | 5.85 | 6.02 | 5.75           |
| 2020 | 6.63  | 6.41  | 6.23 | 6.08 | 5.98 | 5.93 | 5.92 | 5.94 | 6.01 | 6.12 | 6.28 | 6.47 | 6.17           |
| 2021 | 6.79  | 6.57  | 6.38 | 6.23 | 6.13 | 6.08 | 6.06 | 6.08 | 6.16 | 6.27 | 6.43 | 6.62 | 6.32           |
| 2022 | 6.96  | 6.72  | 6.53 | 6.38 | 6.28 | 6.21 | 6.20 | 6.23 | 6.30 | 6.42 | 6.58 | 6.78 | 6.47           |
| 2023 | 7.12  | 6.88  | 6.68 | 6.53 | 6.42 | 6.36 | 6.35 | 6.37 | 6.45 | 6.57 | 6.73 | 6.94 | 6.62           |
| 2024 | 7.16  | 6.92  | 6.73 | 6.57 | 6.46 | 6.40 | 6.39 | 6.41 | 6.49 | 6.61 | 6.78 | 6.99 | 6.66           |
| 2025 | 7.27  | 7.03  | 6.83 | 6.68 | 6.57 | 6.51 | 6.49 | 6.52 | 6.60 | 6.72 | 6.89 | 7.10 | 6.77           |
| 2026 | 7.40  | 7.15  | 6.94 | 6.79 | 6.67 | 6.61 | 6.60 | 6.62 | 6.70 | 6.82 | 7.00 | 7.21 | 6.88           |
| 2027 | 7.51  | 7.25  | 7.05 | 6.89 | 6.78 | 6.72 | 6.70 | 6.73 | 6.80 | 6.93 | 7.11 | 7.33 | 6.98           |
| 2028 | 7.63  | 7.37  | 7.16 | 7.00 | 6.89 | 6.83 | 6.81 | 6.84 | 6.92 | 7.05 | 7.23 | 7.45 | 7.10           |
| 2029 | 7.76  | 7.50  | 7.28 | 7.12 | 7.00 | 6.93 | 6.91 | 6.95 | 7.03 | 7.16 | 7.34 | 7.57 | 7.21           |
| 2030 | 7.82  | 7.56  | 7.34 | 7.18 | 7.06 | 6.99 | 6.97 | 7.01 | 7.09 | 7.22 | 7.40 | 7.63 | 7.27           |



Table C-5  
**Nepool Natural Gas Prices**  
 Constant 2006 \$/MMBtu

| Year | Jan   | Feb   | Mar   | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec   | Annual Average |
|------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|----------------|
| 2006 | 9.51  | 9.53  | 7.79  | 7.55 | 7.71 | 7.85 | 7.98 | 8.07 | 8.13 | 8.22 | 9.27 | 10.26 | 8.49           |
| 2007 | 10.88 | 10.86 | 10.65 | 8.91 | 8.72 | 8.76 | 8.81 | 8.86 | 8.86 | 8.92 | 9.50 | 10.02 | 9.48           |
| 2008 | 10.38 | 10.36 | 10.17 | 7.96 | 7.52 | 7.29 | 7.08 | 6.88 | 6.71 | 6.62 | 6.81 | 7.02  | 7.90           |
| 2009 | 6.94  | 6.50  | 6.05  | 5.26 | 4.97 | 4.80 | 4.67 | 4.62 | 4.63 | 4.72 | 4.90 | 5.16  | 5.27           |
| 2010 | 6.33  | 5.88  | 5.48  | 5.17 | 4.93 | 4.77 | 4.71 | 4.73 | 4.84 | 5.02 | 5.30 | 5.66  | 5.24           |
| 2011 | 6.47  | 5.96  | 5.55  | 5.22 | 4.99 | 4.83 | 4.76 | 4.79 | 4.90 | 5.08 | 5.36 | 5.73  | 5.30           |
| 2012 | 6.30  | 5.82  | 5.41  | 5.10 | 4.86 | 4.71 | 4.65 | 4.66 | 4.76 | 4.96 | 5.23 | 5.58  | 5.17           |
| 2013 | 6.51  | 6.01  | 5.60  | 5.27 | 5.02 | 4.87 | 4.80 | 4.82 | 4.93 | 5.12 | 5.40 | 5.76  | 5.34           |
| 2014 | 7.03  | 6.48  | 6.04  | 5.68 | 5.42 | 5.25 | 5.18 | 5.20 | 5.32 | 5.53 | 5.83 | 6.23  | 5.77           |
| 2015 | 6.46  | 5.96  | 5.55  | 5.22 | 4.98 | 4.82 | 4.76 | 4.78 | 4.89 | 5.07 | 5.35 | 5.72  | 5.30           |
| 2016 | 7.10  | 6.55  | 6.09  | 5.73 | 5.47 | 5.30 | 5.23 | 5.25 | 5.36 | 5.57 | 5.88 | 6.28  | 5.82           |
| 2017 | 6.94  | 6.39  | 5.95  | 5.61 | 5.34 | 5.19 | 5.11 | 5.13 | 5.24 | 5.45 | 5.75 | 6.14  | 5.69           |
| 2018 | 7.12  | 6.57  | 6.12  | 5.76 | 5.49 | 5.32 | 5.25 | 5.27 | 5.39 | 5.60 | 5.91 | 6.31  | 5.84           |
| 2019 | 6.95  | 6.41  | 5.97  | 5.61 | 5.36 | 5.19 | 5.12 | 5.14 | 5.25 | 5.47 | 5.76 | 6.15  | 5.70           |
| 2020 | 7.47  | 6.90  | 6.42  | 6.04 | 5.76 | 5.58 | 5.50 | 5.52 | 5.65 | 5.87 | 6.20 | 6.62  | 6.13           |
| 2021 | 7.67  | 7.08  | 6.59  | 6.20 | 5.91 | 5.73 | 5.65 | 5.67 | 5.80 | 6.02 | 6.36 | 6.79  | 6.29           |
| 2022 | 7.87  | 7.26  | 6.75  | 6.36 | 6.06 | 5.87 | 5.79 | 5.81 | 5.94 | 6.18 | 6.52 | 6.97  | 6.45           |
| 2023 | 8.07  | 7.44  | 6.92  | 6.51 | 6.21 | 6.02 | 5.93 | 5.96 | 6.09 | 6.34 | 6.68 | 7.14  | 6.61           |
| 2024 | 8.12  | 7.49  | 6.97  | 6.56 | 6.25 | 6.06 | 5.97 | 6.00 | 6.13 | 6.38 | 6.73 | 7.19  | 6.65           |
| 2025 | 8.25  | 7.61  | 7.08  | 6.66 | 6.35 | 6.16 | 6.07 | 6.09 | 6.23 | 6.48 | 6.84 | 7.30  | 6.76           |
| 2026 | 8.39  | 7.74  | 7.19  | 6.77 | 6.45 | 6.26 | 6.17 | 6.19 | 6.33 | 6.58 | 6.95 | 7.42  | 6.87           |
| 2027 | 8.52  | 7.85  | 7.31  | 6.88 | 6.56 | 6.36 | 6.27 | 6.29 | 6.43 | 6.69 | 7.06 | 7.54  | 6.98           |
| 2028 | 8.65  | 7.98  | 7.43  | 6.98 | 6.66 | 6.46 | 6.37 | 6.39 | 6.53 | 6.79 | 7.17 | 7.67  | 7.09           |
| 2029 | 8.80  | 8.12  | 7.55  | 7.10 | 6.77 | 6.56 | 6.46 | 6.49 | 6.64 | 6.90 | 7.28 | 7.79  | 7.21           |
| 2030 | 8.86  | 8.18  | 7.61  | 7.16 | 6.83 | 6.62 | 6.52 | 6.55 | 6.70 | 6.96 | 7.34 | 7.85  | 7.27           |

Table C-6  
**NY ABC Natural Gas Prices**  
 Constant 2006 \$/MMBtu

| Year | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Annual Average |
|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| 2006 | 7.58 | 8.20 | 7.10 | 6.70 | 6.86 | 7.00 | 7.14 | 7.23 | 7.29 | 7.24 | 7.93 | 8.92 | 7.43           |
| 2007 | 9.54 | 9.52 | 9.31 | 8.02 | 7.83 | 7.87 | 7.92 | 7.97 | 7.97 | 8.03 | 8.49 | 9.01 | 8.46           |
| 2008 | 9.40 | 9.38 | 9.19 | 7.32 | 6.92 | 6.73 | 6.56 | 6.39 | 6.25 | 6.17 | 6.27 | 6.44 | 7.25           |
| 2009 | 6.17 | 5.86 | 5.52 | 5.05 | 4.85 | 4.75 | 4.56 | 4.55 | 4.56 | 4.61 | 4.70 | 4.85 | 5.00           |
| 2010 | 5.50 | 5.32 | 5.18 | 5.10 | 5.01 | 4.96 | 4.95 | 4.97 | 5.03 | 5.12 | 5.25 | 5.41 | 5.15           |
| 2011 | 5.61 | 5.41 | 5.26 | 5.14 | 5.07 | 5.02 | 5.00 | 5.03 | 5.09 | 5.18 | 5.31 | 5.47 | 5.22           |
| 2012 | 5.45 | 5.27 | 5.12 | 5.01 | 4.92 | 4.87 | 4.87 | 4.89 | 4.94 | 5.04 | 5.16 | 5.32 | 5.07           |
| 2013 | 5.65 | 5.46 | 5.31 | 5.19 | 5.11 | 5.05 | 5.05 | 5.07 | 5.13 | 5.22 | 5.34 | 5.51 | 5.26           |
| 2014 | 6.12 | 5.91 | 5.75 | 5.62 | 5.52 | 5.47 | 5.46 | 5.48 | 5.55 | 5.65 | 5.80 | 5.97 | 5.69           |
| 2015 | 5.62 | 5.44 | 5.28 | 5.16 | 5.08 | 5.03 | 5.02 | 5.04 | 5.10 | 5.19 | 5.32 | 5.48 | 5.23           |
| 2016 | 6.18 | 5.97 | 5.80 | 5.67 | 5.57 | 5.52 | 5.51 | 5.53 | 5.60 | 5.70 | 5.84 | 6.03 | 5.74           |
| 2017 | 6.03 | 5.83 | 5.66 | 5.54 | 5.44 | 5.40 | 5.38 | 5.41 | 5.47 | 5.57 | 5.71 | 5.89 | 5.61           |
| 2018 | 6.17 | 5.96 | 5.80 | 5.67 | 5.57 | 5.51 | 5.51 | 5.53 | 5.60 | 5.70 | 5.84 | 6.02 | 5.74           |
| 2019 | 6.04 | 5.84 | 5.68 | 5.55 | 5.46 | 5.41 | 5.40 | 5.42 | 5.48 | 5.59 | 5.72 | 5.90 | 5.62           |
| 2020 | 6.50 | 6.28 | 6.11 | 5.97 | 5.87 | 5.81 | 5.80 | 5.82 | 5.90 | 6.01 | 6.16 | 6.34 | 6.05           |
| 2021 | 6.67 | 6.45 | 6.26 | 6.12 | 6.02 | 5.97 | 5.95 | 5.97 | 6.05 | 6.15 | 6.31 | 6.50 | 6.20           |
| 2022 | 6.84 | 6.60 | 6.42 | 6.28 | 6.18 | 6.11 | 6.10 | 6.13 | 6.20 | 6.31 | 6.47 | 6.67 | 6.36           |
| 2023 | 7.01 | 6.77 | 6.57 | 6.43 | 6.32 | 6.26 | 6.25 | 6.28 | 6.35 | 6.47 | 6.63 | 6.83 | 6.51           |
| 2024 | 7.04 | 6.80 | 6.62 | 6.46 | 6.35 | 6.30 | 6.28 | 6.31 | 6.38 | 6.50 | 6.67 | 6.87 | 6.55           |
| 2025 | 7.15 | 6.91 | 6.72 | 6.57 | 6.46 | 6.40 | 6.38 | 6.41 | 6.49 | 6.61 | 6.77 | 6.98 | 6.65           |
| 2026 | 7.28 | 7.03 | 6.82 | 6.67 | 6.56 | 6.50 | 6.49 | 6.51 | 6.59 | 6.71 | 6.88 | 7.09 | 6.76           |
| 2027 | 7.39 | 7.13 | 6.93 | 6.78 | 6.67 | 6.61 | 6.59 | 6.62 | 6.69 | 6.82 | 6.99 | 7.21 | 6.87           |
| 2028 | 7.50 | 7.25 | 7.04 | 6.88 | 6.77 | 6.71 | 6.69 | 6.73 | 6.80 | 6.93 | 7.11 | 7.32 | 6.98           |
| 2029 | 7.63 | 7.37 | 7.16 | 7.00 | 6.89 | 6.82 | 6.80 | 6.83 | 6.91 | 7.04 | 7.21 | 7.44 | 7.09           |
| 2030 | 7.69 | 7.43 | 7.22 | 7.06 | 6.95 | 6.88 | 6.86 | 6.89 | 6.97 | 7.10 | 7.27 | 7.50 | 7.15           |



Table C-7  
 NY DEFG Natural Gas Prices  
 Constant 2006 \$/MMBtu

| Year | Jan   | Feb   | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Annual Average |
|------|-------|-------|------|------|------|------|------|------|------|------|------|------|----------------|
| 2006 | 8.27  | 8.77  | 7.65 | 7.09 | 7.19 | 7.32 | 7.44 | 7.53 | 7.59 | 7.69 | 8.57 | 9.56 | 7.89           |
| 2007 | 10.15 | 10.13 | 9.92 | 8.46 | 8.27 | 8.31 | 8.36 | 8.41 | 8.41 | 8.47 | 9.02 | 9.54 | 8.95           |
| 2008 | 9.90  | 9.88  | 9.69 | 7.74 | 7.33 | 7.13 | 6.95 | 6.77 | 6.82 | 6.53 | 6.79 | 6.94 | 7.69           |
| 2009 | 6.64  | 6.31  | 5.95 | 5.24 | 5.04 | 4.93 | 4.81 | 4.78 | 4.78 | 4.83 | 4.96 | 5.09 | 5.28           |
| 2010 | 5.73  | 5.53  | 5.36 | 5.25 | 5.17 | 5.12 | 5.11 | 5.13 | 5.19 | 5.28 | 5.41 | 5.58 | 5.32           |
| 2011 | 5.79  | 5.59  | 5.43 | 5.31 | 5.23 | 5.18 | 5.16 | 5.19 | 5.25 | 5.34 | 5.48 | 5.64 | 5.38           |
| 2012 | 5.64  | 5.46  | 5.30 | 5.18 | 5.10 | 5.05 | 5.04 | 5.06 | 5.12 | 5.22 | 5.34 | 5.51 | 5.25           |
| 2013 | 5.83  | 5.64  | 5.48 | 5.36 | 5.27 | 5.22 | 5.21 | 5.23 | 5.29 | 5.39 | 5.51 | 5.69 | 5.43           |
| 2014 | 6.29  | 6.08  | 5.91 | 5.78 | 5.68 | 5.62 | 5.61 | 5.64 | 5.71 | 5.81 | 5.96 | 6.14 | 5.85           |
| 2015 | 5.78  | 5.59  | 5.43 | 5.31 | 5.22 | 5.17 | 5.16 | 5.18 | 5.24 | 5.33 | 5.47 | 5.64 | 5.38           |
| 2016 | 6.34  | 6.13  | 5.95 | 5.82 | 5.72 | 5.67 | 5.66 | 5.68 | 5.75 | 5.85 | 6.00 | 6.18 | 5.90           |
| 2017 | 6.19  | 5.97  | 5.81 | 5.68 | 5.58 | 5.54 | 5.52 | 5.54 | 5.60 | 5.71 | 5.85 | 6.04 | 5.75           |
| 2018 | 6.31  | 6.10  | 5.93 | 5.80 | 5.70 | 5.65 | 5.64 | 5.66 | 5.73 | 5.83 | 5.98 | 6.16 | 5.87           |
| 2019 | 6.18  | 5.97  | 5.80 | 5.67 | 5.58 | 5.52 | 5.51 | 5.54 | 5.60 | 5.71 | 5.85 | 6.02 | 5.75           |
| 2020 | 6.63  | 6.41  | 6.23 | 6.08 | 5.98 | 5.93 | 5.92 | 5.94 | 6.01 | 6.12 | 6.28 | 6.47 | 6.17           |
| 2021 | 6.79  | 6.57  | 6.38 | 6.23 | 6.13 | 6.08 | 6.06 | 6.08 | 6.16 | 6.27 | 6.43 | 6.62 | 6.32           |
| 2022 | 6.96  | 6.72  | 6.53 | 6.38 | 6.28 | 6.21 | 6.20 | 6.23 | 6.30 | 6.42 | 6.58 | 6.78 | 6.47           |
| 2023 | 7.12  | 6.88  | 6.68 | 6.53 | 6.42 | 6.36 | 6.35 | 6.37 | 6.45 | 6.57 | 6.73 | 6.94 | 6.62           |
| 2024 | 7.16  | 6.92  | 6.73 | 6.57 | 6.46 | 6.40 | 6.39 | 6.41 | 6.49 | 6.61 | 6.78 | 6.99 | 6.66           |
| 2025 | 7.27  | 7.03  | 6.83 | 6.68 | 6.57 | 6.51 | 6.49 | 6.52 | 6.60 | 6.72 | 6.89 | 7.10 | 6.77           |
| 2026 | 7.40  | 7.15  | 6.94 | 6.79 | 6.67 | 6.61 | 6.60 | 6.62 | 6.70 | 6.82 | 7.00 | 7.21 | 6.88           |
| 2027 | 7.51  | 7.25  | 7.05 | 6.89 | 6.78 | 6.72 | 6.70 | 6.73 | 6.80 | 6.93 | 7.11 | 7.33 | 6.98           |
| 2028 | 7.63  | 7.37  | 7.16 | 7.00 | 6.89 | 6.83 | 6.81 | 6.84 | 6.92 | 7.05 | 7.23 | 7.45 | 7.10           |
| 2029 | 7.76  | 7.50  | 7.28 | 7.12 | 7.00 | 6.93 | 6.91 | 6.95 | 7.03 | 7.16 | 7.34 | 7.57 | 7.21           |
| 2030 | 7.82  | 7.56  | 7.34 | 7.18 | 7.06 | 6.99 | 6.97 | 7.01 | 7.09 | 7.22 | 7.40 | 7.63 | 7.27           |

Table C-8  
**NY HIJK Natural Gas Prices**  
 Constant 2006 \$/MMBtu

| Year | Jan   | Feb   | Mar   | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov   | Dec   | Annual Average |
|------|-------|-------|-------|------|------|------|------|------|------|------|-------|-------|----------------|
| 2006 | 13.36 | 10.90 | 8.14  | 7.67 | 7.74 | 7.92 | 8.22 | 8.31 | 8.20 | 8.34 | 9.74  | 11.18 | 9.14           |
| 2007 | 15.88 | 15.21 | 11.75 | 9.17 | 8.98 | 9.02 | 9.07 | 9.12 | 9.12 | 9.18 | 10.01 | 10.99 | 10.63          |
| 2008 | 12.83 | 13.59 | 11.32 | 8.24 | 7.80 | 7.55 | 7.34 | 7.13 | 6.96 | 6.87 | 8.12  | 8.27  | 8.84           |
| 2009 | 8.18  | 7.65  | 7.10  | 5.43 | 5.13 | 4.93 | 4.83 | 4.77 | 4.78 | 4.87 | 5.39  | 5.62  | 5.72           |
| 2010 | 6.91  | 6.32  | 5.79  | 5.37 | 5.08 | 4.90 | 4.82 | 4.83 | 4.95 | 5.15 | 5.46  | 5.87  | 5.45           |
| 2011 | 6.89  | 6.29  | 5.81  | 5.43 | 5.15 | 4.96 | 4.87 | 4.89 | 5.01 | 5.22 | 5.53  | 5.95  | 5.50           |
| 2012 | 6.72  | 6.15  | 5.68  | 5.31 | 5.02 | 4.84 | 4.76 | 4.78 | 4.89 | 5.10 | 5.41  | 5.81  | 5.37           |
| 2013 | 6.94  | 6.36  | 5.87  | 5.48 | 5.19 | 5.00 | 4.92 | 4.93 | 5.05 | 5.27 | 5.58  | 6.00  | 5.55           |
| 2014 | 7.49  | 6.86  | 6.33  | 5.91 | 5.60 | 5.40 | 5.31 | 5.32 | 5.45 | 5.68 | 6.03  | 6.48  | 5.99           |
| 2015 | 6.88  | 6.30  | 5.82  | 5.43 | 5.14 | 4.96 | 4.88 | 4.89 | 5.01 | 5.21 | 5.53  | 5.95  | 5.50           |
| 2016 | 7.56  | 6.92  | 6.38  | 5.96 | 5.64 | 5.44 | 5.35 | 5.37 | 5.49 | 5.72 | 6.07  | 6.53  | 6.04           |
| 2017 | 7.38  | 6.74  | 6.23  | 5.82 | 5.51 | 5.32 | 5.22 | 5.24 | 5.36 | 5.59 | 5.92  | 6.37  | 5.89           |
| 2018 | 7.54  | 6.90  | 6.37  | 5.95 | 5.63 | 5.43 | 5.34 | 5.35 | 5.48 | 5.72 | 6.06  | 6.52  | 6.02           |
| 2019 | 7.37  | 6.75  | 6.23  | 5.81 | 5.51 | 5.31 | 5.23 | 5.24 | 5.36 | 5.59 | 5.93  | 6.37  | 5.89           |
| 2020 | 7.92  | 7.24  | 6.69  | 6.24 | 5.91 | 5.70 | 5.61 | 5.62 | 5.76 | 6.00 | 6.37  | 6.84  | 6.33           |
| 2021 | 8.05  | 7.37  | 6.80  | 6.35 | 6.02 | 5.80 | 5.70 | 5.71 | 5.85 | 6.10 | 6.47  | 6.95  | 6.43           |
| 2022 | 8.19  | 7.49  | 6.91  | 6.46 | 6.12 | 5.89 | 5.79 | 5.81 | 5.95 | 6.20 | 6.58  | 7.07  | 6.54           |
| 2023 | 8.32  | 7.61  | 7.02  | 6.56 | 6.21 | 5.99 | 5.89 | 5.90 | 6.04 | 6.31 | 6.68  | 7.19  | 6.64           |
| 2024 | 8.49  | 7.77  | 7.18  | 6.70 | 6.34 | 6.11 | 6.01 | 6.02 | 6.16 | 6.43 | 6.82  | 7.34  | 6.78           |
| 2025 | 8.63  | 7.90  | 7.29  | 6.80 | 6.44 | 6.21 | 6.10 | 6.12 | 6.27 | 6.54 | 6.93  | 7.45  | 6.89           |
| 2026 | 8.77  | 8.03  | 7.40  | 6.91 | 6.55 | 6.31 | 6.20 | 6.22 | 6.37 | 6.64 | 7.04  | 7.57  | 7.00           |
| 2027 | 8.91  | 8.15  | 7.52  | 7.02 | 6.65 | 6.41 | 6.30 | 6.32 | 6.46 | 6.75 | 7.15  | 7.70  | 7.11           |
| 2028 | 9.05  | 8.28  | 7.64  | 7.13 | 6.76 | 6.52 | 6.40 | 6.42 | 6.57 | 6.86 | 7.28  | 7.82  | 7.23           |
| 2029 | 9.20  | 8.42  | 7.77  | 7.25 | 6.87 | 6.62 | 6.50 | 6.52 | 6.68 | 6.96 | 7.39  | 7.94  | 7.34           |
| 2030 | 9.26  | 8.48  | 7.83  | 7.31 | 6.93 | 6.68 | 6.56 | 6.58 | 6.74 | 7.02 | 7.45  | 8.00  | 7.40           |



Table C-9  
**Ontario Natural Gas Prices**  
 Constant 2006 \$/MMBtu

| Year | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  | Annual Average |
|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| 2006 | 7.64 | 8.26 | 7.16 | 6.76 | 6.92 | 7.06 | 7.20 | 7.29 | 7.35 | 7.30 | 7.99 | 8.98 | 7.49           |
| 2007 | 9.60 | 9.58 | 9.37 | 8.08 | 7.89 | 7.93 | 7.98 | 8.03 | 8.03 | 8.09 | 8.55 | 9.07 | 8.52           |
| 2008 | 9.46 | 9.44 | 9.25 | 7.38 | 6.98 | 6.79 | 6.62 | 6.45 | 6.31 | 6.23 | 6.33 | 6.50 | 7.31           |
| 2009 | 6.23 | 5.92 | 5.58 | 5.11 | 4.91 | 4.81 | 4.62 | 4.61 | 4.62 | 4.67 | 4.76 | 4.91 | 5.06           |
| 2010 | 5.56 | 5.38 | 5.24 | 5.16 | 5.07 | 5.02 | 5.01 | 5.03 | 5.09 | 5.18 | 5.31 | 5.47 | 5.21           |
| 2011 | 5.67 | 5.47 | 5.32 | 5.20 | 5.13 | 5.08 | 5.06 | 5.09 | 5.15 | 5.24 | 5.37 | 5.53 | 5.28           |
| 2012 | 5.51 | 5.33 | 5.18 | 5.07 | 4.98 | 4.93 | 4.93 | 4.95 | 5.00 | 5.10 | 5.22 | 5.38 | 5.13           |
| 2013 | 5.71 | 5.52 | 5.37 | 5.25 | 5.17 | 5.11 | 5.11 | 5.13 | 5.19 | 5.28 | 5.40 | 5.57 | 5.32           |
| 2014 | 6.18 | 5.97 | 5.81 | 5.68 | 5.58 | 5.53 | 5.52 | 5.54 | 5.61 | 5.71 | 5.86 | 6.03 | 5.75           |
| 2015 | 5.68 | 5.50 | 5.34 | 5.22 | 5.14 | 5.09 | 5.08 | 5.10 | 5.16 | 5.25 | 5.38 | 5.54 | 5.29           |
| 2016 | 6.24 | 6.03 | 5.86 | 5.73 | 5.63 | 5.58 | 5.57 | 5.59 | 5.66 | 5.76 | 5.90 | 6.09 | 5.80           |
| 2017 | 6.09 | 5.89 | 5.72 | 5.60 | 5.50 | 5.46 | 5.44 | 5.47 | 5.53 | 5.63 | 5.77 | 5.95 | 5.67           |
| 2018 | 6.23 | 6.02 | 5.86 | 5.73 | 5.63 | 5.57 | 5.57 | 5.59 | 5.66 | 5.76 | 5.90 | 6.08 | 5.80           |
| 2019 | 6.10 | 5.90 | 5.74 | 5.61 | 5.52 | 5.47 | 5.46 | 5.48 | 5.54 | 5.65 | 5.78 | 5.96 | 5.68           |
| 2020 | 6.56 | 6.34 | 6.17 | 6.03 | 5.93 | 5.87 | 5.86 | 5.88 | 5.96 | 6.07 | 6.22 | 6.40 | 6.11           |
| 2021 | 6.73 | 6.51 | 6.32 | 6.18 | 6.08 | 6.03 | 6.01 | 6.03 | 6.11 | 6.21 | 6.37 | 6.56 | 6.26           |
| 2022 | 6.90 | 6.66 | 6.48 | 6.34 | 6.24 | 6.17 | 6.16 | 6.19 | 6.26 | 6.37 | 6.53 | 6.73 | 6.42           |
| 2023 | 7.07 | 6.83 | 6.63 | 6.49 | 6.38 | 6.32 | 6.31 | 6.34 | 6.41 | 6.53 | 6.69 | 6.89 | 6.57           |
| 2024 | 7.10 | 6.86 | 6.68 | 6.52 | 6.41 | 6.36 | 6.34 | 6.37 | 6.44 | 6.56 | 6.73 | 6.93 | 6.61           |
| 2025 | 7.21 | 6.97 | 6.78 | 6.63 | 6.52 | 6.46 | 6.44 | 6.47 | 6.55 | 6.67 | 6.83 | 7.04 | 6.71           |
| 2026 | 7.34 | 7.09 | 6.88 | 6.73 | 6.62 | 6.56 | 6.55 | 6.57 | 6.65 | 6.77 | 6.94 | 7.15 | 6.82           |
| 2027 | 7.45 | 7.19 | 6.99 | 6.84 | 6.73 | 6.67 | 6.65 | 6.68 | 6.75 | 6.88 | 7.05 | 7.27 | 6.93           |
| 2028 | 7.56 | 7.31 | 7.10 | 6.94 | 6.83 | 6.77 | 6.75 | 6.79 | 6.86 | 6.99 | 7.17 | 7.38 | 7.04           |
| 2029 | 7.69 | 7.43 | 7.22 | 7.06 | 6.95 | 6.88 | 6.86 | 6.89 | 6.97 | 7.10 | 7.27 | 7.50 | 7.15           |
| 2030 | 7.75 | 7.49 | 7.28 | 7.12 | 7.01 | 6.94 | 6.92 | 6.95 | 7.03 | 7.16 | 7.33 | 7.56 | 7.21           |

Table C-10  
**Annual Burner-Tip by Area and the Henry Hub**  
 Constant 2006 \$/MMBtu

| Year | Henry Hub | MAAC East | MAAC West | Maritimes | NEPOOL | NY ABC | NY DEFG | NY HIJK | Ontario |
|------|-----------|-----------|-----------|-----------|--------|--------|---------|---------|---------|
| 2006 | 7.84      | 9.02      | 8.44      | 7.89      | 8.49   | 7.43   | 7.89    | 9.14    | 7.49    |
| 2007 | 8.86      | 10.51     | 9.46      | 8.95      | 9.48   | 8.46   | 8.95    | 10.63   | 8.52    |
| 2008 | 7.34      | 8.72      | 7.88      | 7.69      | 7.90   | 7.25   | 7.69    | 8.84    | 7.31    |
| 2009 | 4.68      | 5.60      | 5.19      | 5.28      | 5.27   | 5.00   | 5.28    | 5.72    | 5.06    |
| 2010 | 4.61      | 5.33      | 5.09      | 5.32      | 5.24   | 5.15   | 5.32    | 5.45    | 5.21    |
| 2011 | 4.63      | 5.38      | 5.13      | 5.38      | 5.30   | 5.22   | 5.38    | 5.50    | 5.28    |
| 2012 | 4.49      | 5.25      | 4.99      | 5.25      | 5.17   | 5.07   | 5.25    | 5.37    | 5.13    |
| 2013 | 4.63      | 5.43      | 5.15      | 5.43      | 5.34   | 5.26   | 5.43    | 5.55    | 5.32    |
| 2014 | 4.99      | 5.87      | 5.44      | 5.85      | 5.77   | 5.69   | 5.85    | 5.99    | 5.75    |
| 2015 | 4.60      | 5.38      | 5.04      | 5.38      | 5.30   | 5.23   | 5.38    | 5.50    | 5.29    |
| 2016 | 5.06      | 5.92      | 5.55      | 5.90      | 5.82   | 5.74   | 5.90    | 6.04    | 5.80    |
| 2017 | 4.89      | 5.77      | 5.41      | 5.75      | 5.69   | 5.61   | 5.75    | 5.89    | 5.67    |
| 2018 | 5.01      | 5.90      | 5.44      | 5.87      | 5.84   | 5.74   | 5.87    | 6.02    | 5.80    |
| 2019 | 4.88      | 5.77      | 5.36      | 5.75      | 5.70   | 5.62   | 5.75    | 5.89    | 5.68    |
| 2020 | 5.24      | 6.21      | 5.77      | 6.17      | 6.13   | 6.05   | 6.17    | 6.33    | 6.11    |
| 2021 | 5.36      | 6.31      | 5.91      | 6.32      | 6.29   | 6.20   | 6.32    | 6.43    | 6.26    |
| 2022 | 5.47      | 6.42      | 6.04      | 6.47      | 6.45   | 6.36   | 6.47    | 6.54    | 6.42    |
| 2023 | 5.58      | 6.52      | 6.17      | 6.62      | 6.61   | 6.51   | 6.62    | 6.64    | 6.57    |
| 2024 | 5.62      | 6.66      | 6.20      | 6.66      | 6.65   | 6.55   | 6.66    | 6.78    | 6.61    |
| 2025 | 5.71      | 6.77      | 6.30      | 6.77      | 6.76   | 6.65   | 6.77    | 6.89    | 6.71    |
| 2026 | 5.81      | 6.88      | 6.40      | 6.88      | 6.87   | 6.76   | 6.88    | 7.00    | 6.82    |
| 2027 | 5.90      | 6.99      | 6.51      | 6.98      | 6.98   | 6.87   | 6.98    | 7.11    | 6.93    |
| 2028 | 6.00      | 7.11      | 6.61      | 7.10      | 7.09   | 6.98   | 7.10    | 7.23    | 7.04    |
| 2029 | 6.10      | 7.22      | 6.71      | 7.21      | 7.21   | 7.09   | 7.21    | 7.34    | 7.15    |
| 2030 | 6.17      | 7.28      | 6.78      | 7.27      | 7.27   | 7.15   | 7.27    | 7.40    | 7.21    |



Table C-11  
**Natural Gas Price Forecast 2006-2029 Liquid Market Pricing Centers**  
 Constant 2006 \$/MMBtu

| Year | Kosciusko | AECO | ANR<br>SW | Broadrun | Chicago | Dawn | Dracut | Iroquois | Leach | Lebanon | Niagara | NY<br>City | Opal | Ventura |
|------|-----------|------|-----------|----------|---------|------|--------|----------|-------|---------|---------|------------|------|---------|
| 2006 | 7.96      | 6.41 | 7.80      | 8.25     | 7.42    | 7.15 | 8.27   | 7.60     | 8.10  | 8.08    | 7.18    | 8.91       | 6.50 | 6.95    |
| 2007 | 8.98      | 7.55 | 8.82      | 9.26     | 8.54    | 8.29 | 9.26   | 8.76     | 9.09  | 9.08    | 8.32    | 10.01      | 7.41 | 8.16    |
| 2008 | 7.46      | 6.26 | 7.31      | 7.68     | 7.18    | 7.06 | 7.68   | 7.48     | 7.58  | 7.56    | 7.09    | 8.55       | 6.04 | 6.91    |
| 2009 | 4.81      | 3.91 | 4.67      | 4.98     | 4.67    | 4.81 | 5.05   | 5.06     | 4.94  | 4.93    | 4.84    | 5.49       | 4.07 | 4.50    |
| 2010 | 4.73      | 4.02 | 4.59      | 4.87     | 4.69    | 4.91 | 5.01   | 5.10     | 4.87  | 4.86    | 4.94    | 5.23       | 3.96 | 4.52    |
| 2011 | 4.77      | 4.02 | 4.61      | 4.91     | 4.73    | 4.97 | 5.08   | 5.16     | 4.91  | 4.90    | 5.00    | 5.28       | 4.05 | 4.56    |
| 2012 | 4.62      | 3.83 | 4.47      | 4.76     | 4.58    | 4.82 | 4.95   | 5.03     | 4.78  | 4.76    | 4.85    | 5.15       | 4.05 | 4.43    |
| 2013 | 4.78      | 4.00 | 4.63      | 4.93     | 4.75    | 5.01 | 5.12   | 5.20     | 4.94  | 4.94    | 5.04    | 5.33       | 4.24 | 4.61    |
| 2014 | 5.15      | 4.49 | 5.03      | 5.22     | 5.15    | 5.43 | 5.55   | 5.63     | 5.34  | 5.34    | 5.47    | 5.77       | 4.70 | 5.07    |
| 2015 | 4.74      | 3.85 | 4.64      | 4.82     | 4.74    | 4.98 | 5.08   | 5.15     | 4.90  | 4.91    | 5.01    | 5.28       | 4.40 | 4.62    |
| 2016 | 5.21      | 4.30 | 5.11      | 5.33     | 5.22    | 5.49 | 5.60   | 5.68     | 5.40  | 5.41    | 5.52    | 5.82       | 4.87 | 5.10    |
| 2017 | 5.05      | 4.26 | 5.01      | 5.20     | 5.12    | 5.36 | 5.47   | 5.53     | 5.24  | 5.27    | 5.39    | 5.67       | 4.79 | 5.02    |
| 2018 | 5.17      | 4.44 | 5.13      | 5.22     | 5.24    | 5.48 | 5.62   | 5.65     | 5.36  | 5.37    | 5.52    | 5.80       | 4.90 | 5.16    |
| 2019 | 5.04      | 4.37 | 5.03      | 5.14     | 5.14    | 5.37 | 5.48   | 5.52     | 5.23  | 5.26    | 5.40    | 5.67       | 4.82 | 5.06    |
| 2020 | 5.42      | 4.75 | 5.42      | 5.56     | 5.54    | 5.79 | 5.91   | 5.95     | 5.63  | 5.66    | 5.83    | 6.11       | 5.21 | 5.45    |
| 2021 | 5.55      | 4.96 | 5.59      | 5.69     | 5.69    | 5.94 | 6.07   | 6.10     | 5.78  | 5.81    | 5.98    | 6.21       | 5.41 | 5.62    |
| 2022 | 5.67      | 5.18 | 5.76      | 5.82     | 5.84    | 6.10 | 6.23   | 6.25     | 5.93  | 5.95    | 6.14    | 6.32       | 5.60 | 5.79    |
| 2023 | 5.79      | 5.40 | 5.93      | 5.95     | 6.00    | 6.25 | 6.39   | 6.40     | 6.07  | 6.10    | 6.29    | 6.42       | 5.80 | 5.96    |
| 2024 | 5.83      | 5.39 | 5.91      | 5.98     | 6.01    | 6.29 | 6.43   | 6.44     | 6.10  | 6.14    | 6.33    | 6.56       | 5.86 | 5.94    |
| 2025 | 5.93      | 5.48 | 6.01      | 6.08     | 6.11    | 6.39 | 6.54   | 6.55     | 6.20  | 6.24    | 6.43    | 6.67       | 5.96 | 6.04    |
| 2026 | 6.02      | 5.57 | 6.11      | 6.18     | 6.21    | 6.50 | 6.65   | 6.65     | 6.30  | 6.34    | 6.54    | 6.78       | 6.06 | 6.14    |
| 2027 | 6.12      | 5.66 | 6.21      | 6.28     | 6.31    | 6.60 | 6.76   | 6.77     | 6.40  | 6.45    | 6.65    | 6.89       | 6.16 | 6.24    |
| 2028 | 6.23      | 5.75 | 6.31      | 6.39     | 6.42    | 6.71 | 6.87   | 6.88     | 6.51  | 6.55    | 6.76    | 7.01       | 6.26 | 6.35    |
| 2029 | 6.33      | 5.85 | 6.41      | 6.50     | 6.53    | 6.83 | 6.99   | 6.99     | 6.62  | 6.66    | 6.87    | 7.12       | 6.36 | 6.45    |
| 2030 | 6.39      | 5.91 | 6.47      | 6.56     | 6.59    | 6.89 | 7.05   | 7.05     | 6.68  | 6.72    | 6.93    | 7.18       | 6.42 | 6.51    |



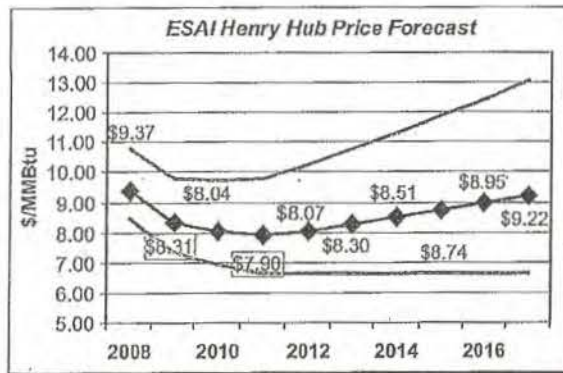
Table C-14  
Average Delivered Coal Prices by ISO/RTO Area  
Constant 2006 \$/MMBtu

| Trans Area | APS  | Marl-<br>times | NE-<br>BOST | NE-<br>CTSW | NE-<br>EAST | NE-<br>WEST | NY_<br>AB | NY_<br>CDE | NY_<br>GHI | On<br>Middleport | On<br>North | On<br>West | PJMEX | PJMWX | VP   |
|------------|------|----------------|-------------|-------------|-------------|-------------|-----------|------------|------------|------------------|-------------|------------|-------|-------|------|
| 2006       | 1.52 | 2.73           | 3.20        | 5.24        | 2.55        | 2.92        | 1.76      | 2.03       | 2.36       | 3.12             | 1.87        | 3.12       | 2.29  | 2.29  | 2.28 |
| 2007       | 1.52 | 2.72           | 3.16        | 4.98        | 2.61        | 3.03        | 2.10      | 2.29       | 2.57       | 3.11             | 1.88        | 3.11       | 2.37  | 2.38  | 2.30 |
| 2008       | 1.69 | 2.52           | 2.92        | 3.60        | 2.46        | 2.87        | 2.09      | 2.47       | 2.73       | 2.90             | 1.89        | 2.90       | 2.44  | 2.48  | 2.43 |
| 2009       | 1.56 | 2.35           | 2.73        | 3.40        | 2.33        | 2.74        | 2.04      | 2.38       | 2.56       | 2.73             | 1.92        | 2.73       | 2.30  | 2.34  | 2.31 |
| 2010       | 1.50 | 2.26           | 2.83        | 3.36        | 2.36        | 2.67        | 2.06      | 2.31       | 2.47       | 2.64             | 2.01        | 2.64       | 2.24  | 2.25  | 2.27 |
| 2011       | 1.50 | 2.25           | 2.82        | 3.34        | 2.36        | 2.67        | 2.03      | 2.27       | 2.46       | 2.64             | 2.01        | 2.64       | 2.23  | 2.25  | 2.25 |
| 2012       | 1.50 | 2.24           | 2.81        | 3.32        | 2.36        | 2.67        | 2.04      | 2.29       | 2.46       | 2.63             |             |            | 2.22  | 2.23  | 2.25 |
| 2013       | 1.51 | 2.23           | 2.80        | 3.30        | 2.36        | 2.68        | 2.08      | 2.30       | 2.45       |                  |             |            | 2.23  | 2.23  | 2.26 |
| 2014       | 1.52 | 2.22           | 2.79        | 3.29        | 2.34        | 2.66        | 2.08      | 2.31       | 2.44       |                  |             |            | 2.24  | 2.25  | 2.31 |
| 2015       | 1.52 | 2.21           | 2.78        | 3.27        | 2.34        | 2.67        | 2.09      | 2.34       | 2.43       |                  |             |            | 2.28  | 2.26  | 2.23 |
| 2016       | 1.51 | 2.21           | 2.77        | 3.26        | 2.34        | 2.67        | 2.10      | 2.34       | 2.42       |                  |             |            | 2.29  | 2.27  | 2.24 |
| 2017       | 1.55 | 2.20           | 2.76        | 3.25        | 2.34        | 2.67        | 2.12      | 2.35       | 2.42       |                  |             |            | 2.30  | 2.27  | 2.25 |
| 2018       | 1.60 | 2.19           | 2.75        | 3.25        | 2.34        | 2.68        | 2.13      | 2.38       | 2.41       |                  |             |            | 2.28  | 2.27  | 2.26 |
| 2019       | 1.60 | 2.18           | 2.74        | 3.24        | 2.35        | 2.69        | 2.14      | 2.39       | 2.40       |                  |             |            | 2.29  | 2.29  | 2.26 |
| 2020       | 1.61 | 2.17           | 2.73        | 3.23        | 2.35        | 2.70        | 2.16      | 2.40       | 2.39       |                  |             |            | 2.30  | 2.29  | 2.27 |
| 2025       | 1.78 | 2.12           | 2.68        | 3.19        | 2.35        | 2.74        | 2.22      | 2.49       | 2.36       |                  |             |            | 2.34  | 2.34  | 2.30 |
| 2030       | 1.83 | 2.08           | 2.64        | 3.15        | 2.38        | 2.79        | 2.30      | 2.76       | 2.32       |                  |             |            | 2.38  | 2.38  | 2.33 |

# NATURAL GAS 10-YEAR FORECAST

67

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |       |      |      |      |       |       |       |       |       |       |
|----------------------------------------------------------------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
|                                                                | 2008  | 2009 | 2010 | 2011 | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  |
| Base Case                                                      | 9.23  | 8.33 | 8.04 | 7.90 | 8.07  | 8.30  | 8.51  | 8.74  | 8.95  | 9.22  |
| High Case                                                      | 10.61 | 9.83 | 9.73 | 9.80 | 10.24 | 10.79 | 11.32 | 11.88 | 12.44 | 13.09 |
| Low Case                                                       | 8.31  | 7.33 | 6.91 | 6.64 | 6.61  | 6.64  | 6.64  | 6.64  | 6.62  | 6.64  |



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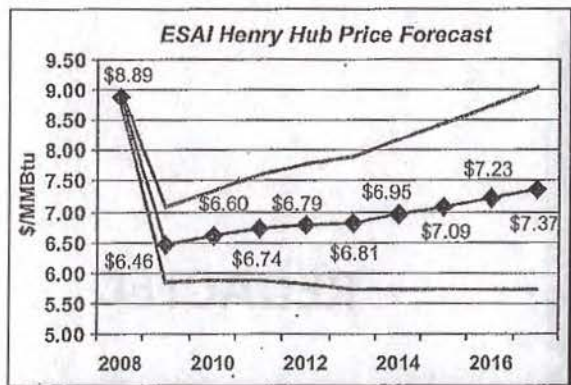
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# NATURAL GAS 10-YEAR FORECAST

45

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |      |      |      |
|----------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
|                                                                | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Base Case                                                      | 8.89 | 6.46 | 6.60 | 6.74 | 6.79 | 6.81 | 6.95 | 7.09 | 7.23 | 7.37 |
| High Case                                                      | 8.98 | 7.08 | 7.34 | 7.60 | 7.77 | 7.90 | 8.17 | 8.45 | 8.73 | 9.03 |
| Low Case                                                       | 8.80 | 5.84 | 5.86 | 5.87 | 5.81 | 5.72 | 5.73 | 5.73 | 5.73 | 5.72 |



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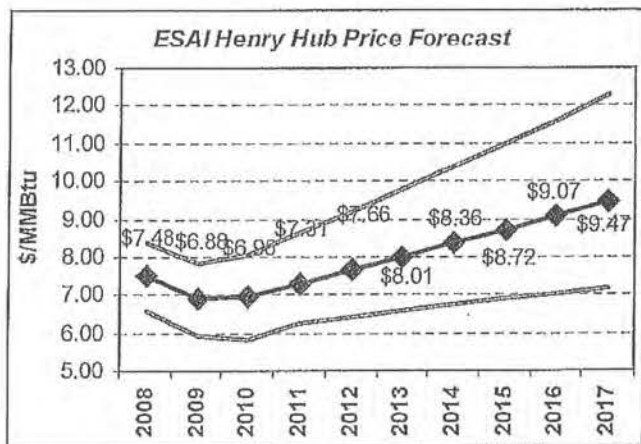
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# NATURAL GAS 10-YEAR FORECAST

48

| <i>ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars</i> |      |      |      |      |      |      |       |       |       |       |
|-----------------------------------------------------------------------|------|------|------|------|------|------|-------|-------|-------|-------|
|                                                                       | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  | 2016  | 2017  |
| Base Case                                                             | 7.48 | 6.88 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  | 9.07  | 9.47  |
| High Case                                                             | 8.38 | 7.84 | 8.07 | 8.62 | 9.19 | 9.77 | 10.37 | 10.99 | 11.61 | 12.31 |
| Low Case                                                              | 6.58 | 5.92 | 5.84 | 6.26 | 6.43 | 6.60 | 6.75  | 6.91  | 7.04  | 7.19  |



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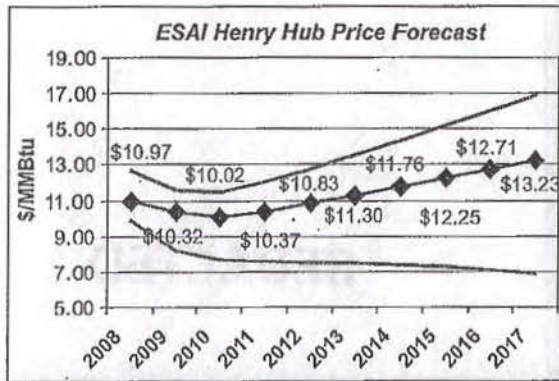
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# NATURAL GAS 10-YEAR FORECAST

42

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |       |       |       |       |       |       |       |       |       |       |
|----------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                                                | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  |
| Base Case                                                      | 10.97 | 10.32 | 10.02 | 10.37 | 10.83 | 11.30 | 11.76 | 12.25 | 12.71 | 13.23 |
| High Case                                                      | 12.61 | 11.55 | 11.42 | 12.03 | 12.78 | 13.56 | 14.35 | 15.18 | 16.01 | 16.94 |
| Low Case                                                       | 9.87  | 8.21  | 7.63  | 7.55  | 7.52  | 7.46  | 7.36  | 7.25  | 7.09  | 6.93  |



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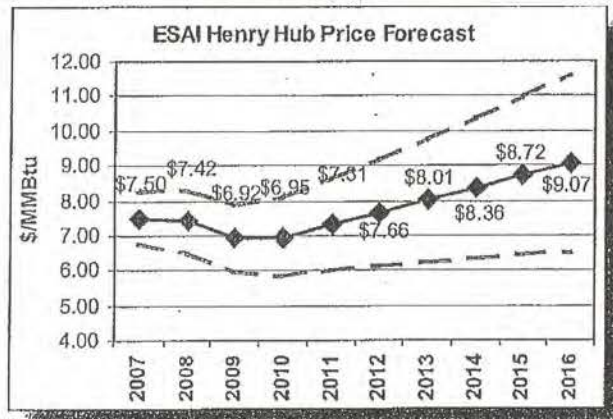
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# NATURAL GAS 10-YEAR FORECAST

25

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |       |       |       |
|----------------------------------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|
|                                                                | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  | 2016  |
| Base Case                                                      | 7.50 | 7.42 | 6.92 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  | 9.07  |
| High Case                                                      | 8.25 | 8.30 | 7.89 | 8.07 | 8.62 | 9.19 | 9.77 | 10.37 | 10.99 | 11.61 |
| Low Case                                                       | 6.75 | 6.53 | 5.95 | 5.84 | 5.99 | 6.13 | 6.25 | 6.35  | 6.45  | 6.53  |



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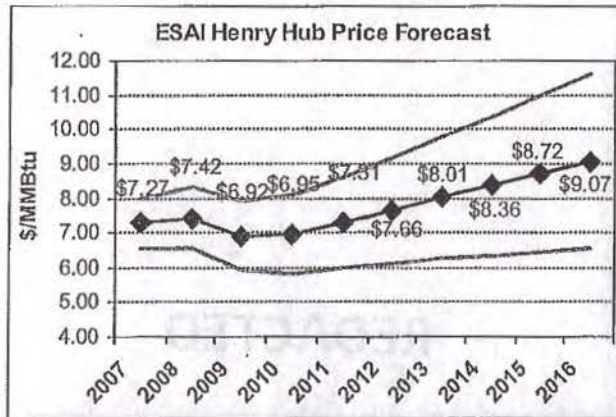
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# NATURAL GAS 10-YEAR FORECAST

35

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |       |       |       |
|----------------------------------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|
|                                                                | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  | 2016  |
| Base Case                                                      | 7.27 | 7.42 | 6.92 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  | 9.07  |
| High Case                                                      | 8.00 | 8.30 | 7.89 | 8.07 | 8.62 | 9.19 | 9.77 | 10.37 | 10.99 | 11.61 |
| Low Case                                                       | 6.54 | 6.53 | 5.95 | 5.84 | 5.99 | 6.13 | 6.25 | 6.35  | 6.45  | 6.53  |



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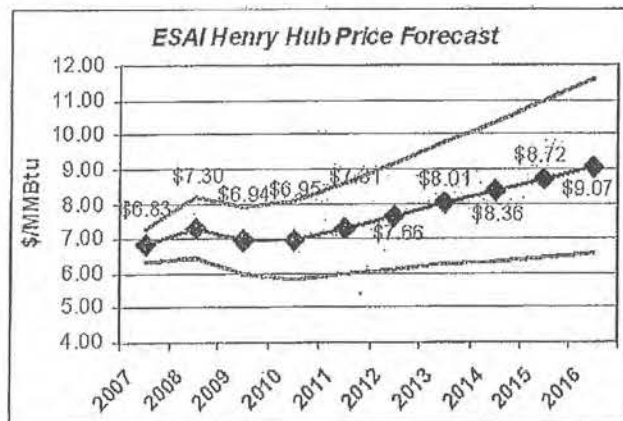
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# NATURAL GAS 10-YEAR FORECAST

40

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |       |       |       |
|----------------------------------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|
|                                                                | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  | 2016  |
| Base Case                                                      | 6.83 | 7.30 | 6.94 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  | 9.07  |
| High Case                                                      | 7.31 | 8.18 | 7.91 | 8.07 | 8.62 | 9.19 | 9.77 | 10.37 | 10.99 | 11.61 |
| Low Case                                                       | 6.35 | 6.42 | 5.97 | 5.84 | 5.99 | 6.13 | 6.25 | 6.35  | 6.45  | 6.53  |



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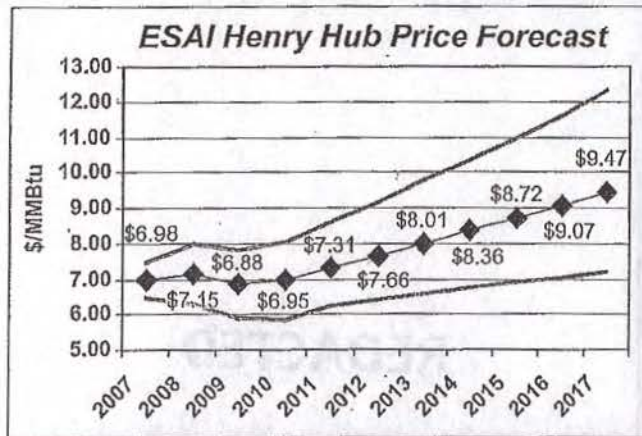
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# NATURAL GAS 10-YEAR FORECAST

37

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |       |       |       |       |
|----------------------------------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|
|                                                                | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  | 2016  | 2017  |
| Base Case                                                      | 6.98 | 7.15 | 6.88 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  | 9.07  | 9.47  |
| High Case                                                      | 7.46 | 8.01 | 7.84 | 8.07 | 8.62 | 9.19 | 9.77 | 10.37 | 10.99 | 11.61 | 12.31 |
| Low Case                                                       | 6.49 | 6.29 | 5.92 | 5.84 | 6.26 | 6.43 | 6.60 | 6.75  | 6.91  | 7.04  | 7.19  |



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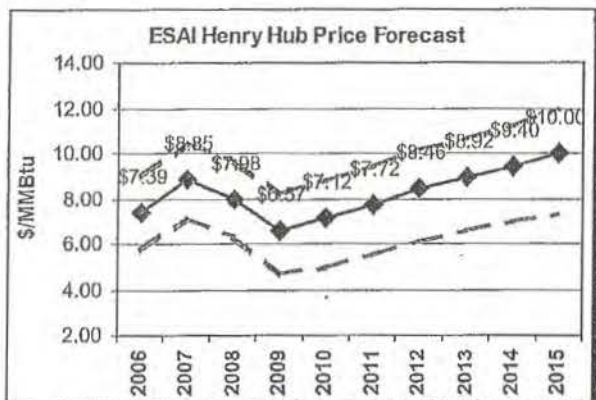
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# NATURAL GAS 10-YEAR OUTLOOK

18

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |       |      |      |      |      |       |       |       |       |
|----------------------------------------------------------------|------|-------|------|------|------|------|-------|-------|-------|-------|
|                                                                | 2006 | 2007  | 2008 | 2009 | 2010 | 2011 | 2012  | 2013  | 2014  | 2015  |
| Base Case                                                      | 7.39 | 8.85  | 7.98 | 6.57 | 7.12 | 7.72 | 8.46  | 8.92  | 9.40  | 10.00 |
| High Case                                                      | 9.06 | 10.52 | 9.65 | 8.24 | 8.79 | 9.39 | 10.13 | 10.69 | 11.25 | 11.99 |
| Low Case                                                       | 5.72 | 7.18  | 6.31 | 4.72 | 4.95 | 5.53 | 6.09  | 6.55  | 6.98  | 7.33  |



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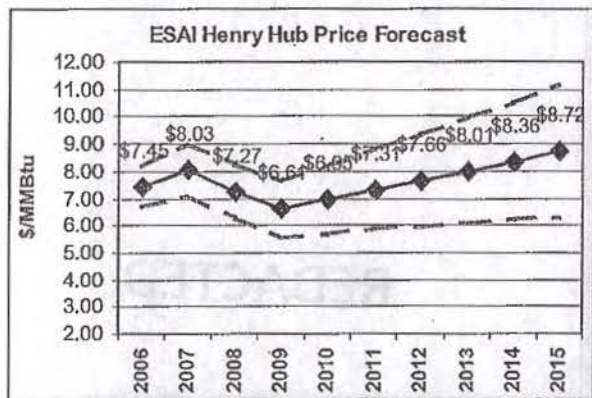
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# NATURAL GAS 10-YEAR OUTLOOK

21

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |      |       |       |
|----------------------------------------------------------------|------|------|------|------|------|------|------|------|-------|-------|
|                                                                | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  |
| Base Case                                                      | 7.45 | 8.03 | 7.27 | 6.61 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  |
| High Case                                                      | 8.19 | 9.00 | 8.29 | 7.67 | 8.21 | 8.77 | 9.34 | 9.93 | 10.53 | 11.16 |
| Low Case                                                       | 6.70 | 7.07 | 6.25 | 5.55 | 5.70 | 5.85 | 5.97 | 6.09 | 6.19  | 6.28  |



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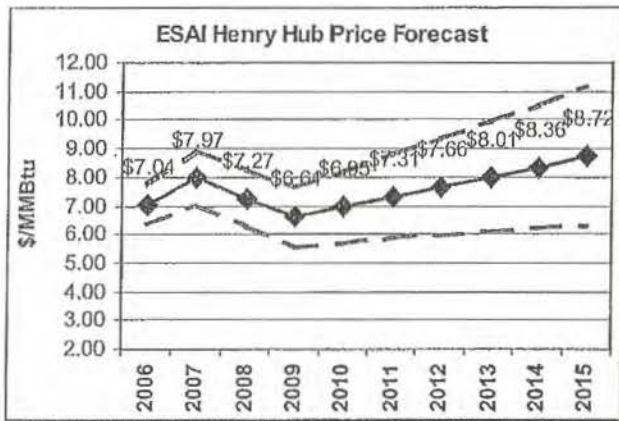
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# NATURAL GAS 10-YEAR OUTLOOK

26

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |      |       |       |
|----------------------------------------------------------------|------|------|------|------|------|------|------|------|-------|-------|
|                                                                | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  |
| Base Case                                                      | 7.04 | 7.97 | 7.27 | 6.61 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  |
| High Case                                                      | 7.75 | 8.92 | 8.29 | 7.67 | 8.21 | 8.77 | 9.34 | 9.93 | 10.53 | 11.16 |
| Low Case                                                       | 6.34 | 7.01 | 6.25 | 5.55 | 5.70 | 5.85 | 5.97 | 6.09 | 6.19  | 6.28  |



REDACTED

REDACTED

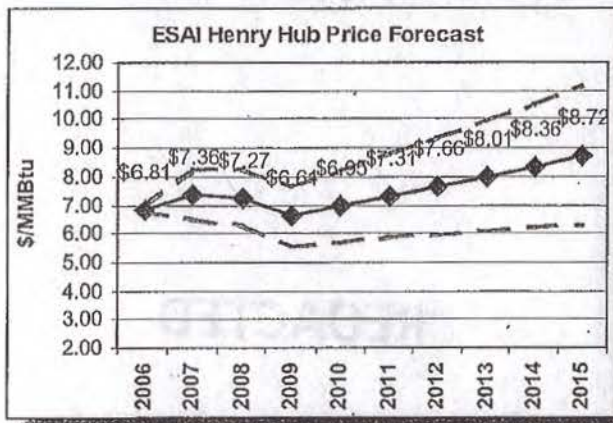
REDACTED



# NATURAL GAS 10-YEAR FORECAST

41

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |      |       |       |
|----------------------------------------------------------------|------|------|------|------|------|------|------|------|-------|-------|
|                                                                | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014  | 2015  |
| Base Case                                                      | 6.81 | 7.36 | 7.27 | 6.61 | 6.95 | 7.31 | 7.66 | 8.01 | 8.36  | 8.72  |
| High Case                                                      | 6.95 | 8.24 | 8.29 | 7.67 | 8.21 | 8.77 | 9.34 | 9.93 | 10.53 | 11.16 |
| Low Case                                                       | 6.78 | 6.48 | 6.25 | 5.55 | 5.70 | 5.85 | 5.97 | 6.09 | 6.19  | 6.28  |



REDACTED

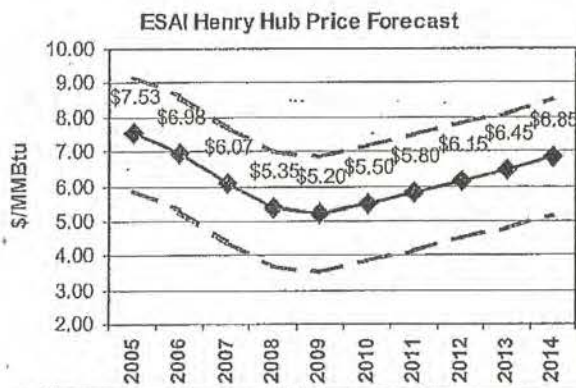
REDACTED

REDACTED

# NATURAL GAS 10-YEAR OUTLOOK

22

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |      |      |      |      |      |      |      |      |      |      |
|----------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
|                                                                | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
| Base Case                                                      | 7.53 | 6.98 | 6.07 | 5.35 | 5.20 | 5.50 | 5.80 | 6.15 | 6.45 | 6.85 |
| High Case                                                      | 9.20 | 8.65 | 7.74 | 7.02 | 6.87 | 7.17 | 7.47 | 7.82 | 8.12 | 8.52 |
| Low Case                                                       | 5.86 | 5.31 | 4.40 | 3.68 | 3.53 | 3.83 | 4.13 | 4.48 | 4.78 | 5.18 |



REDACTED

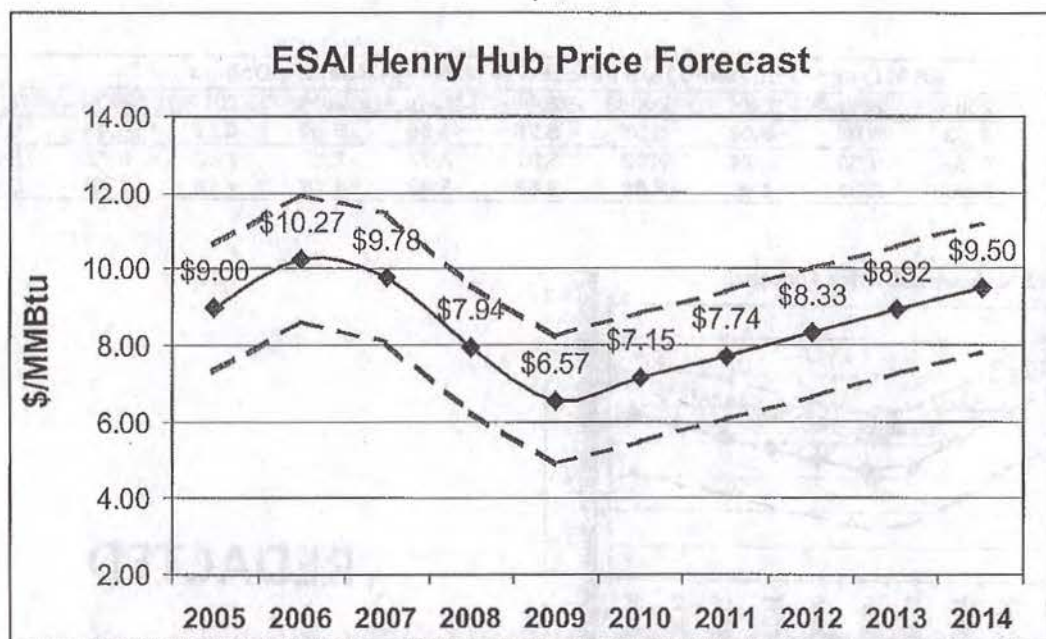
REDACTED

REDACTED

# NATURAL GAS 10-YEAR OUTLOOK

20

| ESAI Long-Term Henry Hub Forecast (\$/MMBtu) - Nominal Dollars |       |       |       |      |      |      |      |       |       |       |
|----------------------------------------------------------------|-------|-------|-------|------|------|------|------|-------|-------|-------|
|                                                                | 2005  | 2006  | 2007  | 2008 | 2009 | 2010 | 2011 | 2012  | 2013  | 2014  |
| Base Case                                                      | 9.00  | 10.27 | 9.78  | 7.94 | 6.57 | 7.15 | 7.74 | 8.33  | 8.92  | 9.50  |
| High Case                                                      | 10.67 | 11.94 | 11.45 | 9.61 | 8.24 | 8.82 | 9.41 | 10.00 | 10.59 | 11.17 |
| Low Case                                                       | 7.33  | 8.60  | 8.11  | 6.27 | 4.90 | 5.48 | 6.07 | 6.66  | 7.25  | 7.83  |





**Question:**

52. As enumerated by the Commission in Order No. 25,663, at 7: "Request 52 asked for documents 'regarding the forward market for natural gas delivered to New England in the 2008 through 2011 time frame.' This request is a subset of the information sought in Request 34a and will be produced in response to that request."

**Answer:**

The Companies previously objected to this request. Notwithstanding the objection and without waiving the same, please see response to 34a.

Provided by: Michael Hachey

**Question:**

74.

b. As enumerated by the Commission in Order No. 25,663, at 7-8: “[P]roduce ‘any studies or statements made by TransCanada in the 2008/2009 timeframe on the effects of horizontal drilling and hydraulic fracturing on future gas supply and prices.’”

**Answer:**

b. The Companies previously objected to this request. Notwithstanding the objection and without waiving the same, attached is a copy of a presentation made by the President and CEO of TransCanada Corporation in November of 2008 which was also included as Attachment 1 to the Motion for Reconsideration and/or Clarification of Order No. 25,663 dated May 19, 2014.

Provided by: Michael Hachey



## Energy Requirements and Planning in North America: 2018

The Trilateral Commission, North American Regional Meeting  
November 22, 2008

Hal Kvisle  
President and CEO  
TransCanada Corporation

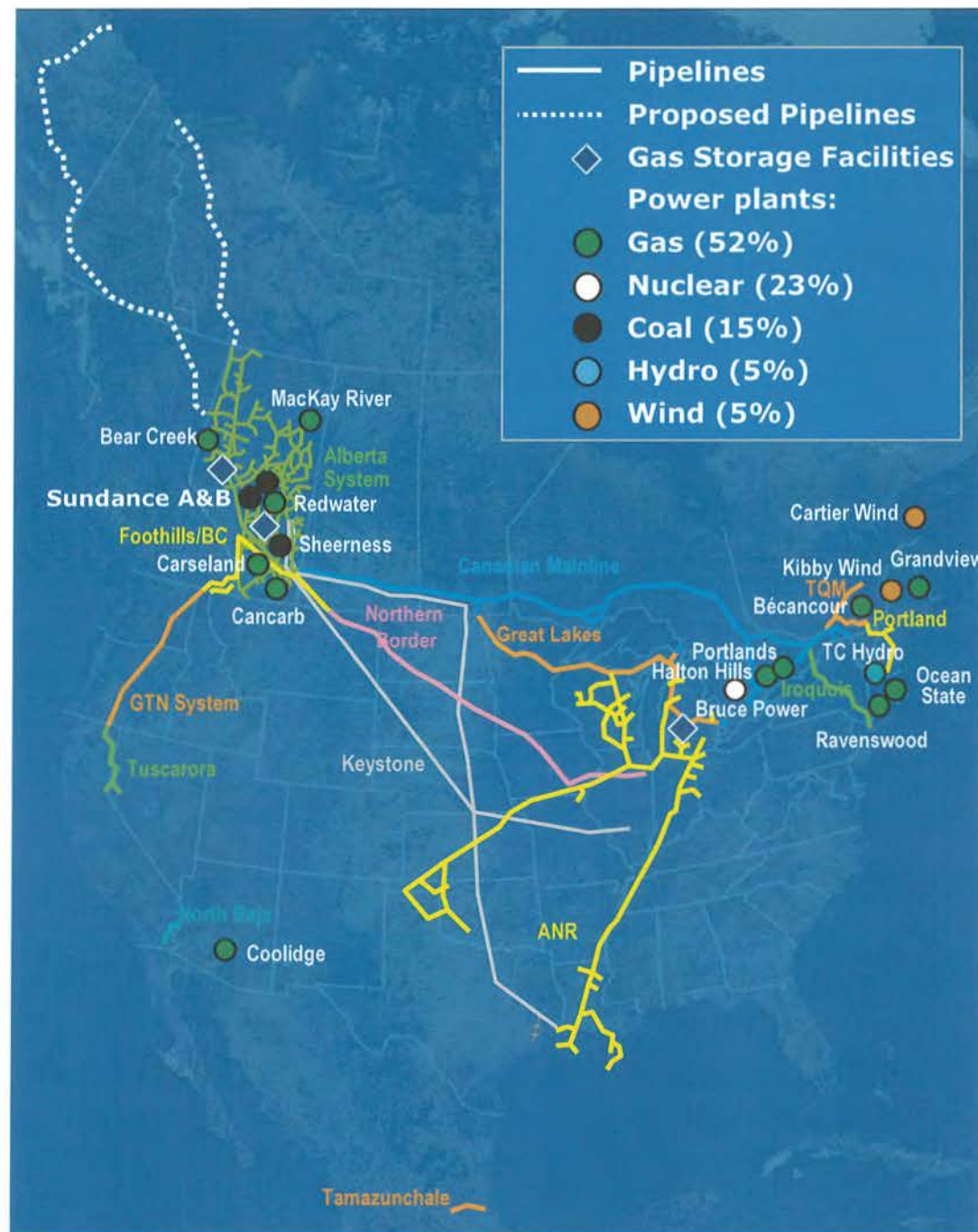




## Forward-Looking Information

This presentation may contain certain information that is forward looking and is subject to important risks and uncertainties. The words "anticipate", "expect", "may", "should", "estimate", "project", "outlook", "forecast" or other similar words are used to identify such forward-looking information. All forward-looking statements reflect TransCanada's beliefs and assumptions based on information available at the time the statements were made. Actual results or events may differ from those predicted in these forward-looking statements. Factors which could cause actual results or events to differ materially from current expectations include, among other things, the ability of TransCanada to successfully implement its strategic initiatives and whether such strategic initiatives will yield the expected benefits, the operating performance of the Company's pipeline and energy assets, the availability and price of energy commodities, regulatory processes and decisions, changes in environmental and other laws and regulations, competitive factors in the pipeline and energy industry sectors, construction and completion of capital projects, labour, equipment and material costs, access to capital markets, interest and currency exchange rates, technological developments and the current economic conditions in North America. By its nature, such forward-looking information is subject to various risks and uncertainties, which could cause TransCanada's actual results and experience to differ materially from the anticipated results or expectations expressed. Additional information on these and other factors is available in the reports filed by TransCanada with Canadian securities regulators and with the U.S. Securities and Exchange Commission. Readers are cautioned not to place undue reliance on this forward-looking information, which is given as of the date it is expressed in this presentation or otherwise, and to not use future-oriented information or financial outlooks for anything other than their intended purpose. TransCanada undertakes no obligation to update publicly or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as required by law.





## Pipeline and Energy Assets

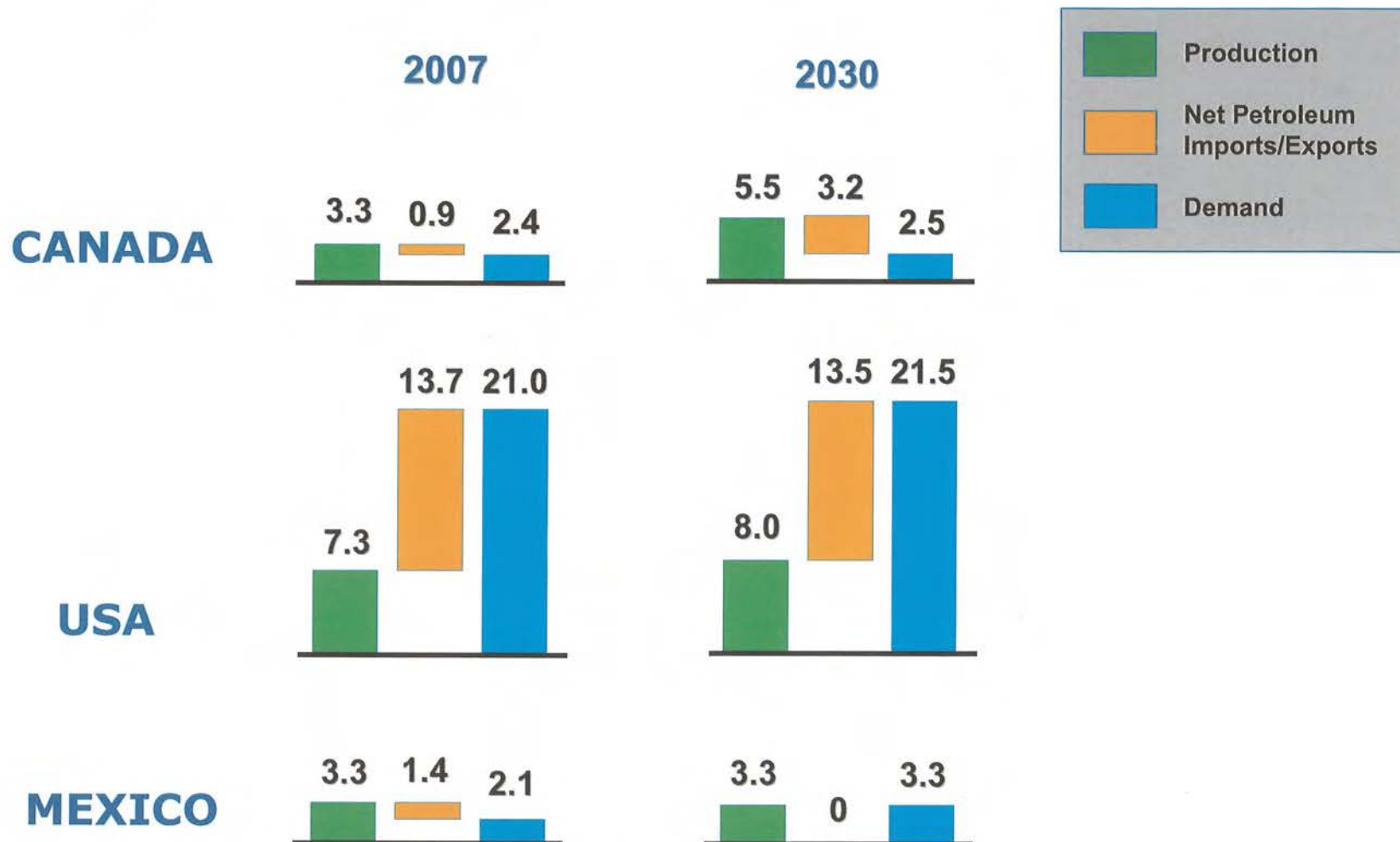
### Pipelines

- 59,000 km (36,500 mi) of wholly-owned natural gas pipeline, and interests in an additional 7,800 km (4,800 mi)
- 235 Bcf of regulated natural gas storage capacity
- Average daily volume of 15 Bcf
- Keystone oil pipeline 1.1 MMb/d

### Energy

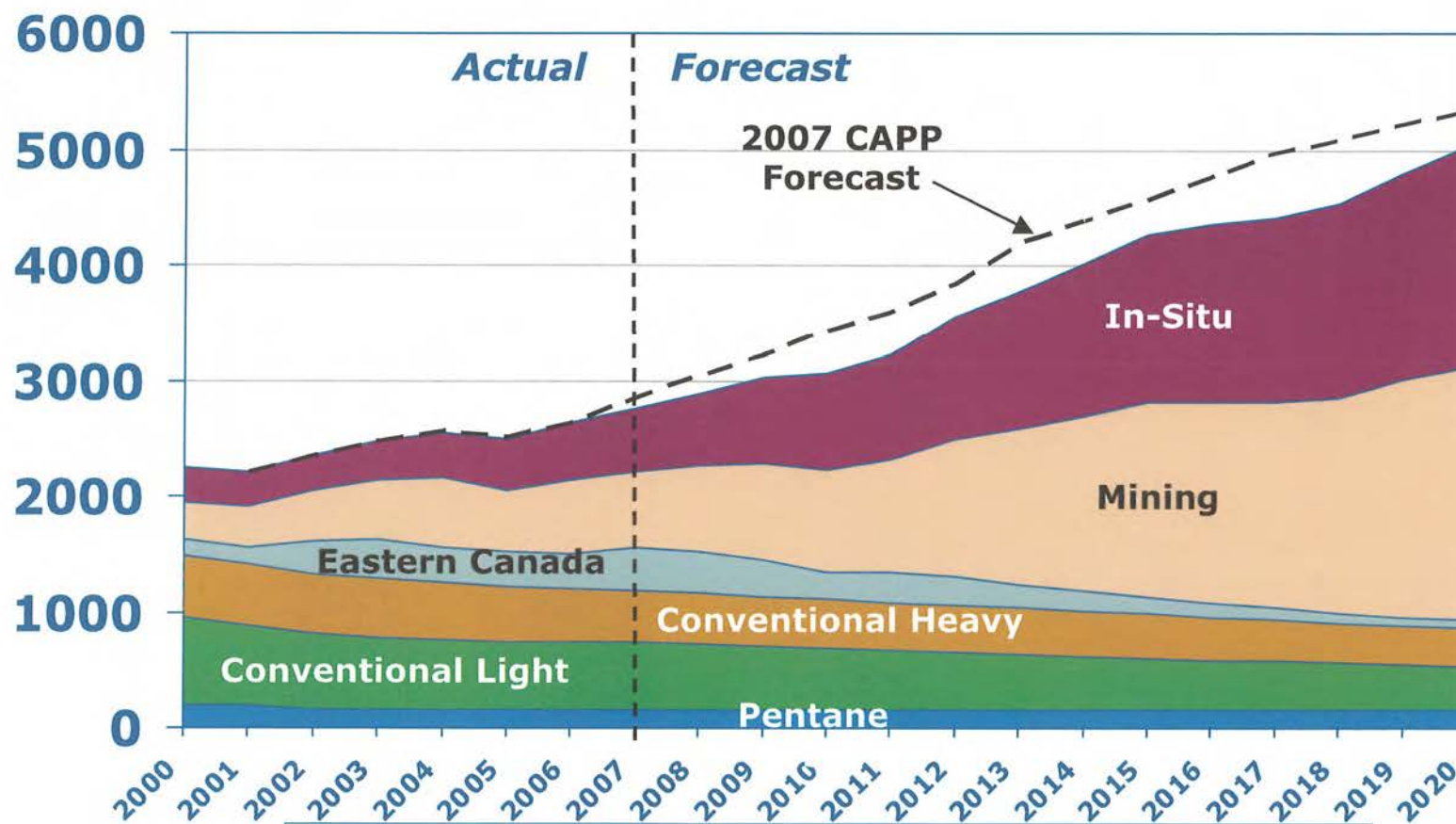
- 19 power plants, 10,900 MW
- Diversified portfolio, primarily low-cost, baseload generation
- 120 Bcf of non-regulated natural gas storage capacity

## North American Petroleum Overview 2007/2030 (MMb/d)



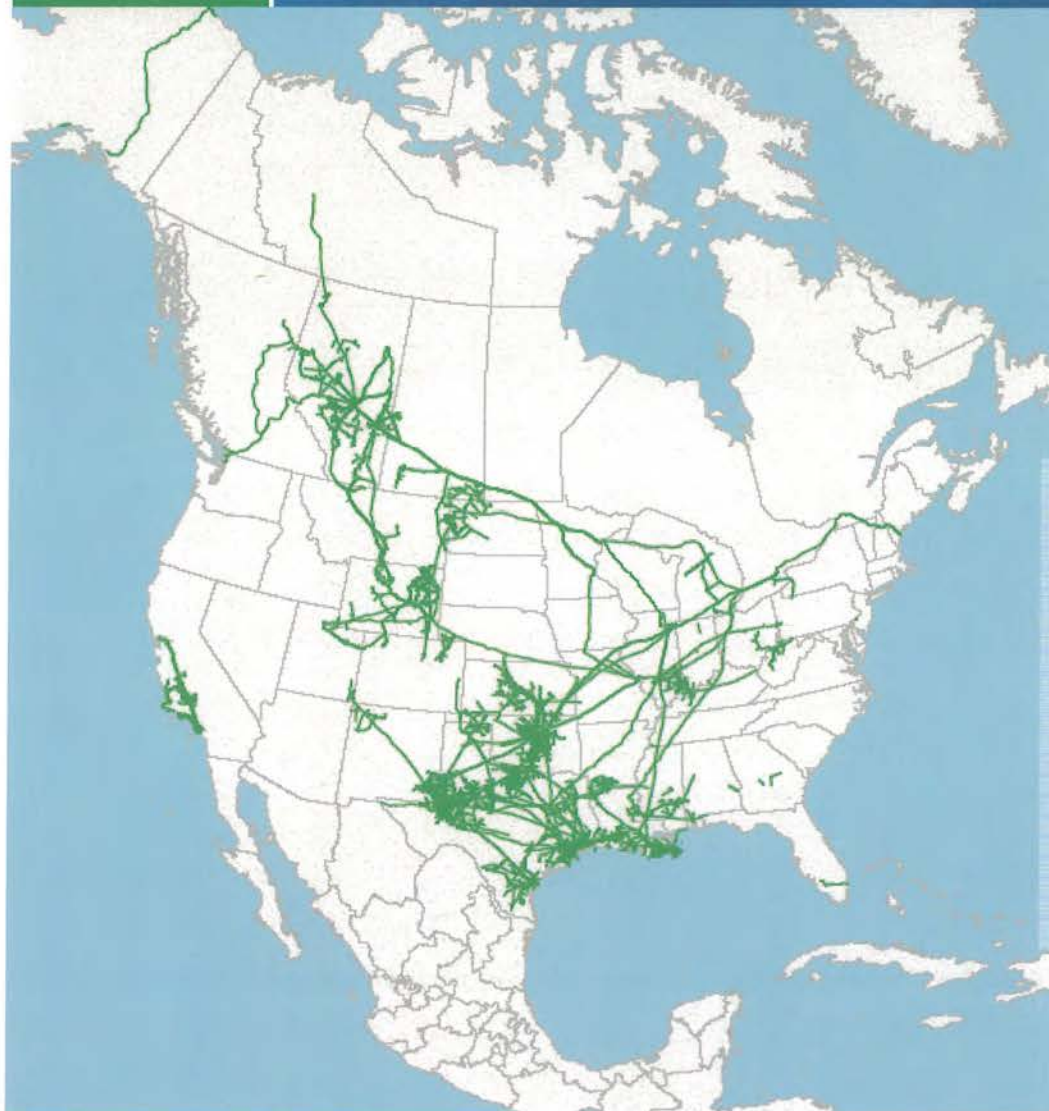


# Crude Oil: Canada Production Forecast



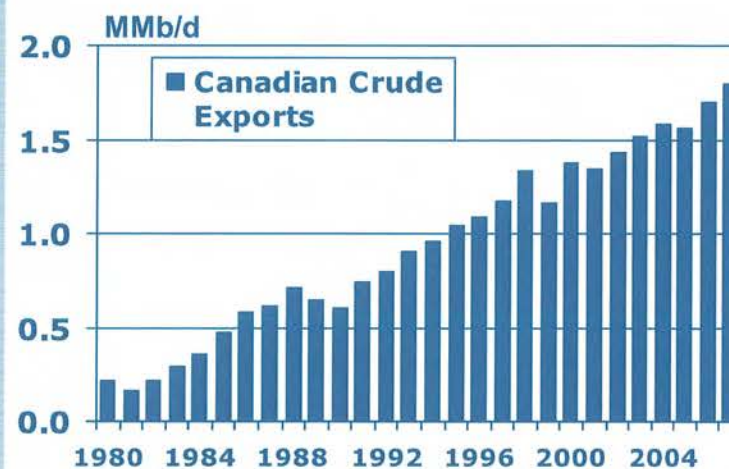
Reference: CAPP June 2008 Canadian Crude Oil  
Production & Supply Forecast (2008-2020)

## Crude Oil: Canada Exported 1.8 MMb/d Worth \$41 Billion to the U.S. in 2007

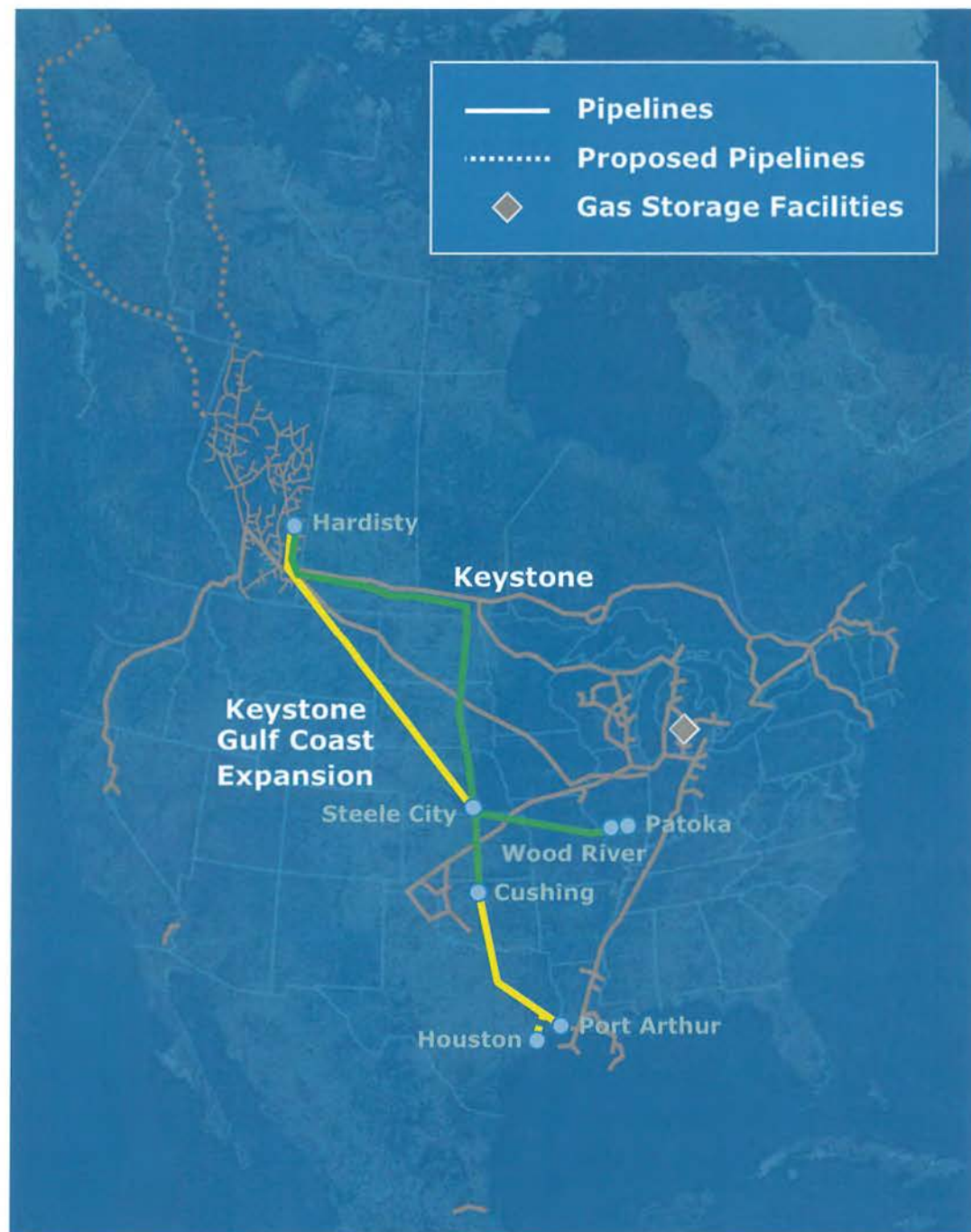


### 2007 Crude Oil Demand (MMb/d)

|        |      |
|--------|------|
| Canada | 2.3  |
| U.S.   | 20.8 |
| Mexico | 2.0  |







## Keystone Oil Pipeline

### Keystone System\*

- 1,090,000 B/d capacity
- 830,000 B/d binding contractual commitments for an average term of 18 years
- Future expansion potential to 1,500,000 B/d capacity
- US\$12.2 billion, TransCanada 79%
- In service 2009 – 2012

\* Comprises Keystone and Keystone Gulf Coast Expansion. Keystone in construction





## Keystone Under Construction

### Schedule:

#### 2008 Construction

- Conversion
- 4 pipeline spreads
- 27 pump stations
- 3 tanks

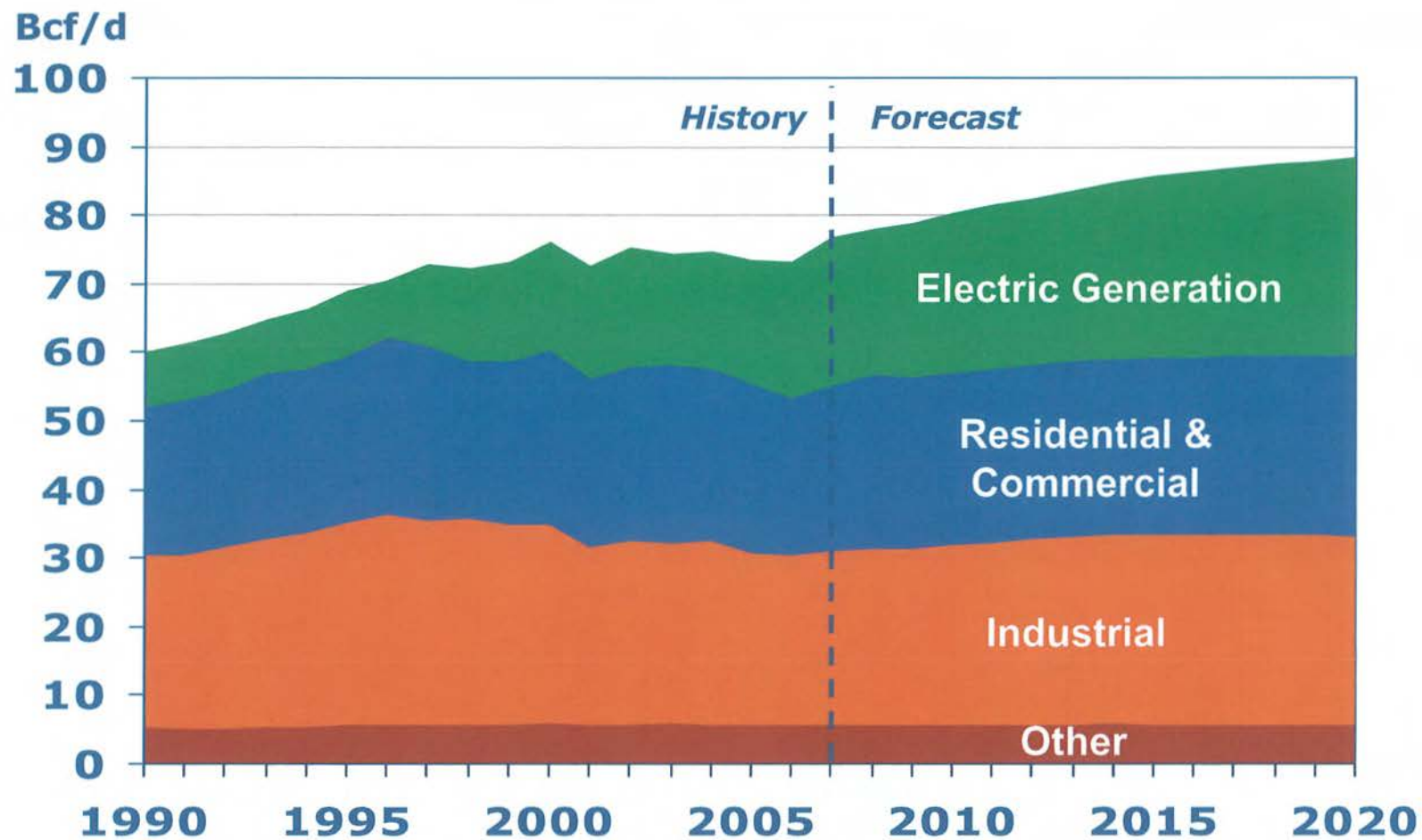
#### 2009 Construction

- 7 pipeline spreads
- 40 pump stations
- 3 terminals

#### 2010 Construction

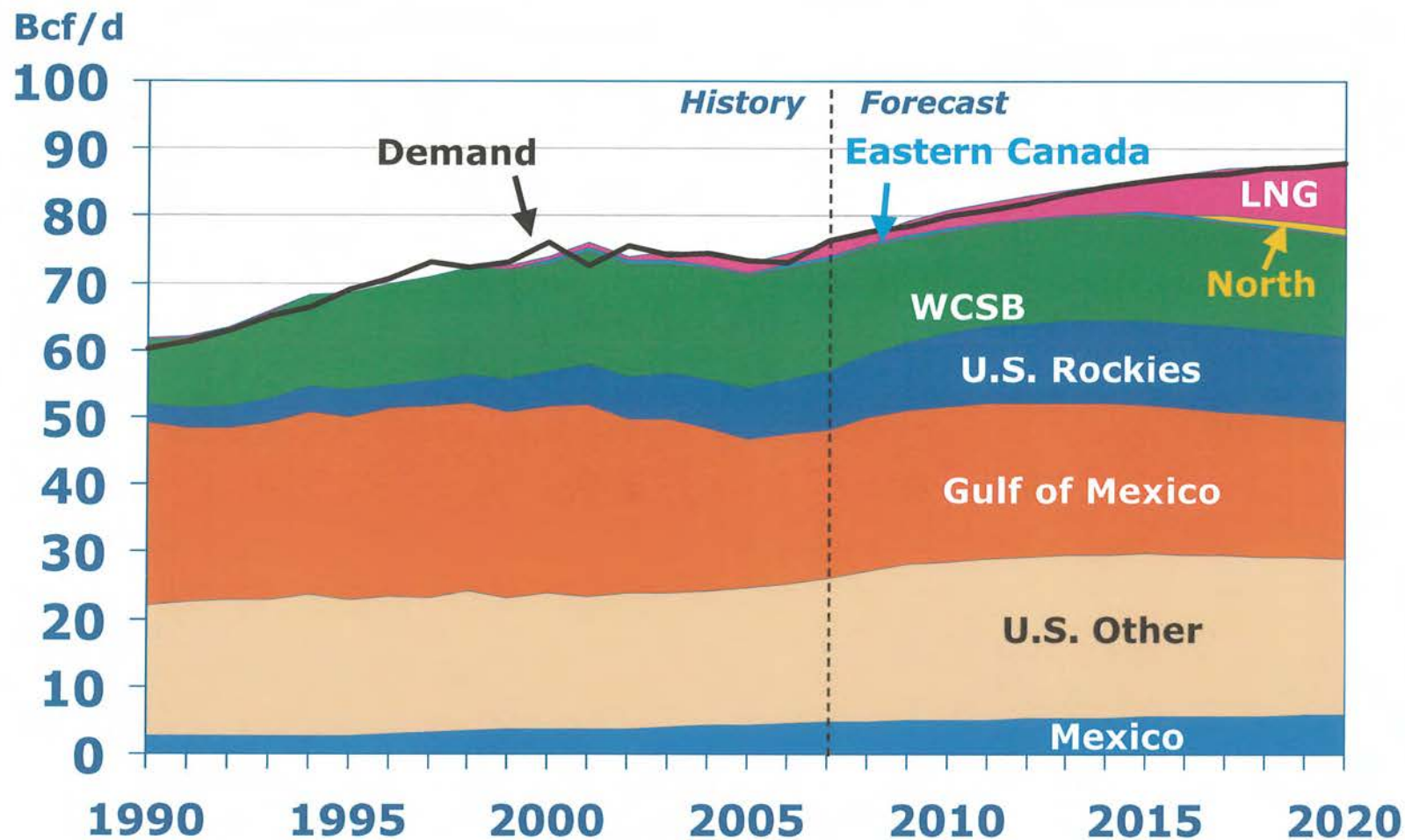
- 3 pipeline spreads
- 50 pump stations

## North American Gas Demand





# North American Gas Supply

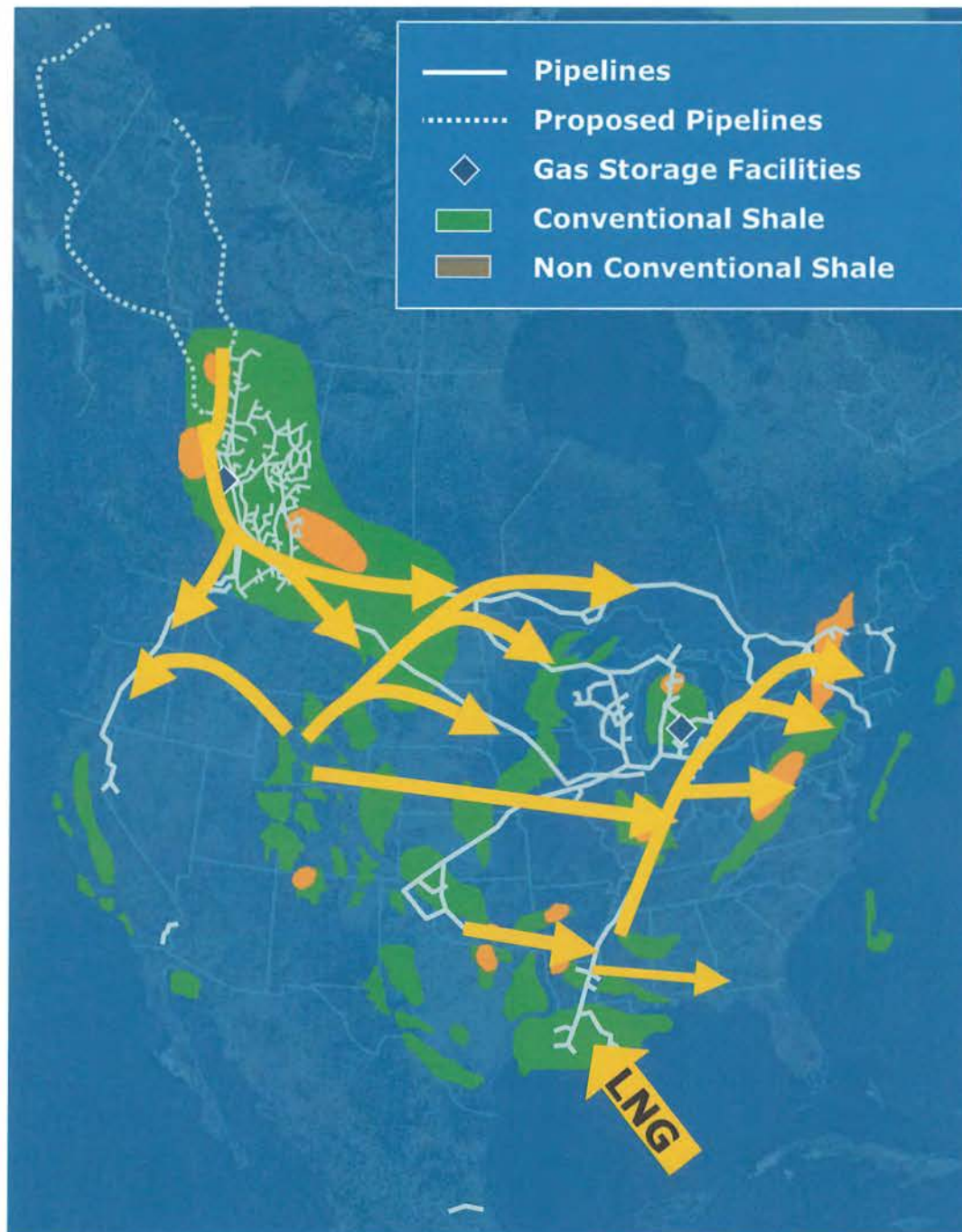






## North American Natural Gas Resources

- Major conventional natural gas basins in North America marked in green
- Emerging shale natural gas basins (marked in brown) in North America may add significant supply

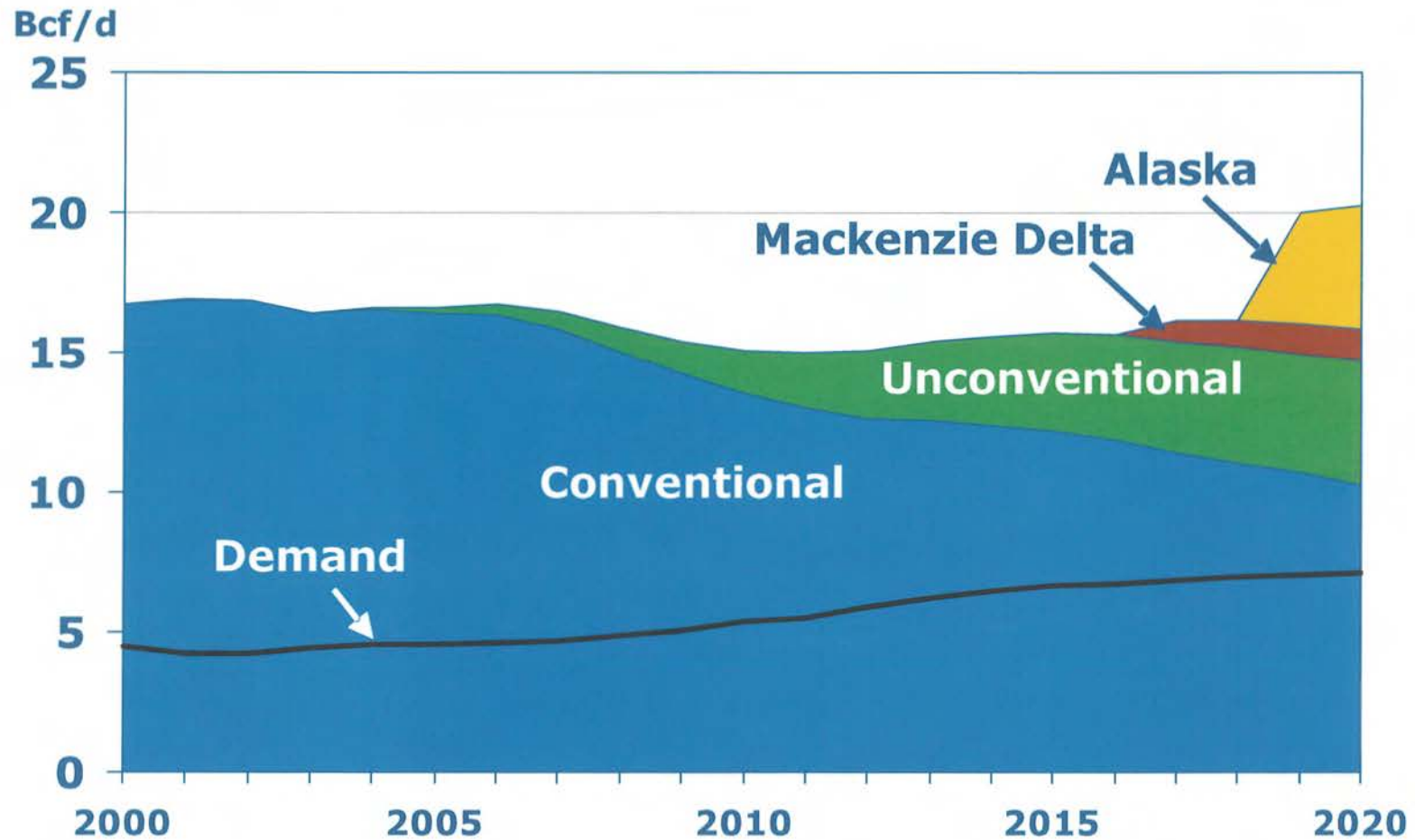


## North American Natural Gas Supply

- Flow patterns will shift
- Committed to playing a role in meeting the growing needs for energy infrastructure
- Progressing options for Midwest and Northeast U.S. markets to access incremental supply from the largest continental basins
- Leveraging our existing, integrated footprint across North America to deliver the most cost-effective and timely solutions

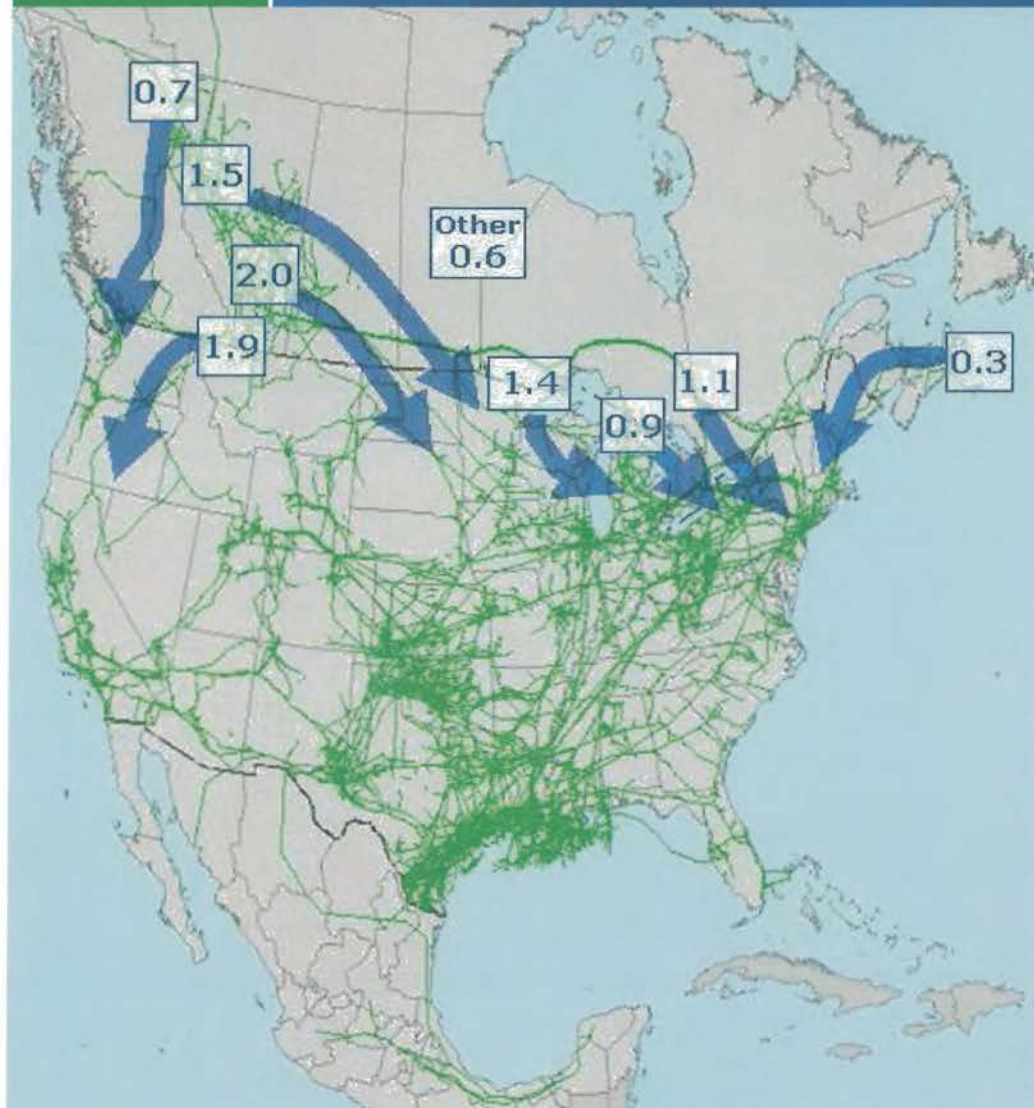


# Western Canada Gas Supply and Demand



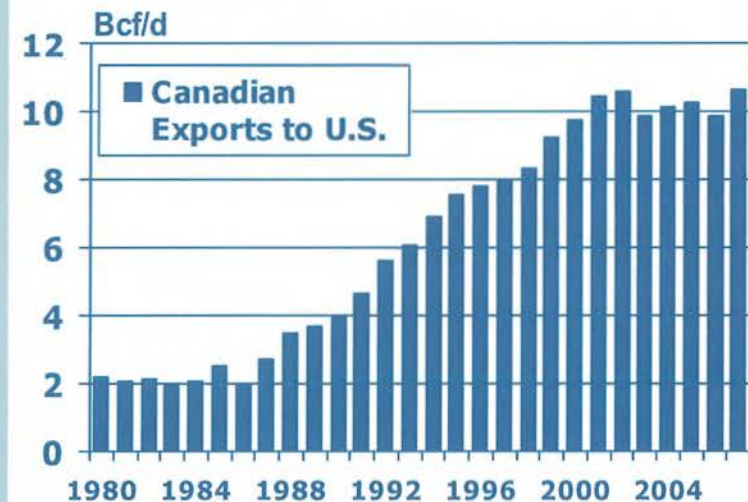


## Natural Gas: Canada Exported 10.5 Bcf/d Worth \$28 Billion to the U.S. in 2007

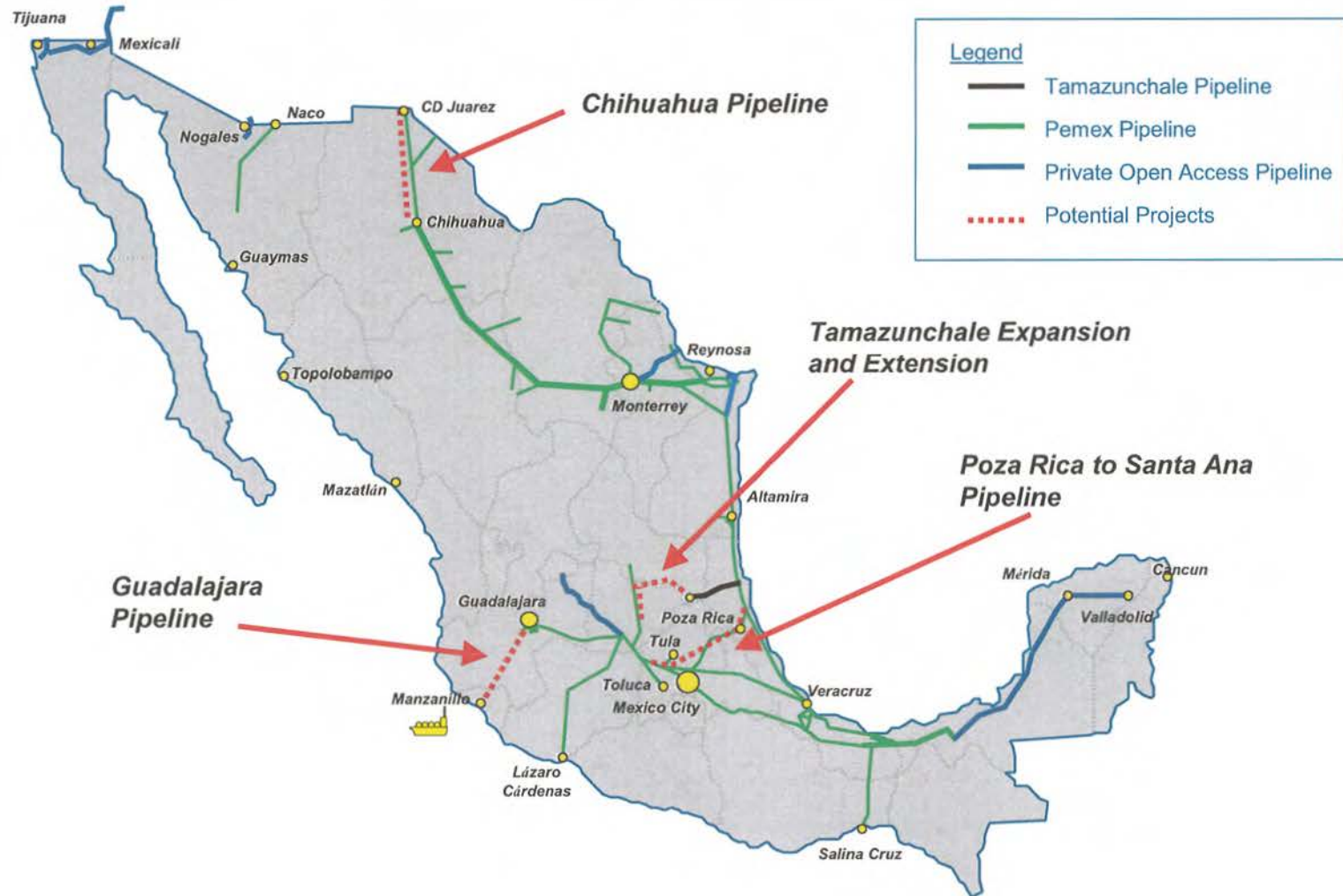


### 2007 Natural Gas Demand (Bcf/d)

|        |      |
|--------|------|
| Canada | 8.5  |
| U.S.   | 62.1 |
| Mexico | 5.8  |



# Potential Mexico Pipeline Projects



**Question:**

75.

c. As enumerated by the Commission in Order No. 25,663, at 8: "Request 75c asked, 'When did TransCanada first acknowledge the impact of Marcellus gas on gas prices?'"

**Answer:**

c. The Companies previously objected to this request. Notwithstanding the objection and without waiving the same, as noted in the response to 74b, in November 2008 TransCanada made a public presentation recognizing the supply increase from Marcellus Shale gas. For the purposes of the issues in this case, the November 2008 presentation is responsive to the request because the supply increase would logically impact gas prices.

Provided by: Michael Hachey