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U.S. Natural Gas Supply to 2030

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1. Introduction

Each year, the U.S. Department of Energy, through the Energy Information Agency (EIA), publishes an Annual Energy Outlook (AEO), with projections for the United States' energy supply and demand. This year's AEO, for 2006, has energy projections to 2030. Two of this year's AEO projections are of particular interest for what they say about Canadian exports of natural gas to the United States and expected production of natural gas in the United States.

2. Canadian exports

This year's AEO shows a slump in projected natural gas pipeline exports (i.e., from Canada) to the United States over the next 25 years (see Figure 1). Pipeline exports to the United States for 2003 are 2.85 trillion cubic feet per year (TCF/year); the volume is projected to drop to 1.15 TCF/year in 2029 (rebounding to 1.22 TCF/year in 2030).



Figure 1: U.S. natural gas supply (reference case)

It should be noted that this is the reference case; the "side cases", based upon the volume of projected LNG (liquefied natural gas) imports show similar declines in Canadian exports to the U.S. by 2030 (see Table 1).

Table 1: Side case natural gas supply projections for 2030 (TCF)

Production	Low LNG	Reference	High LNG
Dry gas	21.99	20.83	19.10
Pipeline	1.50	1.22	0.95
LNG	1.30	4.36	9.58
Syngas	0.07	0.07	0.07
Total supply	24.87	26.48	29.70

The AEO suggests pipeline exports are expected to decline by anywhere from 47 percent

(Low LNG case) to 67 percent (High LNG case). Since the United States will be looking for any supply of natural gas possible, one can conclude that the drop in pipeline exports from Canada will be due to a decline in Canadian natural gas production.

3. U.S. long term natural gas supply

The EIA projections for U.S. natural gas production are constantly being revised downwards (see Figure 2). For example, production projections for 2010 have fallen steadily, from 24.7 TCF in the 1998 projection to 18.58 TCF in the 2006 projection. Similarly, projections made in 2005 are noticeably higher than those made in 2006. Actual production has been declining since 2000, with a volume of 18.46 TCF in the last reported year (2004).



Figure 2: EIA Annual Energy Outlook natural gas projections (1998 to 2006)

The more recent EIA projections suggest that the optimistic projections of the late 1990s and early 2000s are giving way to the likelihood that natural gas production in the United States has peaked or is nearing its peak.

4. References

All EIA Annual Energy Outlook reports (1998 to 2006) can be found on the EIA website: http://www.eia.doe.gov/oiaf/archive.html#aeo