Canada's Energy Future 2016

ENERGY SUPPLY AND DEMAND PROJECTIONS TO 2040

Canada

Key Drivers

- EF 2016 considers six cases: a Reference Case, which reflects a baseline view of future energy prices and economic growth, two price sensitivity cases and three supplemental sensitivity cases. These sensitivity cases represent a range of uncertainties and possible outcomes for the Canadian energy system. Higher and lower crude oil and natural gas prices characterize the price sensitivity cases, referred to as the High Price and Low Price cases. The supplemental sensitivity cases, the Constrained and the High LNG and No LNG cases, are discussed in Chapters 10 and 11, respectively.

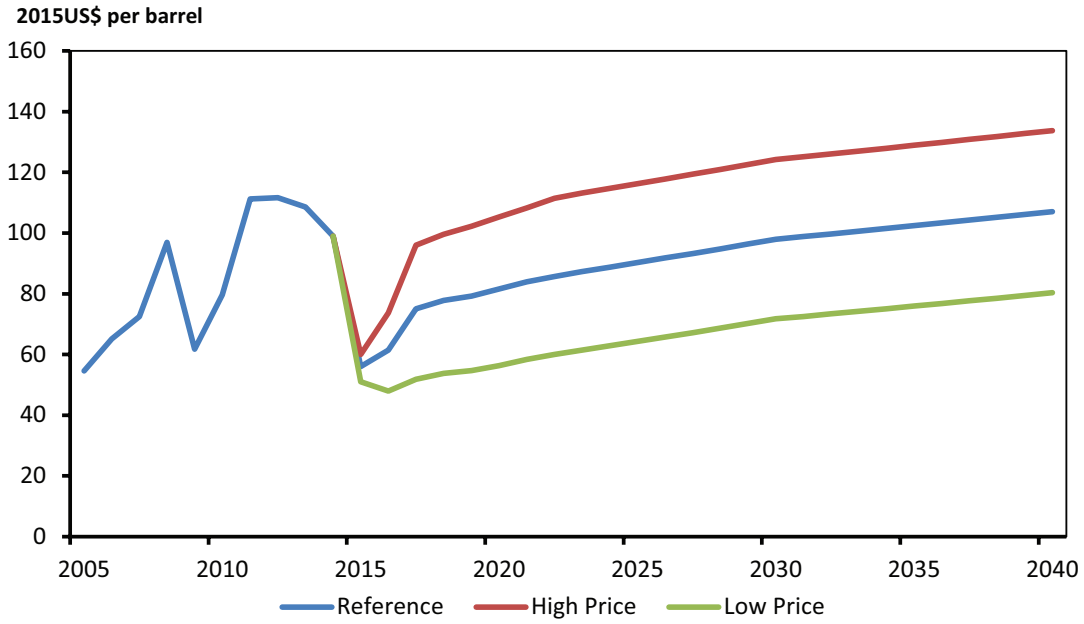
Energy Prices

Crude Oil Prices

- The Brent crude oil price is a key global benchmark price for crude oil. In the Reference Case, the Brent price averages US$56/bbl in 2015. As shown in Figure 3.1, the price in 2015 dollars steadily increases to roughly US$80/bbl by 2020. After 2020, the price increases more gradually, reaching US$107/bbl by 2040. As discussed in Chapter 2, recent growth in tight and shale oil production in North America has increased global supply and crude oil prices have dropped significantly since mid-2014. Continued growth in global oil demand and the need to access higher cost sources of oil supply results in moderate price growth over the projection period. In the Reference Case, the WTI oil price, a benchmark for U.S. crude oil prices, is approximately US$5/bbl less than the Brent price throughout the projection period. The Western Canadian Select (WCS) price, the benchmark for heavy crude oil prices in western Canada, averages US$17/bbl less than the WTI price.

FIGURE 3.1

Brent Crude Oil Price, Reference, High and Low Price Cases



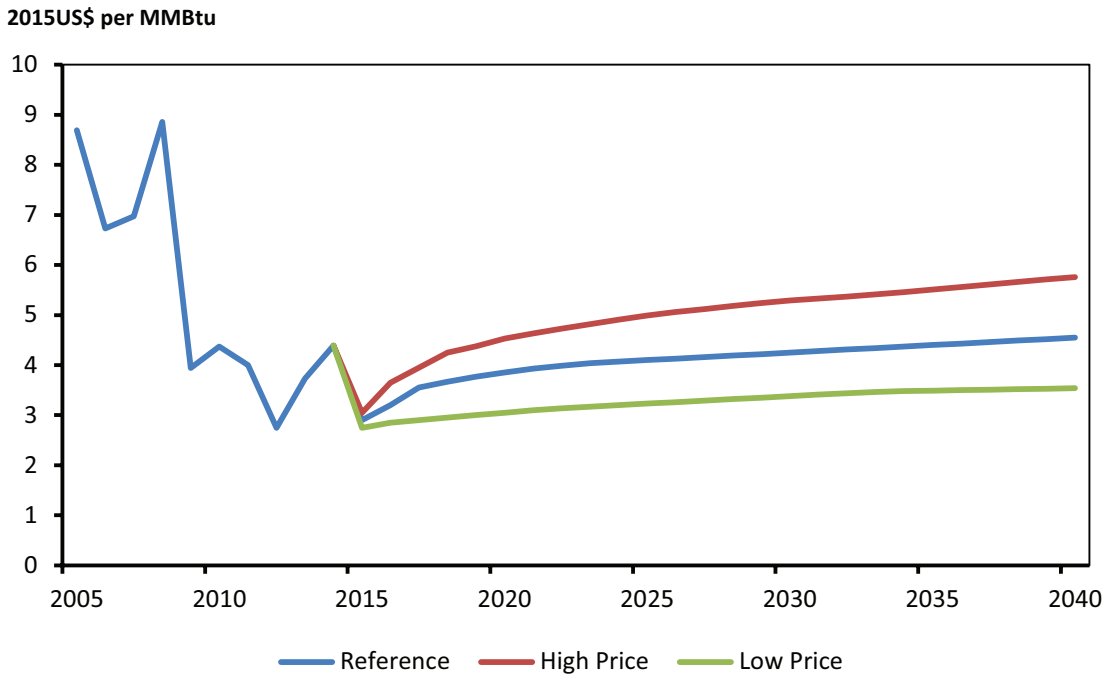
- In the Low Price Case, the Brent crude oil price averages US$26/bbl below the Reference Case price throughout the projection period, reaching US$80/bbl in 2040. In the High Price Case, the Brent price averages US$26/bbl higher than the Reference Case price, rising to US$134/bbl by 2040.

Natural Gas Prices

- The Reference Case assumes that the Henry Hub price for natural gas increases from US$2.90/MMBtu in 2015 to US$4.55/MMBtu in 2040 in 2015 dollars as shown in Figure 3.2. Steady demand growth in North America results in a gradual increase in natural gas prices over the projection period.

FIGURE 3.2

Henry Hub Natural Gas Price at Louisiana, Reference, High and Low Price Cases



- In the Low Price Case, the natural gas price reaches US$3.55/MMBtu by 2040, and in the High Price Case, it reaches US$5.75/MMBtu.

Economy

- The economy is a key driver of the energy system. Economic growth, industrial output, inflation, exchange rates, and population growth are key macroeconomic factors that influence the energy supply and demand outlook.
- As shown in Figure 3.3, Canadian real gross domestic product (GDP) growth averages 1.7 per cent per year from 2014 to 2040. In the first five years of the projection, economic growth averages 1.8 per cent per year before slowing somewhat over the long term, averaging 1.6 per cent per year from 2020 to 2040. This is slower growth compared to the historical trend; annual real GDP growth averaged 2.4 per cent from 1990 to 2013.