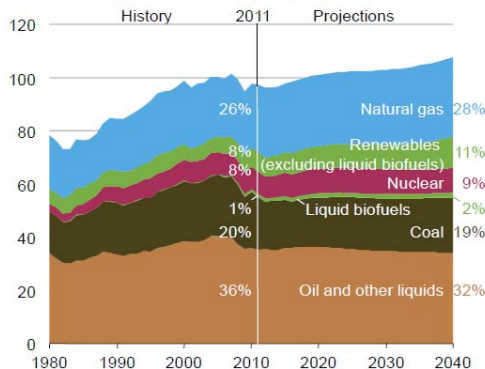


How well are we doing, in our efforts to strip fossil fuels from our energy mix? If you want to believe the most recent estimates from the U.S. Energy Information Administration (EIA), the answer is: [not so well](#).

Figure 7. U.S. primary energy consumption by fuel, 1980-2040 (quadrillion Btu per year)

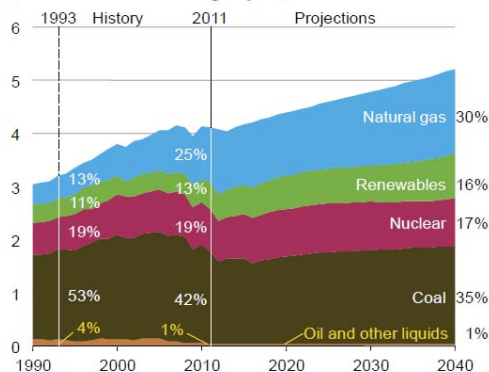


As EIA prepares its 2013 report on the impact of various proposed policy changes, it asks itself: what will the energy mix look like if current law and policy stay in place? EIA has released its answer, and it looks like this:

In 2011, the U.S. met 82% of its energy needs with fossil fuels (coal, oil and natural gas). With business as usual, in the year 2040, the ratio of fossil to overall energy use will have shrunk to: 79%. Because this percentage is applied to a larger overall demand in 2040, that means that EIA is predicting continued growth in our use of fossil fuels over at least the next three decades.

Focusing more narrowly on fuels used to generate electricity, the picture does not look much rosier. Fossil fuel use in 2011: 67%. Projected fossil fuel use in 2012: 66%.

Figure 12. Electricity generation by fuel, 1990-2040 (trillion kilowatthours per year)



The EIA forecast assumes some reductions in the average carbon content of a unit of energy, largely because of the increased reliance on natural gas. Gas' contribution to the electric generation mix would change from 30% today, to 35% in 2040. But that is because natural gas would support most of the increased demand for electricity. There would be slightly more coal generation in 2040 than there is today, since even as older coal plants are retired, a modest number of new coal plants come on line. The bottom line: EIA now predicts that under current law and policy, energy-related carbon dioxide emissions would be about 5% lower in 2040 than they were in 2005.

This is so far away from where we would need to be in order meet carbon reduction goals as to suggest that in 2040, rather than making great strides in reducing emissions, we will still be at the starting line. Remember, many scientists and policy leaders have called for emissions in 2050 to be at least 80% lower than emissions in 1990. As EIA sees it, in 2040, emissions would not be lower than 1990 levels at all.

Energy demand and production forecasts are notoriously unreliable. Who would have predicted, for instance, that the world would experience a devastating financial crisis in 2008 that would dry up business and associated energy use along with it? Ten years ago, who would have predicted our current apparent abundance of inexpensive domestic natural gas?

The message underlying EIA's current forecast is that current policies reflect no pervasive plan to end our overwhelming reliance on fossil fuels. Proponents of increased use of natural gas for power production hope that gas will push out coal and, in the process, cut deeply into power-related greenhouse gas emissions. At the combustion stage, natural gas is considered to be only half as bad as coal. But EIA suggests that rather than displacing much coal use, natural gas will just take up the slack, ensuring that most of any new demand will be met with carbon-emitting fuel. Many like to call natural gas a bridge fuel, as we find ways to increase our reliance on renewable power sources. But how long is that bridge? As things stand, EIA says that the bridge will at least span the next three decades, and show no signs of letting up. In fact, at least up to 2040, natural gas use would continue to grow. We need to turn that bus around, if we have any hope of reducing carbon emissions as much as we need to by 2050.

The whole purpose of this forecast is to provide a reference case with which to compare the potential impact of proposed changes to law and policy. For its 2013 report, here is hoping that EIA will consider the impact of policies that would manage our clearly important natural gas resources, systematically eliminate all coal-fired power, and dramatically increase our reliance on renewable energy.