Questions from The Honorable Fred Upton

1. Over the last decade, emissions from the power sector have been declining. What role has organized electricity markets played in declining emissions?

   Organized markets have played an important role in reducing emissions from the power sector over the last decade. The primary focus of organized markets is assuring adequate electricity supply at the lowest reasonable cost, and the structure of these markets places a relentless pressure on cost. That pressure manifests itself through the deployment of newer, more efficient generation facilities and the retirement of inefficient generation. Since inefficient generation facilities require more fuel and produce more emissions to generate the same electrical output as efficient facilities, the retirement of inefficient generation for economic reasons has the effect of also lowering emissions. Most of the inefficient generation that has retired in the organized markets has been older coal and natural gas generation with high emissions levels, and has been replaced by more efficient natural gas generation and renewable generation with lower or no emissions. While these same economic pressures exist outside of the organized markets, the transparent price signals within the organized markets has led competitive generators to retire older, inefficient resources more quickly. Although the object of organized markets is not lowering emissions, these markets are ultimately responsible for much of the emissions reductions that have occurred in their regions over the past ten years. Of course, other factors have played an important role in reducing emissions, including the steep decline in natural gas prices, lower demand for electricity, environmental requirements, and customer preferences for clean energy.

   a. Do you expect emissions from the power sector to continue to decline into the future?

      I expect emissions from the power sector will continue to decline as the U.S. electricity supply mix evolves to rely more heavily on wind and solar power, modern, efficient natural gas generation, and storage technologies. The transformation of the generation fleet is occurring primarily for economic reasons, with lower-cost natural gas and renewable generation displacing older, less efficient generation with higher emissions. This trend is expected to continue for years to come given the continuation of low natural prices and the on-going decline in the cost of wind and solar generation.