

**Summary of Response to:**

“Economic Impacts Resulting from Implementation of RFS2 Program” by NERA  
Economic Consulting, on behalf of the American Petroleum Institute, October 2012

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In October 2012, NERA published a report concluding that the Renewable Fuel Standards (RFS2) would cause significant harm to the U.S. economy by 2015. According to NERA, the RFS2 volume mandates would be greater than the amount of feasible U.S. biofuel demand by 2013,<sup>1</sup> which (according to NERA) would cause the U.S. economy to enter a “death spiral,”<sup>2</sup> as refiners restrict the amount of refined petroleum supplies (especially diesel) to comply with a shortage of RINs, dramatically increase prices (especially for diesel), and shutter refinery capacity. According to NERA, in 2015 alone, the RFS2 will result in a \$770 billion decline in U.S. GDP.

The results of the NERA study are based on four flawed assumptions. First, NERA incorrectly assumes that the EPA has no meaningful flexibility in setting the total annual biofuel volumes under RFS2 – even in the face of severe harm to the U.S. economy. Second, NERA incorrectly assumes that the approximately 10% “blend wall” imposes an insurmountable constraint on U.S. biofuel consumption after 2013, despite significant opportunities for increased penetration of E15, E85, and biodiesel, particularly in response to significant price increases or binding supply constraints. Third, NERA assumes that there would be no other significant changes in the markets for biofuels, petroleum products, or RINs in the face of these predicted dramatic price increases and supply constraints. Fourth, NERA assumes that eliminating the RFS2 requirements would have no negative impact on U.S. GDP, even though the RFS2 program has played an important role in the recent growth of the U.S. biofuels industry, and is expected to play an increasingly important role in stimulating additional investment in advanced biofuel technology and production capacity.

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<sup>1</sup> The NERA Report adopts this result obtained in a “Phase 1” report prepared by Charles River Associates, also for the American Petroleum Institute.

<sup>2</sup> NERA Report, p. 2.; Figure 1, p. 3.

With regard to NERA's first flawed assumption, the EPA has significant flexibility in administering the RFS2 program (including the establishment of the RIN program) and in setting annual volume targets (RVOs and percentages) for each category of biofuels. In particular, the EPA has the authority to waive, in whole or in part, the RFS2 volumes mandated by Congress, if there is inadequate domestic supply, or if the RFS2 volumes were to "severely harm the economy."<sup>3</sup> Since 2010, the EPA has repeatedly exercised its waiver authority with respect to the cellulosic biofuel mandate. In fact, the EPA has demonstrated broad flexibility in how it administers the RFS2 program more generally. For example, the EPA has increased the required biodiesel volumes above the level initially mandated by Congress, in line with demonstrated market capacity to both supply and consume this increased amount of biodiesel.<sup>4</sup> Most recently, the EPA announced that it would extend the annual compliance period, allowing obligated parties to achieve compliance for 2013 by June 30, 2014, which allows them to better optimize their use of RIN credits in any given year (given the RIN carryover provisions established by the EPA, and given the market prices for RINs). In addition, the EPA has also explicitly stated that it will use its statutory "flexibilities" to address potential future limits in the amount of biofuels that the market can accommodate.<sup>5</sup>

With regard to NERA's second flawed assumption, the assumed 10% "blend wall" is by no means a "hard-and-fast" technological constraint (and thus, it is not in fact a "wall"), but rather a gray line resulting from EPA's own regulatory policies. For example, in 2010, EPA ruled that E15 was allowed to be used in model year 2007 and later light-duty vehicles (cars and light-duty trucks), and in 2011, the EPA extended the use of E15 to model year 2001 – 2006 light-duty vehicles. Thus, as the vehicle fleet ages with each passing year, and as E15 is increasingly incorporated into the U.S. fuel supply, the "blend wall" will be increasingly pushed back. Further, much of the economic harm predicted by NERA is a result of reduced *diesel* supply and increased *diesel* prices predicted by its model. Biodiesel, however, is far from being constrained by either supply or demand limitations. Biodiesel is currently well below NERA's assumed diesel "blend wall" of 5% (in the form of B5 penetration), and there is a broad consensus that the use of biodiesel is not limited to B5 (whether with respect to distribution infrastructure or engine performance). Thus, given the current excess biodiesel capacity well above the RFS2 mandates, there are significant unexploited opportunities to further increase biodiesel production and consumption, which can further help push

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<sup>3</sup> 42 USC § 7545(o)(2)(7)(A)(i).

<sup>4</sup> The EIA recently reported that biodiesel production reached a record 89,000 bbl/d in June 2013 (nearly 1.4 billion gallons on an annual basis). See: [http://www.eia.gov/forecasts/steo/report/renew\\_co2.cfm](http://www.eia.gov/forecasts/steo/report/renew_co2.cfm).

<sup>5</sup> See, e.g., <http://thehill.com/blogs/regwatch/energyenvironment/315761-epa-calls-for-mixing-165-billion-gallons-of-biofuel-with-gas-in-2013>; see also: <http://www.epa.gov/otaq/fuels/renewablefuels/documents/420f13042.pdf>.

back the “blend wall” – particularly since each additional biodiesel RIN credit is equivalent to 1.5 conventional RIN credits.

With regard to NERA’s third flawed assumption, NERA assumes that there would be no significant change in technology, investment, consumer demand, or trade in response to the dramatic price increases and supply constraints that its model predicts (assuming, for the sake of argument, that the EPA were to ignore its statutory obligations to grant waivers in the face of such adverse economic effects). For example, if the supply of gasoline were truly limited by the availability of RIN credits (as NERA’s model predicts), one would expect the price of E85 to decline precipitously, and the demand for E85 to increase (since E85 generates substantially more RIN credits than E10); likewise, one would expect there to be a rapid increase in the roll-out of E15. With rapidly escalating RIN prices predicted by NERA’s model, one would also expect additional advanced biofuel capacity to be brought on line – much of which becomes economic at prices well below those predicted by NERA – which would generate additional RIN credits faster than the use of conventional ethanol.<sup>6</sup> In addition, the U.S. imports significant sugarcane-based ethanol which qualifies for advanced biofuel RIN credits; if NERA’s predicted price and quantity effects were to occur, one would expect a large increase in such imports, either supplementing or displacing U.S. conventional ethanol consumption (since a gallon of advanced biofuels generates more RINs than conventional ethanol). NERA’s modeling approach to “holding everything else constant” in the event of the assumed price increases and supply constraints is simply unrealistically simplistic in the context of this rapidly changing industry.

With regard to NERA’s fourth flawed assumption, eliminating the RFS2 volume requirements will undermine the further development of the U.S. biofuels industry, which has been an important contributor to U.S. GDP growth. The RFS2 program was designed to provide “volume certainty” to potential investors in advanced biofuels in particular; and, via tradeable markets for RINs, to provide market-based signals to incentivize that investment. To date, the EPA has carefully – and flexibly – administered the RFS2 program to accommodate capacity constraints, compliance costs, and other market realities, which has contributed to the expansion of biofuels production and the development of an increasingly liquid RIN market. Eliminating the RFS2 volume requirements would undermine investor confidence in the biofuels and RIN markets more generally, and thereby itself bring about a reduction in U.S. GDP and household incomes.

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<sup>6</sup> Each gallon of biodiesel, cellulosic biofuels, biobutanol, or non-ester renewable diesel is equivalent to more than 1 RIN of conventional ethanol.