

Focus on Fuels

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TM&C Services

The Future of Renewable Fuels

October 2017

Volume 7, Issue 7



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TM&C Services in Fuel Regulations

TM&C provides a full range of services in its fuels regulatory practice. Some of these services are listed below.

- Preparing, reviewing and submitting fuels reports, including CDX submissions.
- Facility audits for compliance with fuels programs.
- Interaction with EPA to pose fuels-related questions.
- Industry specialist assistance for required gasoline attestations.
- Industry specialist

From time to time, I am asked what I think will be the future of renewable fuels. The question is always for a relatively short time horizon, say one month to five years. The answer is always given with great trepidation because in fact, I have no particular insight into the primary driving force, the political policies. Dr. Thomas Sowell once said about predicting the future, "Economists are often asked to predict what the economy is going to do. But economic predictions require predicting what politicians are going to do- and nothing is more unpredictable." Replacing a few key words addressing the specific subject matter yields a statement that still rings true. Industry observers are often asked to predict the demand for renewable fuels. But predicting renewable fuel demand requires predicting what politicians are going to do- and nothing is more unpredictable. Recognizing that I lack knowledge of the primary driving force in renewable fuel demand, let's examine some of the more important considerations that might influence it in the next few years of the current administration.

The Future of Renewable Fuels

Political Considerations

I do not believe that it is an overstatement to say that the change in the executive office of the President of the United States from the Obama Administration to the Trump Administration is one of the greatest historical shifts in political philosophy in American history. Therefore, the future of a program begun under a theoretically conservative administration which was continued and re-enforced under a self-described philosophy to "spread around the wealth" through government programs and is currently being administered by a group with the aim to "Make America Great Again", might be a little hard to predict. The program had humble beginnings with relatively low obligations in the early years. Programs, like the renewable fuel mandate, that result in significant changes in the American economy, are frequently started slowly with little initial impact and are allowed to grow into significant parts of the economy. This format is favored by politicians that want to take credit for "doing something" but want the insulation of several years to make it more difficult to be blamed when the country must pay the piper for legislated rather than economically driven costs.

The program has had significant "growing pains" including two years during the Obama Administration with no mandate because it was politically difficult to reconcile the highly negative economic impact of

- assistance for in-line blending audits.
- Assistance in setting up a fuels compliance group/program.
 - Personnel reviews of compliance-related groups.
 - Compliance status reviews and recommendations.
 - Negotiations/consultation during EPA enforcement actions.
 - 3rd-Party Engineering reviews.
 - Due diligence reviews of facilities and companies in RFS RINs Program.

enforcing the original mandates with the expectations of the environmental lobby, a favored group under the then current Administration. Eventually, the Administration bowed to a court mandate that they issue a renewable fuel mandate and set the obligation significantly below the original mandate. The obligation was meant to force the use of renewable fuel beyond the seeming current limits without setting it so high that the system could not meet the obligation. The system was able to meet the obligations through 2016 with relatively little economic pain to the consumer. Currently, most industry observers believe the 2017 and proposed 2018 mandates can be met without significant economic disruption. However, it is difficult to know whether the EPA's marching orders remain the same, that is, to push as much renewable fuel use as possible without causing dramatic price increases for transportation fuels or even more unwanted, shortages of transportation fuels. Or, if the EPA might take a more market oriented position and allow the market place to "pull" additional renewable fuel into the transportation fuel. The best indicator of that will be the Final Rule on the 2018 obligation which is due by November of this year.

Another part of the political equation is that the current Administration owes its recent presidential campaign victory to rural, presumably agricultural regions. Some agricultural interests favor renewable fuels (grain growers, etc.). Others are negatively impacted, i.e. cattle growers that use grains for feed. Therefore, supporting renewable fuels does not meet approval from the entire agricultural community. Thus the political equation in the rural areas is not simple. It appears that the politics would continue to favor some use of renewable fuel use but not an "exorbitant" volume.

Physical Limitations

Ethanol

The use of renewable fuel in gasoline has been limited by three considerations, 1) the ethanol ten volume percent blend wall, 2) limited acceptance of E85 and 3) limited distribution capacity for E15. These three limitations are likely to continue to be limiting in the near future at least through 2018. However, the distribution system is beginning to address some of the problems associated with E15 as described below.

For several years, E15 has been approved for use in vehicles manufactured from 2001 forward. However, the product pipelines and midstream terminals do not generally have adequate facilities to handle another grade of gasoline. In addition, E15 does not receive the federal 1 psi vapor pressure waiver for summer gasoline because it is not "substantially similar" to gasoline produced in the early 1970s when initial health effects testing was conducted.

As the years go by, the limitation on pre-2001 vehicles becomes less and less important as the fleet ages and is replaced. In addition, an argument can be made that extending the 1 psi waiver to E15 would not be significant because ethanol addition from 10-15 volume percent does not increase vapor pressure. Whether the EPA would approve extending the 1 psi waiver to E15 is ultimately a political decision. However, an administration that wanted to increase ethanol addition by up to 50% could find that extending the 1 psi waiver to E15 would be acceptable. Just as easily, an Administration that thought the growth of ethanol usage

was adequate with E10, could determine that the 1 psi waiver should not be extended to E15.

Finally, the EPA has indicated that it would like to simplify some of the regulations they consider duplicative or no longer necessary. A primary target for elimination is reformulated gasoline. Reformulated gasoline was originally designed to be used in the areas with the worst air quality. It was to be "cleaner" than conventional gasoline by having lower annual emissions of toxics, nitrogen oxides and lower summertime volatile organic compound emissions. Through the years, the conventional and reformulated gasoline recipes have become essentially identical with the exception of summertime reformulated gasoline which generally has vapor pressure below 7 psi. The regulations continue to exclude mixing RFG and Conventional gasolines year round. If the EPA were to remove the RFG/Conventional gasoline designations and mixing restrictions, the system would have greater ability to handle another grade of gasoline like E15.

Cellulosic/Biodiesel

Cellulosic biofuel was by far the largest volume (16 billion gallons out of a total requirement of 36 billion gallons) of renewable fuel that was mandated to be added to the transportation pool by 2022. Cellulosic biofuel is also by far the least likely of any biofuel to actually meet the 2022 goal. The regulations were meant to be technology forcing and the legislators of the day had seen too many reruns of the "Field of Dreams" (If you build it, they will come) and they bought into the mantra that "if they legislated cellulosic usage, it will be available". It is not and will not be available in the volumes required in 2022.

Biodiesel on the other hand has been much more available than originally thought. Quality limitations to the addition of biodiesel to petroleum diesel such as cold flow properties can be overcome by producing renewable diesel which has cold flow properties similar to petroleum diesel. Production is already two times the minimum required and listed biodiesel production capacity is 4 times the 1 billion gallons required starting in 2012. The current biggest limitation to biodiesel addition to the transportation pool is resistance to adding in excess of 5% biodiesel which would require special labeling throughout the distribution system. Currently, imported biodiesel and renewable diesel can generate credits that can be used against the renewable fuel obligation. The legislation that began the renewable fuel program was to promote energy independence from foreign imports. Excluding foreign biodiesel/renewable diesel from the program would increase demand from domestic sources that likely would be more expensive than the current sources. However, it would not necessarily reduce supply since domestic resources are available.

Where is the Program Headed

I do not believe the program will be abolished. I also do not believe that the program will again be allowed to languish for several years with no direction. I believe the most likely direction of the program in the near future is to maintain the current obligation with slow growth primarily from additional biodiesel and renewable diesel. With the current administration, it is a real possibility that foreign renewable fuel sources will not be

allowed to participate in the program. If this occurs, the cost of the program will increase due to the added cost of the domestic biodiesel not due to higher credit prices. Although I believe there are good reasons to expect the program to continue in this manner, I believe there is a reasonable possibility that E15 will replace E10 within the next five years and the obligation will increase by 5-6 billion gallons. Again, this is not likely to significantly increase the cost of the program. It will just shift the transportation pool from petroleum to more renewables. Finally, remember that, "predicting renewable fuel demand requires predicting what politicians are going to do-and nothing is more unpredictable".

TM&C stays current on all of the developments in the regulatory arena as well as the latest in refining and transportation. Contact us if you have any questions or we can help you in any of these areas.

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