

Advanced Biofuels USA, a nonprofit educational organization, advocates for the adoption of advanced biofuels as an energy security, economic development, military flexibility and climate change solution.



Non-Renewable Carbon User Fee for Fuels (Disappearing Gas Tax)

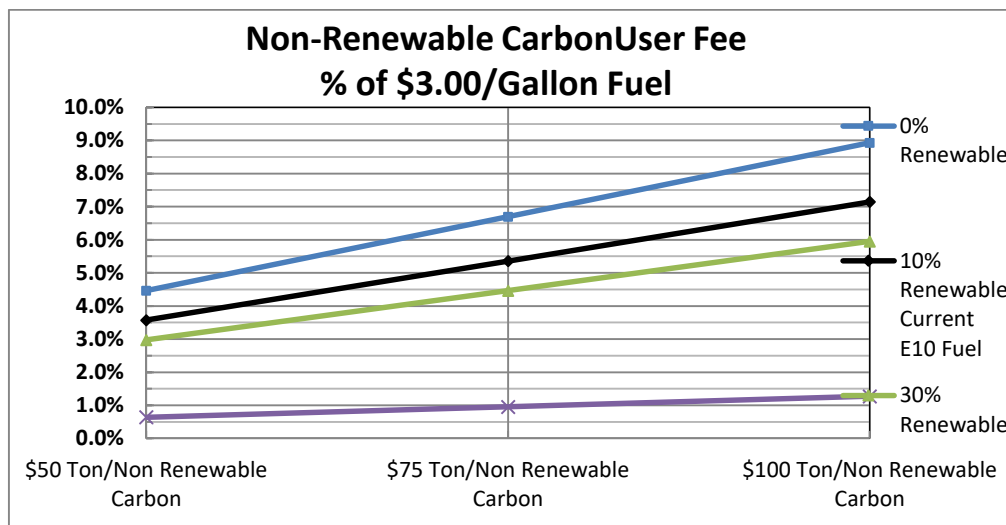
Let's face it. If we're serious about reducing Climate Change-causing Green House Gases and reducing non-renewable liquid and gas use, we need serious actions.

The first steps needed are:

1. Including the price of GHG effects in the pricing of renewable and non-renewable fuels.
2. Committing serious money to focused renewable fuel research and infrastructure development.

The simplest and fastest way to accomplish this is by adding a **Non-Renewable Carbon User Fee** to the portion of liquid transportation fuels and natural gas made from non-renewable sources. Estimates for the Climate Change effects of these fuels begin at about **\$50/ton of non-renewable carbon** and increase to over **\$100/ton** when costs for research and infrastructure changes are included.

While these costs may sound overpowering, they translate into **only 3.5% to 7% increases** in current fuel prices. *This is less than typical monthly fluctuation in most gasoline prices.*



More important, as renewable content increases, the fee for the consumer decreases.

If renewable content was increased from the current 10% to an achievable goal of 85%, an average motorist would see a reduction of \$ \$92.40 to \$17.60.

**Annual Non-Renewable Carbon Fuel User Fee
12,000 miles @ 27mpg = 440 gallon/year**

	\$50/Ton Non-Renewable Carbon	\$75/Ton Non-Renewable Carbon	\$100/Ton Non-Renewable Carbon
0% Renewable Fuel Fee/Gallon	\$ 0.13	\$ 0.19	\$ 0.25
Annual User Fee	\$ 57.20	\$ 83.60	\$ 110.00
10% Renewable Current E10 Fuel Fee/Gallon	\$ 0.11	\$ 0.16	\$ 0.21
Annual User Fee	\$ 48.40	\$ 70.40	\$ 92.40
30% Renewable Proposed Tier 3 Fuel Fee/Gallon	\$ 0.08	\$ 0.13	\$ 0.17
Annual User Fee	\$ 35.20	\$ 57.20	\$ 74.80
85% Renewable E85 Fuel Fee/Gallon	\$ 0.02	\$ 0.03	\$ 0.04
Annual User Fee	\$ 8.80	\$ 13.20	\$ 17.60

Is the Non-Renewable Carbon User Fee Never Ending?

No. The fee is designed to disappear as renewable fuels replace non-renewable. For instance, once renewable content increases to 85% and mileage increases become fleet-wide, the income from the fee will fall dramatically. In fact, *legislation should cancel the fee when income drops below \$500 million/year.*

Projected Non-Renewable Carbon User Fees from US Motor Vehicles

Potential Fee Revenue	\$50/Ton Non-Renewable Carbon	\$75/Ton Non-Renewable Carbon	\$100/Ton Non-Renewable Carbon
Year 1	\$4.8 Billion	\$7.2 Billion	\$9.6 Billion
End Year R85 Fuel & 35% Mileage Increase	\$535 Million	\$803 Million	\$1.07 Billion

Use of the Non-Renewable Carbon User Fee

The fees should be used in only two ways.

- **Renewable Fuel R&D:** An immediate Apollo type program should be funded with between 50% and 60% of the fees. It should be *administered by the National Science Foundation* (NSF) and be focused on getting non-food biomass fuels and gases into the pipeline in less than 7 years. A sustainable renewable fuel industry will not only cut petroleum imports and tremendously reduce US oil and gas extraction

damage, but more important, create good jobs for Americans in research labs, rural towns, and urban manufacturing plants.

- **Renewable Fuel Infrastructure:** The upgraded fuel pumps and decentralized processing/distribution modules would be funded with between 40% and 50% of the fees. These programs would be *run by the states* with funding available via the existing USDA Biofuel Infrastructure Partnership grant program. States know what the needs are and the most effective ways to address them.

Collection of the Non-Renewable Carbon User Fee

The collection of this user fee *would not require new bureaucracies*. Existing consumer point-of-sale fuel and utility tax collections systems would be used.

Environmental Justice Considerations: Real, Practical, Visible Benefit to People Who Need It Most.

A tax on the non-renewable portion of gasoline makes transition to less expensive, more renewable fuel a real option. As the proceeds from the tax expand the infrastructure (pumps, engine design/production) to optimize availability and use of greater portions of ethanol, biodiesel, renewable diesel, renewable natural gas or other components in the fuel, everyone should have more renewable choices. Market forces will enhance demand for more renewable fuels (including more renewable electricity for EVs).

If low income and poor air quality areas are given priority for upgraded fuel pumps, cleaner, less-polluting and less expensive options will benefit those most in need of these advantages of renewable fuels.

This will also accomplish the goal of getting cleaner fuel at a lower price to people who will be driving liquid-fueled vehicles now and for many years to come. It will improve the emissions from older vehicles until the market provides newer, more efficient, high octane/high ethanol engines options.

Expansion of the Non-Renewable Carbon User Fee to Natural Gas

The Non-Renewable Carbon User Fee should be applied to commercial, industrial, and residential users. The same renewable research and infrastructure funding approach should be used.

When available, the contribution of renewable natural gas/biomethane to the power grid should be factored in. As eRINs, or the electric pathway for renewable identification numbers under the Renewable Fuel Standard, are determined, that information will inform non-renewable carbon user fees applied to natural gas use for power generation or eventual transportation use.

Special emphasis should be placed on the *immediate large-scale use of distributed solar and wind and decentralized energy storage in all sectors*.

Annual Non-Renewable Carbon User Fee: Average Residential Household

Natural Gas: Average Residential Use					
Annual Therms	800		Monthly Cost @ \$1.2/Therm	\$ 80.00	
Monthly Therms	66.7		Annual Cost @ \$1.2/Therm	\$ 960.00	
Natural Gas: 0% Renewable			\$50/Ton Non-Renewable Carbon	\$75/Ton Non-Renewable Carbon	\$100/Ton Non-Renewable Carbon
Monthly User Fee on	\$ 80.00		\$ 8.95	\$ 13.42	\$ 17.90
Annual User Fee on	\$ 960.00		\$ 107.39	\$ 161.08	\$ 214.77
Percent User Fee			11.2%	16.8%	22.4%
Natural Gas: With 30% Renewable Substitute					
Monthly User Fee on	\$ 80.00		\$ 6.26	\$ 9.40	\$ 12.53
Annual User Fee on	\$ 960.00		\$ 75.17	\$ 112.76	\$ 150.34
Percent User Fee			7.8%	11.7%	15.7%
Natural Gas: With 85% Renewable Substitute					
Monthly User Fee on	\$ 80.00		\$ 1.34	\$ 2.01	\$ 2.68
Annual User Fee on	\$ 960.00		\$ 16.11	\$ 24.16	\$ 32.22
Percent User Fee			1.7%	2.5%	3.4%

References:

New Engine Technologies Could Produce Similar Mileage for All Ethanol Fuel Mixtures Robert Kozak:

Atlanticiomass@aol.com for Advanced Biofuels USA (Updated Version: August 2012)

<https://advancedbiofuelsusa.info/wp-content/uploads/2012/08/New-Ethanol-Engine-Tech-Revised-Aug-2012-Formatted.pdf>

Ford Motor Company Appendix A: Literature Review of Benefits of High Octane/High Ethanol Fuels

<https://advancedbiofuelsusa.info/wp-content/uploads/2013/07/Appendix A Literature Review of Benefits of High Octane High Ethanol Fuels1-2.pdf>

Average annual prices for wholesale ethanol and E85 for two years and projections out 20 to 25 years compared to gasoline and other transportation fuels in the Transportation section of Table 12 of the *Annual Energy Outlook*.

<https://www.eia.gov/outlooks/aeo/data/browser/#/?id=12-AEO2018&cases=ref2018&sourcekey=0>

US Energy Information Agency *Today in Energy*: Daily wholesale and retail prices for various energy products including E85 and gasoline <https://www.eia.gov/todayinenergy/prices.php>

Advanced Biofuels USA, an educational nonprofit organization, advocates for advanced biofuels as an *energy security, economic development, military flexibility and climate change solution*. Technology neutral and feedstock agnostic, it serves as a resource for everyone from opinion-leaders, decision-makers and legislators to industry professionals, investors, researchers, educators and journalists. Revised August 2019