New PPGRT Guidance for Burnout Portion of Aviation Fuel in Interstate/Foreign Commerce

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Tax: Petroleum Products Gross Receipts Tax

NEW GUIDANCE FOR CALCULATING THE PETROLEUM PRODUCTS GROSS RECEIPTS TAX (PPGRT) ON THE BURNOUT PORTION OF AVIATION FUEL USED IN INTERSTATE AND FOREIGN COMMERCE (EFFECTIVE JULY 1, 2025)

The Petroleum Products Gross Receipts Tax Act, which imposes tax on gross receipts from the first sale of petroleum products within New Jersey, contains an exclusion for receipts from sales of aviation fuels used by common carriers in interstate or foreign commerce, *other than the burnout portion,* which is taxable pursuant to rules promulgated by the director. This Technical Bulletin provides updated guidelines and a new equation to determine how the burnout portion of aviation fuel used by common carriers engaged in interstate or foreign commerce is calculated for Petroleum Products Gross Receipts Tax (PPGRT) purposes.

EXPLANATION OF METHODOLOGY

The Division reviewed the previous methodology for taxing the burnout portion, as set forth in the Division's Aviation Fuel Consumption Chart and determined that a new procedure was necessary that would account for additional aircraft not on the chart, to account for improvements in aircraft fuel efficiency, and to provide clarity as to the portion of departure fuel that is taxable.

The PPGRT is applied to the fuel used in the taxi and takeoff phases of each common carrier interstate or foreign commerce flight (the burnout portion), rather than to all fuel consumed while flying above New Jersey. The completion of the taxi and takeoff phases represents the logical separation point of an interstate or foreign commerce flight from New Jersey.

The Division is defining takeoff to coincide with the Federal Aviation Administration's 14 C.F.R. § 25.111 definition of "takeoff path," which establishes the end of the takeoff path as when the aircraft reaches 1,500 ft. The Division is taking a conservative approach in applying this takeoff path definition by disregarding the VFTO (final takeoff speed) aspect of it.

In order to impose the tax on fuel consumed in taxiing and takeoff to 1,500 ft., the Division sought a methodology that would tax aircraft equitably among airlines, consistently between periods, verifiably to the Division, and adaptively to account for new aircraft and improved engine efficiencies.

A determination was made to tie the taxable burnout portion to the Type Certificate Data Sheet ("TCDS") for each aircraft variant, which is an official FAA document that is publicly available and its approval is required before an aircraft can operate. By referencing data from the official TCDS in the burnout portion calculation, the Division's goals for the methodology are achieved, except for adapting to fuel efficiency, which is addressed separately.

To determine how the TCDS would be utilized, a study was conducted between several members of the airline industry and the Division, involving departures of common carrier aircraft engaged in interstate or foreign commerce. The study involved the collection and analysis of consumption data spanning five years from airline engineers of airlines representing greater

than seventy percent of the current passenger aircraft departures from Newark Liberty International Airport. The data included actual fuel consumed in all New Jersey departures of the participating airlines during taxi and in takeoff to 1,500 ft.

The airline consumption data was compared to various specifications on the associated TCDS. The analysis between the two data sets revealed that the Maximum Landing Weight (MLW) from the TCDS for each aircraft had the strongest correlation to the consumption data. As such, this specification was selected as the definitive variable to utilize in the creation of an equation that would replicate the consumption data with the least variance. That equation is the "(.0008x + 19.1056)" portion of the burnout portion equation below, where "x" represents the Maximum Landing Weight, as found on the aircraft variant's TCDS.

An equation not only replicates fuel burned in taxi and takeoff, but also allows for consistency between time periods, which results in the equitable treatment of airlines, as all will be liable for the same amount of tax for a particular aircraft variant. An equation also accounts for all aircraft, including future aircraft, whereas a chart would be limited to the aircraft on the chart and would not account for improvements in fuel efficiencies. **The new methodology is effective on and after July 1, 2025.**

EQUATION/DEFINITIONS

"Burnout portion" means the following equation which represents the replication of actual fuel gallons consumed in New Jersey during the taxiing and takeoff path based on a study conducted between members of the airline industry and the Division, as applied to departures of common carrier aircraft engaged in interstate or foreign commerce and rounded to the nearest gallon:

Burnout portion = (.0008x + 19.1056) * FEF

The burnout portion, as defined, does not allow for any deductions or adjustments.

"Taxiing and takeoff path" means the phase of an aircraft departure from when the aircraft leaves the gate to 1,500 feet above the takeoff surface, a metric derived from the Federal Aviation Administration's definition of "takeoff path," per 14 C.F.R. § 25.111.

"x" in the burnout portion equation means the Maximum Landing Weight ("MLW") in pounds for the aircraft variant as found on the variant's official approved Federal Aviation Administration Type Certificate Data Sheet ("TCDS"), which must be kept on file for a minimum of four years from the later of the due date of the return or the date the return was filed.

"FEF" in the burnout portion equation means the Fuel Efficiency Factor and is a single value established as "1" upon implementation to reflect current engine fuel efficiencies and updated by the Division every ten years beginning with 2034 and going into effect January 1st of the following year to account for changing engine fuel efficiencies in the industry, provided that the Division is supplied with the necessary information from the Leading airline by September 30th of the update year.

"Engine fuel efficiency" is measured by calculating the weighted average of the Thrust Specific Fuel Consumption ("TSFC") rates at 15 degrees Celsius of the Leading aircraft type from the Leading airline by incorporating the number of Newark Liberty International Airport departures and MLW's of the variants at the Division's discretion.

"Leading airline" means the airline with the highest market share of commercial passenger aircraft departures at Newark Liberty International Airport through June 30th of the update year.

"Leading aircraft type" means the Leading airline's most used aircraft type in New Jersey through June 30th of the update year.

"Aircraft type" means the overall aircraft design, for example, the "B737" in all B737 aircraft.

"Variant" means the most specific aircraft model as found on the TCDS, for example, the B737-800 as opposed to the B737.

"Update year" means a year in which the FEF will be updated but not go into effect until January 1st of the following year, and will occur every ten years beginning with 2034.

ADDITIONAL MAXIMUM LANDING WEIGHT (MLW) RULES

The burnout portion must be calculated down to the most detailed variant available in the TCDS's MLW section. If the airline is unable to track departures to this level of detail, it must use the highest MLW indicated on the TCDS based on all MLWs that fall within the level of detail the airline is able to track.

If the TCDS does not list the MLW and instead refers to the aircraft's flight manual for the MLW figures, the MLW is determined from the manual. The manual must also be kept on file for a minimum of four years from the later of the due date of the return or the date the return was filed.

If an airline fails to determine its burnout rates, a flat rate of 800 gallons per departure must be used. The 800-gallon rate was derived by taking the MLW of the world's largest passenger aircraft, the A380, which at the time this bulletin was promulgated was 869,000 pounds, rounding up to 1 million pounds to account for future heavier aircraft, and applying the burnout portion equation to arrive at 819 gallons, which is truncated to 800 gallons.

If it is not clear which MLW to utilize due to unforeseen or unusual circumstances and the solution is not readily ascertainable, the airline must reach out to the Division for guidance and approval on how to proceed, at: Fuel.Tax@treas.nj.gov. If the Division determines that an airline utilizing this specific process is not justified in doing so and that instead the airline has not attempted to determine its burnout rates, then the Division may reject such inquiries at its discretion and require the airline to utilize the 800-gallon rate as described above.

FUEL EFFICIENCY FACTOR (FEF) PROCESS

The FEF is determined by the engine fuel efficiency. It begins as the number 1 since current efficiency rates are already reflected in the base burnout portion equation (".0008x + 19.1056"), so there is no need for adjustment to reflect changing efficiencies between two different periods.

The FEF is updated every ten years with the changes going into effect January 1st of the following year. As such, the update years are 2034, 2044, 2054, etc., with the changes going into effect January 1, 2035; January 1, 2045; and January 1, 2055, etc. The 2024 year serves as the first referenced update year beginning with the first actual update that occurs in 2034.

The FEF is adjusted based on the percentage change in efficiency of the update year from the prior efficiency.

The efficiencies are determined from the Leading aircraft type of the Leading airline and the data must be submitted to the Division's Fuel.Tax@treas.nj.gov account, by September 30th of the update year. The Division will post a Fuel Efficiency Factor Worksheet on its website for the Leading airline to use or reference for each update year, specifying the fields of data required to reflect the January to June departures at Newark Liberty International Airport. The Division reserves the right to update this worksheet at its discretion.

If the Leading airline and Leading aircraft in the update year are the same as the prior update year, then only one set of data must be provided to the Fuel.Tax@treas.nj.gov account by September 30th of the update year, which is the updated efficiency data of the Leading aircraft type from the Leading airline which serves as both a metric for determining the change in efficiency from the prior update and as a benchmark for the next update.

If either the Leading aircraft type or Leading airline in the update year is different from the prior update year, then two sets of efficiency data must be supplied to the Division by September 30th of the update year by an email to the Fuel.Tax@treas.nj.gov account, in order to compare current efficiency to prior efficiency and also to establish a new efficiency base:

1) The updated prior Leading aircraft type efficiency data provided by the prior Leading airline.

2) The current Leading aircraft type efficiency data provided by the current Leading airline.

To determine how the FEF is to be updated in the update year, the current efficiency is compared to the prior efficiency, and the FEF is then adjusted by that same percentage change.

If the Leading airline fails to provide the Division with efficient data by September 30th of the update year, there is no update effective the following January 1st.

The Division administers the FEF update at its discretion and reserves the right to adjust the process to most accurately and reasonably reflect changing fuel efficiency.

BURNOUT PORTION EQUATION EXAMPLES

Example 1: The Y aircraft type includes three variants, the Y-100, Y-200 and Y-300. In 2025, Airline ABC is trying to determine the burnout rate for its Y aircraft type, which includes two variants, the Y-100 and the Y-200. The MLW of Y-100 is 100,000 pounds and the MLW of Y-200 is 110,000 pounds. The MLW of the Y-300 is 120,000 pounds. Assume there are no other Y variants in existence.

a) If ABC tracks departures by Y-100 and Y-200, the burnout calculations are as follows:
   Y-100: (.0008(100,000) + 19.1056) * 1 = 99 gallons
   Y-200: (.0008(110,000) + 19.1056) * 1 = 107 gallons

b) If ABC knows and can prove it only flies the Y-100 and Y-200, but it doesn't track departures beyond the Y aircraft type, it must use 107 gallons, the highest MLW of the level of tracking available to ABC.

c) If ABC knows it only flies Y aircraft types, with no knowledge of the variants, it must use the Y-300 MLW to calculate the burnout, as this is the highest MLW variant in the Y aircraft type family.

FEF EXAMPLES
Airline ABC was the initial Leading airline in 2024. The B737 was the initial Leading aircraft type in 2024.

Example 1: On June 30, 2034:
ABC is still the Leading airline. The B737 is still the Leading aircraft type.
By September 30, 2034, ABC must submit an updated FEF Worksheet for the B737.

Example 2: On June 30, 2034:
ABC is still the Leading airline. The A320 is now the Leading aircraft.
By September 30, 2034, ABC must submit an updated FEF Worksheet for the B737 and an FEF Worksheet for the A320.

Example 3: On June 30, 2034:
ABC is not the Leading airline. XYZ is the Leading airline.
The A320 is the Leading aircraft type.

By September 30, 2034, ABC must submit an updated FEF Worksheet for the B737, and XYZ must submit an FEF Worksheet for the A320.

Example 4: On June 30, 2034:
ABC is not the Leading airline. XYZ is the Leading airline.
The B737 is the Leading aircraft type for XYZ.

By September 30, 2034, ABC must submit an updated FEF Worksheet for the B737, and XYZ must submit an FEF Worksheet for its B737 usage.

Example 5: In 2024, the Division calculated efficiency to be .8. In 2034, the updated efficiency data resulted in a new efficiency calculation of .7, which is a 12.5% increase in efficiency. This percentage change would then be applied to the active FEF, which is "1" in 2034, to arrive at .875. Effective January 1, 2035, the updated equation would be posted on the Division's website as follows: (.0008x + 19.1056)*.875. This reflects a decrease of the FEF value of 1 by 12.5%.

The Division intends to amend the regulation on Aviation fuels (N.J.A.C. 18:18A-6.3) to reference the new methodology described in this Bulletin.

Note: A Technical Bulletin is an informational document that provides guidance on a topic of interest to taxpayers and may describe recent changes to the relevant laws, regulations, and/or Division policies. It is accurate as of the date issued. However, taxpayers should be aware that subsequent changes to the applicable laws, regulations, and/or the Division's interpretation thereof may affect the accuracy of a Technical Bulletin. The information provided in this document does not cover every situation and is not intended to replace the law or change its meaning.