


CR 2023/50 - Nuonic Pty Ltd - Prism software platform - vehicle activity measurement (kilometres and time) for fuel tax credit purposes

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Class Ruling

Nuonic Pty Ltd – Prism software platform – vehicle activity measurement (kilometres and time) for fuel tax credit purposes

❶ Relying on this Ruling

This publication is a public ruling for the purposes of the *Taxation Administration Act 1953*.

If this Ruling applies to you, and you correctly rely on it, we will apply the law to you in the way set out in this Ruling. That is, you will not pay any more tax or penalties or interest in respect of the matters covered by this Ruling.

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What this Ruling is about

1. This Ruling sets out when the portable document format (PDF) version of the monthly Vehicle Activity Apportionment Report¹ (the Report) generated by Nuonic Pty Ltd's (Nuonic) Prism software platform (Prism platform) can be used as a record (but not the only record) for record-keeping purposes for fuel tax credit purposes.
2. Details of this scheme are set out in paragraphs 22 to 67 of this Ruling.
3. This Ruling is limited to the initial allocation of kilometres travelled by a vehicle, idle time and auxiliary equipment engagement time (if applicable), where the activity data is captured by a Geotab GO vehicle tracking device (GO7 and GO9 only). The Ruling does not extend to the subsequent steps within the Prism platform that relate to the apportionment (including fuel) methodology and the results generated.
4. This Ruling does not:
 - rule on whether particular roads are public roads for the purposes of the *Fuel Tax Act 2006*
 - extend to determining entitlement to claim and calculation of fuel tax credits
 - extend to determining whether the road user charge is correctly applied in the apportionment methodology

¹ A number of reports are generated by Nuonic Pty Ltd's Prism software platform but this Ruling is limited to the initial report, that is, the Vehicle Activity Apportionment Report.

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- rule on whether the methodology or processes used to determine location and the nature of the activity taking place at that location are correct
- rule on whether the fuel consumption rates or other inputs are correct and support the actual fuel use by the vehicles and auxiliary equipment, and
- address the assessability of fuel tax credits for income tax purposes.

5. Although the Prism platform generates an estimate of the fuel tax credit entitlement, clients to which this Ruling applies (refer to paragraph 7 of this Ruling) need to check the calculations and inputs to ensure the methodology for claiming fuel tax credits is fair and reasonable. Paragraph 3 of this Ruling makes it clear that the Ruling is limited in scope and does not extend to the calculation and estimation of the fuel tax credit amounts. As Nuonic is not a tax adviser, clients are encouraged to seek independent tax advice on any fuel tax credit taxation issue, including entitlement issues relating to results generated by the Prism platform and outlined in the relevant disclaimers on the report and both the Nuonic and Prism websites.

Note: By issuing this Ruling, the ATO is not endorsing the Prism platform or the Geotab GO7 or GO9 device. Potential Nuonic clients (purchasers or users) must form their own view about the Prism platform.

6. All legislative references in this Ruling are to Schedule 1 of the *Taxation Administration Act 1953*, unless otherwise indicated.

Who this Ruling applies to

7. This Ruling applies to you if you are a client of Nuonic that:
- is registered for goods and services tax
 - uses a Geotab G07 or G09 telematics device to capture vehicle activity data, and
 - generates and uses the Report for measuring the kilometres travelled, idle time and auxiliary equipment engagement time (such as when the power take-off (PTO) is engaged) as part of calculating the extent of your fuel tax credit entitlement.

Although the Prism platform can perform analysis of vehicle data recorded by a number of telematic devices, this Ruling is limited to clients of Nuonic that use Geotab G07 and G09 devices only.

When this Ruling applies

8. This Ruling applies to taxable fuel acquired on or after 1 January 2023 to 30 June 2024.

When this Ruling does not apply

9. This Ruling will not apply:
- if the scheme carried out is materially different to the scheme outlined in paragraphs 22 to 67 of this Ruling – this Class Ruling will have no binding effect on the Commissioner because the scheme entered into is not the scheme on which the Commissioner has ruled

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- if there are software and system updates that will materially affect the allocation of distance, apportionment and results that will be set out in the relevant report
- where inputs such as consumption rates are used on account creation in the upload steps of the product
- if inputs such as consumption rates used by the client have been distorted or do not reflect the vehicle or vehicles' consumption rate
- if roads have been incorrectly classified as non-public roads or areas² to achieve specific outcomes, and
- where results of the product have been distorted or errors have not been rectified to ensure the methodology is fair and reasonable.

10. This Ruling does not extend to the steps and results following the allocation of kilometres travelled, idle and auxiliary equipment operation time.

Ruling

11. Subsection 382-5(1) provides that an entity must keep records that record and explain all transactions and other acts it engages in that are relevant to an entitlement to a fuel tax credit.

12. An entity must retain those records for at least 5 years after the completion of the transactions or acts to which they relate.

13. Subsection 382-5(8) provides that the records must be in English, or easily translated into English, and enable an entitlement under an indirect tax law (that is, fuel tax) to be ascertained.

14. The Vehicle Activity Apportionment Report provides the following information during the selected periods:

- device ID
- vehicle category
- description
- total kilometres
- off-road travel kilometres
- off-road travel kilometres (percentage)
- total idle time
- off-road idle time
- off-road idle time (percentage)
- total operating time
- auxiliary operating time
- auxiliary operating time (percentage), and

² Meaning of public road outlined in Fuel Tax Ruling FTR 2008/1 *Fuel tax: vehicle's travel on a public road that is incidental to the vehicle's main use and the road user charge*.

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- trip count.

15. The Report is produced in English and is sent by email to a nominated recipient or recipients for each client in PDF format.

16. The Report is also made available via a web interface which allows the report detail to be downloaded in a PDF or spreadsheet format and provides a range of additional tools to support more detailed analysis of the data used to produce the report.

17. The information provided in the Report forms part of the formula to determine the extent of the taxable fuel used in the vehicle to be apportioned for fuel tax credit purposes.

18. An extract of the disclaimer in the Report states:

... This report has been prepared for the primary purpose of estimating an apportionment of fuel use between travel on public roads and otherwise and for vehicle propulsion and otherwise during a specified period (Apportionment) based on Global Positioning System (GPS) and related vehicle data provided by you and/or your vehicle tracking (Telematics) technology provider (Vehicle Data).

Nuonic Pty Ltd does not provide tax advice and nothing within this report should be relied upon as such.

There are many factors and considerations which influence entitlement to Fuel Tax Credits beyond the Apportionment and this report does not guarantee an entitlement to Fuel Tax Credits.

You are encouraged to seek professional tax advice before acting upon any of the information in this report.

19. The Report is a document that satisfies the requirements of a record for the purposes of subsection 382-5(8).

20. Provided the Report is retained for 5 years, or in accordance with the specific requirements under section 382-5, it can be used as a record for record keeping purposes in respect of fuel tax credit claims.

21. However, the Report will not be the only record required to be produced or retained for fuel tax credit purposes. Other evidence or reports could include:

- data input information reports and source data records
- reports showing accuracy of fuel consumption rates used for vehicles and other inputs
- fuel acquisition records (such as tax invoices)
- confirmation of location and time (such as driver job sheet)
- documentation to verify that the environmental criteria has been satisfied
- documentation on the use of fuel along with supporting evidence demonstrating the accuracy of information from the Report and calculations of credits and this can include
 - total litres after information from other source documentation has been incorporated
 - litres based on the categorisation of travel on public roads and off public roads
 - litres used in auxiliary equipment (where applicable)
 - litres used while the vehicle is idling off-road based on time and the categorisation of off-road use

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- evidence of other assurance or process checks that have been undertaken to ensure that the amounts included in the Report are accurate.

Scheme

22. The following description of the scheme is based on information provided by the applicant. If the scheme is not carried out as described, this Ruling cannot be relied upon.

23. Certain information has been provided on a commercial-in-confidence basis and will not be disclosed or released under Freedom of Information legislation.

Overview of the Prism platform

24. The Prism platform, developed by Nuonic, is a cloud-based online platform that receives and analyses vehicle data from global positioning system (GPS) devices.

25. The GPS tracking device is installed in the client's vehicle. The client must use a Geotab GO7 or GO9 device (Geotab device) installed in accordance with Geotab's installation guides by a qualified installer.

26. The Prism platform collects, stores, and processes the data received from the Geotab device to generate various reports, dashboards and other outputs for clients, including the Report.

27. The Report can be used by a client to apportion kilometres travelled on public roads and otherwise (off public road) and to record idle and auxiliary equipment operating time.

Tracking devices

28. Nuonic does not provide, install or control the Geotab devices. The client needs to ensure the device is installed in accordance with Geotab's installation guides by a qualified installer.

29. The device records activity for each journey the vehicle undertakes automatically with no user interaction required, from ignition on to ignition off. The data provided by the Geotab system to the Prism platform includes the set of positions recorded across the journey and the aggregate kilometres, operating time, idle time and auxiliary operating time.

30. The device uses a patented 'curve logging' tracking algorithm which transmits tracking messages at intervals ranging from 1 to 100 seconds, allowing the device to keep only the points necessary to give an accurate representation of the data as possible, as dictated by the predetermined allowable margin of error. The device keeps checking the points of maximum error (for example, turn points). If the difference between the predicted and actual position is significant, the points are sent and if the difference is small, the points are not sent. This ensure critical information about the vehicle, such as critical high or low values for speed and cornering, are not missed.

31. The Geotab devices do not send data directly to the Prism platform. They send data to Geotab's global system which then makes the data accessible to the Prism platform via Application Programming Interfaces (API) as required.

32. The data collected by the device is transmitted via cellular or satellite connection to Geotab's database. The Prism platform connects with Geotab servers to access vehicle

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activity data via REST API (an API that conforms to representational state transfer style or criteria) calls executed and managed by the Prism platform's control system. The Prism platform requests data for each client account approximately 3 times daily, obtaining the last 2 days of records in each case (known as a 'job').

33. Each data request accesses the following Geotab data:

- devices – returns device identifiers and installed vehicle specifications
- trips – returns trip start, end and next trip start time and locations
- log data – returns the detailed GPS positions and times during the trip, and
- diagnostics – returns event data including ignition changes and auxiliary equipment activation.

34. The data received is then processed by the Prism platform to determine the apportionment between on and off-road activity. Following the end of each calendar month, the Prism platform generates the Report using the data collected for the period.

35. At each step the data is encrypted in transit (when data is being sent from the device to the Geotab platform and from the Geotab platform to the Prism platform) and at rest (when the data is stored in the Geotab databases and the Prism platform databases). If the device loses cellular connectivity and is unable to transmit the data it is stored on the device until connectivity is available.

The Portal

36. The Prism platform provides tools in its web portal that allow clients to visualise individual journeys, showing the on or off public road classification of each position, as well as algorithmically-produced visualisation reports showing the most significant concentrations of on and off public road activity.

37. Clients can selectively exclude any individual journeys that they deem to contain inaccurate data.

38. All client activities that add, update or delete data in the Prism platform are logged for audit purposes.

Vehicle location data

39. The Prism platform maintains a proprietary database of public roads, private property and other land features relevant to the apportionment of vehicle activity. The data is compiled from multiple sources including Australian state governments, independent mapping organisations and Prism customer and partner contributions.

40. The Prism platform includes various tools to analyse and adjust the spatial data. Nuonic has been conducting spatial data analysis for a number of years and continuously works to improve and update the data.

41. All the data from the multiple sources are combined into a single data set. Most of the source data set contain public roads in addition to other features such private roads, footpaths and off-road tracks. The Prism platform applies filters to remove features that are not public roads from the final output.

42. The output used by the Prism platform contains only polygon features, therefore, any line data inputs are transformed into polygons to determine if the vehicle (its GPS position) is within a public road. The process is called buffering, that is distance in meters

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from the line in each direction based on the category of the road. A GPS position outside of this buffer is considered off public road.

43. Categories of road are determined by mapping the categories within each data set to a set of generic categories defined by Nuonic, to standardise across all sources. The radius values for each category have been determined through visual and quantitative analysis conducted by Nuonic and are reviewed periodically to continuously optimise classification accuracy.

44. Following filtering for public roads, all source data sets are then combined into a single National Public Road layer (table) and are present in the final output.

45. Custom features are then created by allowing spatial shapes to be drawn onto maps to create a boundary of certain locations that are to be classified as off-road. For example, an off-road facility may be incorrectly captured as being on public road can have the boundary drawn to reclassify the location as off-road.

46. Custom features and any adjustments to road features are generally proposed as a result of client feedback, internal analysis by Nuonic or publication of relevant public road information (for example, press releases and ATO notifications). All new feature proposals go through an evaluation process before implementation.

Idle and auxiliary equipment operating time

47. The GPS devices record the time spent driving, idling, and stopped with engine off for each journey.

48. They can be optionally configured to record operating time for PTO-based auxiliary equipment.

49. The data is used by the Prism platform to determine the idle and auxiliary operating time.

50. Idle time is apportioned by calculating the total time of all positions that are classified as off public road and subtracting this result from the total idle time to get an apportionment between on and off public road idling. The report captures the total idle time, the percentage of off-road idle time, the total operating time and auxiliary operating time (including percentages) as set out in paragraph 61 of this Ruling.

51. The data for PTO operating time is provided by Geotab as a series of events recording the engagement and disengagement of the PTO by the vehicle operator, with a precise timestamp. Idle and PTO are distinct events, that is, time recorded for PTO is based on an on or off event whereas idle relates to positions during a trip where no movement occurs.

Activity apportionment for Report outputs

52. To calculate activity apportionment for the Report outputs including the off-road kilometres percentages and the time (idle and auxiliary time) percentages, the Prism platform executes the following steps:

- obtains vehicle activity data from the client's Geotab devices
- calculates the time and distance between each point in each trip
- determines the state of the vehicle at each point, being either driving (moving) or idling (engine switched on but not moving). This step includes PTO-based auxiliary equipment if configured

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- compares each position to the Prism platform's spatial reference data set to determine the 'public' or 'non-public' road classification
- aggregates the results of the analysis, to vehicle, time period and fleet levels. The standard reporting period is a calendar month and includes a split between fuel tax credit rate periods if changed within the month, and
- calculates the apportionment percentages for distance and time.

Controls and governance

53. The Prism platform includes an integration with the Geotab system that handles data transfer, so Prism can obtain vehicle activity data from the client's Geotab device.

54. The accuracy of GPS position readings is wholly dependent on the performance of the Geotab devices installed in client vehicles. These devices are not modifiable or controllable by either Nuonic or clients, once the devices are installed.

55. However, Nuonic has conducted sample physical testing to observe the accuracy and alignment of Geotab's GO9 telematics devices, when integrated with Prism platform, with respect to key measurements of the vehicle activities. This includes measurements of distance travelled, driving time, idling time and vehicle position recorded as latitude and longitude coordinates.

56. The physical testing process involves the vehicles travelling in various locations and conditions (for example, rural, tunnels, high trees, mountainous areas et cetera) multiple times (at least 5 times each route) and recording real-time data to compare with the data recorded by the Geotab device and the Prism platform.

57. All positions used in the Prism platform processing can be visualised through the Trip Viewer feature in the Portal, and the complete point set can be downloaded via the Audit Reports section. This allows for an evaluation of the quality of the position data.

58. The Prism platform calculates the distance between points using the GPS positions and the inverse geodetic, or great-circle, computation for distance (the shortest distance between 2 points on the surface of a sphere). The Prism platform ensures the points are within the Geotab-defined trips, where trips, positions and ignition events are evaluated together.

59. There are various sources of error that may affect the GPS data and the mapping data. The controls in place to mitigate these sources of error are:

- Incomplete or inaccurate GPS data that are due to signal blockage, reflection or interference. In these cases the Geotab device determines distance by algorithm, removing inconsistent GPS positions. This is a Geotab device feature to ensure only a clean set of positions are provided to Prism platform.
- GPS wobble, or transient fluctuations around a position, can lead to incorrect off-road assignment in some cases. This is mitigated through the Geotab curve algorithm, and processes in the Prism platform that require at least 4 off-road points to confirm the classification. The Prism platform road data can also be selectively buffered to add extra width to roads in areas where fluctuations are generally higher, often dense urban areas or deep valleys.
- Road location and shape data may be inaccurate due to new or evolving infrastructure or short-term adjustments for construction and maintenance

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which may incorrectly classify positions. This is mitigated through a range of tools provided in the Prism platform for clients to assess, verify or modify road data, combined with the continuous analysis, reviews and updates conducted by Nuonic staff.

60. There are algorithms in place for each specific client to identify their most contributing off-road locations. This is useful because every client's off-road travel is different. This information is available via audit reports to allow the client to identify, review and correct any material errors where required.

61. One of the primary mitigants of risk involves Nuonic ensuring clients of the Prism platform are well educated regarding the systems capabilities, limitation and their responsibilities. Nuonic does this by taking all new clients through the same process where each component of the system is explained in detail, along with providing access to helper documents for future references.

62. All client activities such as adding, updating or deleting data in the Prism platform are logged for audit purposes.

63. Nuonic also run system data checks across all Geotab Prism accounts before sending monthly reports to clients. If any unusual or unrealistic results are identified, the relevant clients are notified and further action may subsequently be taken as required, such as further analysis, filtering or adjustment of client account settings.

The Vehicle Activity Apportionment Report

64. The Report generated by the platform contains the following information for each vehicle that is being tracked with Geotab devices:

- device identification
- vehicle category
- description
- total kilometres
- off-road kilometres
- off-road kilometres (percentage)
- total idle time
- off-road idle time
- off-road idle time (percentage)
- total operating time
- auxiliary operating time
- auxiliary operating time (percentage), and
- trip count.

65. The Report is produced in English and is sent by email to a nominated recipient(s) for each client in PDF format.

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66. The Report is also made available via a web interface which allows the report detail to be downloaded in a PDF or spreadsheet format and provides a range of additional tools to support more detailed analysis of the data used to produce the report, including tools specifically designed to assist users in validating off public road activity and potentially anomalous readings such as instances of unusually high idling times.

67. The Reports are saved indefinitely and will not be deleted from the Prism platform.

Commissioner of Taxation

20 September 2023

Status: **not legally binding**

References

Related Rulings/Determinations:

FTR 2008/1

- TAA 1953 Sch 1 382-5
- TAA 1953 Sch 1 382-5(1)
- TAA 1953 Sch 1 382-5(8)

Legislative references:

- FTA 2006
-

ATO references

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