



2023 Traffic Signal Grants

GENERAL GUIDANCE FOR BIDDERS



Department
for Transport



TRANSPORT
TECHNOLOGY
FORUM

REVISION INFORMATION

Version	Title	Date
01	Initial public release	10 November 2023

Background

1. The intention to provide three targeted grants to local authorities for traffic signal maintenance and upgrading, and for innovative traffic management solutions was announced by Mark Harper MP, Secretary of State for Transport in October 2023 as part of the Government's Plan for Drivers.
2. Traffic signals are essential to ensure road junctions work smoothly and safely. Helping local authorities to retune their traffic control systems could free up traffic flow in cities. Technology can be used to manage flow intelligently, reduce queuing, reduce the time drivers spend at red lights and generally speed up journeys. Many traffic signals have not been updated since they were introduced, leading to longer waits than necessary and poor utilisation of road space. Currently, around half of England's traffic signals are working below optimal performance.
3. The provision of government funding and support to local councils will create a benefit in traffic flow for drivers and other road users. We allocated £15 million specifically for traffic signal maintenance in 2021 to 2022 to help authorities replace life-expired equipment and improve operation. This resulted in the delivery of 232 schemes across 39 local authorities in England to tune up traffic signal performance. Initial unpublished data from 88 junction schemes across 27 of these authorities shows an average reduction in vehicle travel times of 8%. This not only reduces frustration but also saves fuel and cuts carbon emissions.

Summary

4. Three grants, totalling **£70 million** have been announced:

- TSOG (Traffic Signals Obsolescence Grant) - A **£30 million** fund to upgrade obsolete traffic signal systems and improve reliability, primarily at sites using halogen lamps and legacy 2g/3g communications but also aimed at unreliable and obsolete equipment more generally. This grant has a **£10m** automatic element paid to all eligible authorities and **£20m** challenge element.
- GLF (Green Light Fund) - A **£20 million** challenge fund to tune up traffic signals to better reflect actual traffic conditions and get traffic flowing.
- ITMF (Intelligent Traffic Management Fund) - a **£20 million** challenge fund to deploy advanced technology for traffic signals, making use of machine learning and artificial intelligence (AI) to optimise traffic flow and balance traffic across wider areas.

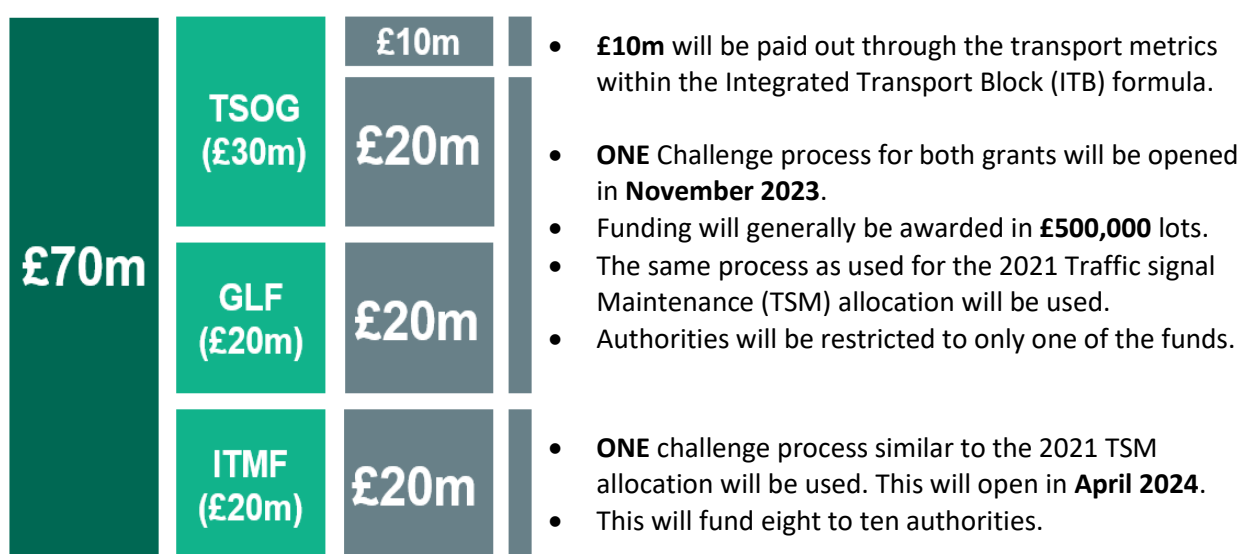
5. Authorities may bid for either the challenge element of **TSOG** or **GLF** (but not both), depending on their needs and there will be a common application process that will be open between **November and December 2023**. Grant funding will be paid to recipients in full in March 2024 and will be required to be spent in the period **April 2024 to March 2026**.
6. For **ITMF** the application process will be open between **April and June 2024** and grant funding paid to recipients in stages and it is anticipated that this will commence in **September 2024**. Grant-funded projects will be required to be completed by **September 2026**. ITMF grants will be paid against agreed milestones during the project delivery period.

Eligibility

7. TSOG and GLF grants will be made using Section 31 of the Local Government Act 2003. ITMF grants will be made under Section 5(1) of the Science and Technology Act 1965.
8. The funds are available to all English local authorities defined as Highway Authorities under Section 1(2) of the Highways Act 1980, excluding London Boroughs. Funds are also available to Combined Authorities excluding Transport for London in England for which powers to pay grant (for transport) under Section 31 of the Local Government Act 2003 have been established.
9. Local authorities in receipt of funding from the 2021 TSM (Traffic Signals Maintenance) Grant are eligible to receive funding through this round of grants.
10. Authorities who have Public Finance Initiative (PFI) arrangements in place that affect areas of activity relevant to this process may apply for funding. However, before doing so, they must satisfy themselves that any grant awarded can be spent within the terms of their PFI arrangements.

Grant Structure

11. All authorities currently in receipt of Highways Maintenance Block (HMB) and / or Integrated Transport Block (ITB) funding will automatically receive an allocation of TSOG funding based on the transport metrics within the ITB formula mechanism. £10m of the TSOG funding will be allocated for this purpose and you will receive this funding even if you do not apply for the additional grant funding outlined below.
12. The remaining £20m of TSOG funding, and the £20m funds for GLF and ITMF will be awarded through challenge processes as outlined below.



13. Authorities defined in paragraph 7 above may apply through the upcoming challenge processes for grant funding for either TSOG or GLF and may additionally apply for ITMF.

TSOG AND GLF AWARDS

14. It is intended that the challenge process allocated element of TSOG will be targeted at authorities who demonstrate particular, unresolved issues with obsolete equipment, including halogen lamps and legacy 2g/3g communications. GLF will be available to those authorities who do not qualify for this but require support to undertake general improvement works to their traffic signal asset. Both grants are aimed at resolving maintenance and reliability issues with traffic signals and Urban Traffic Control systems. No authority will be funded from both TSOG and GLF.
15. Although TSOG and GLF are primarily aimed at traffic signal site equipment, it is recognised that other systems also have a key role to play in effective operation of the road network. Applications that include elements of expenditure to address obsolescence and maintenance issues in ancillary systems, such as VMS, traffic monitoring or UTC will be considered.
16. The challenge allocated element of TSOG and GLF will be allocated in £500,000 lots to successful authorities. No more than one lot will be award to each authority, but individual

larger lots may be awarded in special circumstances. Funding will be awarded by means of revised reissue of their annual Section 31 Local Transport Capital Block Funding (Integrated Transport and Highway Maintenance Blocks) Specific Grant Determination Letter.

ITMF AWARDS

17. ITMF is intended to support the introduction of next generation traffic management technologies for corridor and area-wide optimisation to a small number of English authorities. It is intended to be more research and development focused than TSOG or GLF and is aimed at showcasing a wide range of new and emerging solutions to area-wide traffic management.
18. It is envisaged that local authorities applying for ITMF will have assembled delivery consortia to support their bids. Authorities should be aiming to deliver innovative but practical, workable solutions that demonstrate the application of new technology to corridor and region-wide traffic optimisation. ITMF is intended to provide a small number of 'beacon sites' in which a range of innovative technologies are demonstrated. Although authorities are expected to propose solutions that benefit traffic management in their areas, the ultimate aim of ITMF is to provide real-world showcases of new technologies.
19. Authorities bidding for ITMF are expected to propose solutions that demonstrate the use of emerging trends in computing and data science including AI and machine learning, complex data processing and analysis and new and advanced forms of detection and monitoring. For example, 'traditional' iterations of SCOOT and MOVA based technology are not eligible, but the newer versions offered by TRL, Yunex and Swarco, that utilise elements of the emerging trends outlined above, are. ITMF projects may involve innovative products from established traffic engineering providers but should also include where possible new entrants, SMEs and technology transfer from other sectors.
20. For ITMF, awards of around £2m will be made to between eight and ten successful applicants. ITMF funding will also be awarded following a challenge process. Larger individual awards may be made in exceptional circumstances. It is anticipated that award letters will be issued to successful recipients in September 2024 and initial payments made at this time. The remaining grant amount will be paid in stages at fixed intervals throughout the two-year project delivery period, subject to the attainment of agreed performance milestones. Given the innovative nature of this grant, it is strongly recommended that authorities start to develop plans and assemble consortia as soon as possible.

Application Process

21. The £10m automatically awarded element of TSOG will be paid to authorities via revised Section 31 Grant Determination Letters in March 2024. All eligible authorities will receive this funding even if no application is made for the additional grant funding outlined below.
22. For the challenge elements of TSOG and GLF, a single challenge process will be used. This will aim to understand the policy frameworks and technology aspirations of bidding authorities and their readiness and ability to deliver the required maintenance and enhancement works. Bidding authorities are reminded that although schemes delivered with this grant funding will be primarily aimed at dealing with obsolescence and maintenance issues, they should also align with local policy frameworks and wider local transport objectives.
23. A similar but separate process will be used for ITMF and will also seek to understand the policy frameworks and technology aspirations of bidding authorities and their readiness and ability to deliver complex and innovative technical solutions.
24. The challenge processes will be on-line only and will be hosted on the Transport Technology Forum (TTF) website at www.ttf.uk.net. All eligible authorities will have a dedicated private area on this site to enable them to provide their responses. The process will be supported by TTF delivery partner LCRIG, who will be available to assist authorities with accessing and using this service.
25. The challenge questionnaire for TSOG and GLF is included as Annex A. This will require bidders to provide responses to the questionnaires via on-line forms hosted in the dedicated private areas of the TTF website and provide the opportunity to upload supporting information as required.
26. The challenge process for ITMF will be published in January 2024, but will follow the same principle of responses to high level policy and delivery challenges as TSOG and GLF. Given the greater degree of innovation and complexity expected in projects delivered using ITMF grants, authorities are strongly advised to commence development of proposals as soon as possible, ahead of the opening of the application process in April 2024.
27. The challenge questionnaire for TSOG and GLF includes three parts. Part 1A and 1B which form the formal response to the challenge process. Applications for TSOG or GLF will be assessed based on responses to this part of the questionnaire. Part 2 gathers additional information about the state of the sector. Part 2 will not be used as part the formal assessment but should be completed as it is vital that this information is collected. Details of the challenge questionnaire for ITMF will be made available in January 2024.

Grant Awards

28. The application process for TSOG and GLF will be open during November and December 2023. Bidders may save and return to their applications at any time during this period. The process will be closed, and applications locked at 1200hrs on 22 December 2023. Following assessment, an award announcement will be made in February 2024. Funding will be provided to successful recipients in March 2024 by the issue of a revised Section 31 Grant Determination Letter. For successful Combined Authority recipients, an additional submission as set out in paragraph 36 below shall be submitted to DfT before 15 March 2024 to enable the revised Section 31 Grant Determination Letter to be issued.
29. Further details of the application process for ITMF will be made available in January 2024.
30. For all grants, when assessing bids, the Department may make awards to the full value described above for each grant or partial awards of a percentage of the full value. Additional awards above the full value may be made in exceptional circumstances.
31. Detailed grant terms will be provided in the Section 31 Grant Determination Letter. After accepting the grant offer, the Chief Executive and Chief Internal Auditor of each of the recipient authorities will be required to sign and return to the Department a declaration. This must be received by the Department no later than 31 December 2024, and include confirmation that to the best of the authority's knowledge and belief, having carried out appropriate investigations and checks, in all significant respects the conditions of the grant have been complied with.

SPECIFIC ARRANGEMENTS FOR COMBINED AUTHORITIES

32. The Combined Authorities (CAs) defined in paragraph 8 have powers to pay grant to their constituent local authorities that run concurrently with the Secretary of State's powers under Section 31 of the Local Government Act 2003.
33. As such, CAs may bid for the challenge element of TSOG and GLF in one of two ways:

- They may stand aside and allow each of their constituent local highway authorities to submit individual applications. These will be assessed individually and, as with awards to authorities outside of CAs, awards will be made directly by the Secretary of State. Individual authorities may choose to bid for either TSOG or GLF.
- They may submit a combined bid on behalf of their area and use their powers to allocate funding within their areas. In this case, a single combined award to the CA would be made by the Secretary of State but it must be made clear by the CA in the bidding process how a successful grant award would then be ultimately distributed. A combined bid must be for either all TSOG or GLF and may not be for elements of both.

34. On the basis that a maximum of £500,000 will normally be allocated to any authority (paragraph 16 above), a CA combined bid should be no more than this value multiplied by the number of constituent local highway authorities it can distribute funding to:

- For example, a CA made up of six constituent eligible councils may bid for a maximum of [6 x £500,000 = £3,000,000]

35. CAs may also adopt a hybrid approach, and act for a number of their constituent authorities, while allowing others to make the own individual bids. In such circumstances, the total bid value that the Combined Authority can make will follow the formula above but with the multiplier reduced to reflect the number of non-participating constituent authorities. The CA must make clear in the bidding process how a successful grant award would be distributed to participating councils in their area. In this case, grant awards to non-participating local councils would be made directly by the Secretary of State, and a single combined award would be made by the Secretary of State to the CA for ultimate distribution to participating councils. The combined bid must be for either TSOG or GLF, (not both), but individual non-participating councils may bid for either, depending on their circumstances.

36. For successful combined or hybrid CA bids, an additional submission will be required to be made to DfT as part of the grant acceptance process indicating the agreement of each subsidiary council to being part of the CA combined bid.

37. To reflect the area-wide nature of intended outcomes for ITMF proposals, only one bid per CA area will be permitted. It will be the for the authorities within the CA to determine who makes the bid, but generally, in areas where wide-scale traffic management and control is provided at CA level, it should be the CA, but where a constituent local council operates as lead authority or is pre-eminent in this area, they should make the application.

Evaluation, Reporting and Assessment

FOR TSOG AND GLF AWARDS.

38. It is intended that a light touch approach to evaluation, reporting and assessment is adopted, and the Department does not expect successful recipients to devote a significant element of their awards to this purpose.

39. Evaluation will take two forms:

- Outturn – Successful recipients will be expected, at the start of the grant period to provide a programme of works including site location, projected start and end dates and scheme costs. Recipients will be expected to keep this programme up to date during the period of the grant and provide actual outturn information and changes and amendments to the programme at regular intervals. The dedicated private area on the TTF website used for bidding will also be used for this purpose, and the standard on-line monitoring form will be provided.
- Outcome – The Department is developing a common approach to outcome (economic, environmental and performance benefit) analysis of schemes delivered with TSOG and GLF funding. Further guidance will be issued on this subject, but it is expected that recipient authorities will support the Department as required to gather pre- and post-scheme delivery information and assist in the preparation of economic, environmental and performance analysis as required.

40. The Department is currently funding the development of DCIS, the Digital Controller Information Standard, and it is intended that where grant is expended at traffic signal sites, recipient authorities support the development of this standard in two ways:

- It is an aim of DCIS that a national, common numbering system is implemented for all UK traffic signal sites, to run alongside local numbering systems already in use. Authorities in receipt of TSOG or GLF funding will be expected to work with the DCIS development team to establish common numbers for their signal sites, initially for sites at which grant funded schemes will be delivered and for all sites by the end of the grant period in 2026.
- DCIS is developing a standard to allow site information currently described in the TOPAS2500 form (or similar), to be stored in a digital JSON schema. When works funded through TSOG or GLF require new or revised site information, recipient authorities shall work with the DCIS development team to ensure that this is provided in DCIS JSON format alongside information provided in other formats.

41. Detailed guidance will follow regarding the implementation of the draft DCIS standards.

FOR ITMF AWARDS

- 42. Recipients of ITMF grant funding will be required to work with the Department to identify key projected outcomes and benefits of their proposals and to work with the Department's analysts as required to gather relevant information and prepare analysis.
- 43. Recipients of ITMF should consider scheme monitoring and assessment of immediate and wider impacts as part of their proposals. It is expected that bids for ITMF grants will include a clearly defined allocation for this purpose.

Engagement

- 44. The Department will primarily use the TTF to support the bidding and delivery phases of each of the three grants. As outlined above, the TTF website will be used for applications to the challenge process and for submitting delivery programme and scheme progress information.
- 45. Bidders are strongly advised to make themselves aware of the activities of the TTF and participate where possible. The TTF website can be found at www.ttf.uk.net.
- 46. A series of webinars is planned to support the challenge bidding process for the three grants, and to brief successful recipients. Details will be made available via the TTF website.
- 47. For each of the grants, it is expected that recipients will participate in learning and outreach activities. It is intended to share general progress in the delivery of the grants and to identify general issues, problems and successes. The scale of investment in local traffic control represented by the three grants is unprecedented and so it is essential that to support the sector in the future, best practice and good and bad experiences are gathered and shared. Working collaboratively through the TTF will ensure this happens effectively.
- 48. There will be a particular onus on recipients of ITMF grants to participate in outreach and learning. With the stronger focus on research and development in this grant, and the aim to establish a series of 'beacon sites' for new technology, so the need to ensure learning and experience from them is greater. It is intended that these sites lead the way in justifying the wider adoption of new technologies and approaches through the innovation they deliver with ITMF funding.

ANNEX A

COMMON QUESTIONNAIRE FOR THE TRAFFIC SIGNAL OBSOLESCENCE GRANT (TSOG) AND GREEN LIGHT FUND (GLF) 2023

Please read this questionnaire in conjunction with the **2023 Traffic Signal Grants General Guidance**.

This questionnaire is designed to help the Department for Transport understand your traffic signals asset and the challenges you face. We are seeking information around:

- The size of your traffic signals asset estate
- Maintenance and obsolescence issues
- Needs and priorities
- Strategies for planning for the future
- Links to wider targets
- Preparedness for future technology opportunities

This questionnaire is common to applications for TSOG, to address specific backlogs in dealing with obsolete equipment and GLF, to address more general need for maintenance and upgrading. It is for each authority to determine which of these funds best reflects their current position. It is not possible to apply for both funds for a single authority or in a single CA combined bid.

The questions are very similar to those used in the 2021 Traffic Signal Maintenance (TSM) challenge process. If your authority provided answers at that time, it is vital that you provide updated information now to help us understand the progress authorities have made in that time.

Do not provide your answers into this form, it is for information only. Your authority will be provided with access to an online version of this form through which to provide your responses.

Access to the form is through the TTF website here:

<https://ttf.uk.net/traffic-signals-funding/>

A login in will be required to complete the questionnaire and this process is being managed by LCRIG. Each authority's individual login credentials used for the 2021 TSM grant application process can be used for this process. Traffic signals managers in each authority will be contacted by LCRIG to confirm their login details. For support with logins, or for any questions relating to the completion of the questionnaires, please contact:

signals_maintenance@lcrig.org.uk

Part 1A and 1B form the formal response to the challenge process. Your application for TSOG or GLF will be assessed based on your responses to this Part. **Part 2** allows us to gather additional information about the state of the sector. Part 2 will not be used as part of your assessment, but please complete it – it is vital that we collect this information.

Part 1A – Plans and strategies – Questions relating to TSOG or GLF applications.

Tell us which grant you are applying for – TSOG or GLF

1	Provide a plan for improvements	What is your overall rationale for interventions? Is your primary aim to address obsolete equipment or general maintenance? Include future plans for traffic signal operation and maintenance, including whole life operating cost reductions, preparations for emerging technologies and services and wider Authority objectives, priorities and policies. If you intend to include an element of expenditure not at traffic signal sites, (such as VMS replacement or UTC maintenance), describe it here.
2	Prioritised upgrade plan	Do you have a methodology used to assess and grade traffic signal locations and select those to be maintained or upgraded? Show the mechanism you use for managing and prioritising traffic signal maintenance over future years. For TSOG - Describe the scale of the obsolescence issue you have. For GLF – Describe the general maintenance and / or upgrading issues you must address.

Part 1B – Plans and strategies – Questions common to both TSOG and GLF applications.

3	Links to carbon reduction and Air Quality (AQ) targets	Show any methodology you have for linking traffic signal improvements to carbon reduction and AQ targets. Show anticipated improvements from interventions and contribution to overall authority targets. Demonstrate ranking of intervention sites by carbon and AQ gains.
4	Monitoring plan, including indicator selection and targets	Indicate proposals for monitoring improvements due to traffic signal maintenance. Describe selected indicator set, and how this links to wider authority policies and targets. Indicate methodology for before and after assessment and evaluation of the financial and traffic impacts of interventions and how this will drive future years maintenance programming.
5	Technology vision	Outline wider authority technology vision and the role traffic signal upgrading will play in this. Describe technology strategy and aims. Describe policy for ensuring increased reliability and reduced maintenance and operating costs for upgraded assets and plans for preparing for increased availability of data and readiness for connected vehicles.
6	Support to public transport, vulnerable road users and active travel	Demonstrate ways in which the opportunity presented by upgrading traffic signal sites will align with your policies and / or plans for Public Transport, Pedestrians, Mobility and Visual Impaired, Active Travel; and benefits realised for these users.
7	Future proofing	Demonstrate plans to ensure traffic signal upgrading can add flexibility to policy and technological changes, support for new mobility ideas and open publishing of data.

Part 2 – Local Councils signal asset questionnaire

8	Details of your signal asset and maintenance regime	Expenditure; • how much do you spend in total on traffic signal maintenance? • what is the value of your backlog? How many junctions & crossings are you responsible for? • Junctions • Mid-blocks • %age on SCOOT or MOVA • %age with above ground detection • What form of SCN / site numbering schema do you use? Traffic equipment maintenance; • Do you have a term maintenance contractor, if so, what is the value of the contract? • Cost of periodic inspections? • Cost of fault repair? • How many local authority FTEs (full-time equivalent posts) are responsible for traffic signals? • What fault reporting systems do you use? How many signalised junctions in your area have: • at least one un-signalised pedestrian crossing? • no pedestrian facilities on at least one arm? At standalone (mid-block) signalised crossings in your area, what is; • the average time between someone pressing the button at the crossing and the crossing showing a green signal to them? • what is the maximum time set for this?
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