

PPS-I 2025 Call Innovations for Improved Water Quality and Water Quality Monitoring

If you are planning to conduct chemistry and/or biobased research into water quality improvements, you can apply for a PPS-i allowance for 2025 from the TKI (Top consortium for Knowledge and Innovation) for Green Chemistry and Circularity by submitting an application no later than 14:00:00 on 16 September 2025. Please find the submission requirements below.

Introduction

The TKI for Green Chemistry and Circularity has made €5,000,000 available for public-private partnerships that conduct research into innovations relating to water quality, biobased raw materials, and carbon capture and utilisation (CCU). This call text relates to the theme of 'water quality'. Water quality is an issue of current interest in society at present, with potentially major implications for both industry in general and the chemical industry. The biobased and chemical field plays a crucial role in realising innovations for improving water quality. The TKI is issuing this call to stimulate innovation within this specific theme and wishes to encourage young researchers and SMEs in particular to submit an application.

Scope van de call

Introduction

The rise of persistent chemical pollutants in water, such as PFAS and microplastics, has become an environmental and health concern of significance, and the prevalence of such residues is becoming more and more of an issue. Recent developments require chemical facilities to work towards zero discharge into the surrounding environment. The EU Water Framework Directive¹ and EU Urban Wastewater Treatment Directive² mandates member states to achieve good qualitative and quantitative status of all water bodies. Innovations that prevent the disposal of the pollutants are crucial for improving overall water quality and removal technologies, such as separation techniques, and advanced monitoring are needed to make the Dutch water systems robust and safe. Ultimately, monitoring and controlling water quality and the identification of sources of pollution and keeping them at bay is crucial for the chemical industry, agriculture and other sectors. We encourage research proposals aimed at developing sustainable and effective solutions for water quality improvement on at least one of the following: (i) removal technologies such as innovative separation technologies (ii) industrial process optimization or (iii) advanced sensing technologies.

Sustainable Separation Technologies

Developing advanced separation technologies that are low in energy and chemical usage and applicable on a large scale are crucial, not just to separate out components that have adverse environmental effects, but also to minimize the effect the separation method has on the environment. Achieving this may require hybrid or cascaded methods, guided by advanced sensing technologies to manage product flows. This ensures water safety and minimizes environmental impacts, such as concentrate disposal, energy- and chemical use. Membrane filtration is promising for water separations and can be used in tandem to be integrated with wastewater management, however improvements are needed to make these technologies future-proof. Electrically driven processes, with low energy usage and effective component attraction/repulsion are expected to become more relevant. To implement these technological developments, advanced sensing technologies are essential. These technologies should assist in better-defined and uniform pore sizes, reducing solvent use and consider end-of-life options for membrane modules. Artificial intelligence will play an increasingly important role in this development.

¹ [Water Framework Directive - European Commission](#)

² [Directive - EU - 2024/3019 - EN - EUR-Lex](#)

Industrial Process Optimization

The chemical industry plays a crucial role in modern society, but also poses significant environmental challenges concerning water quality. To overcome this, the European Council drafted the Urban Wastewater Treatment directive in 1991, with its aim to protect the environment from adverse effects of wastewater discharges from cities and industrial sectors including the chemical- and pharmaceutical industry. Since 1 January 2025, there has been a recast of this directive in the European Union, obliging member states to implement this into their national legislation within 31 months (i.e. until July 31, 2027). This directive also targets non-domestic wastewater, including industrial wastewater, which can contain pollutants like heavy metals, microplastics, micropollutants, and PFAS. Ideally, discharge containing these pollutants from non-domestic wastewater should be prevented at source. Optimizing operational settings of manufacturing- and recycling processes can minimize the generation of waste (chemicals and/or particles such as microplastics), and thus contribute to improved water quality and increased circularity. Moreover, integrating advanced filtration, sustainable separation technologies and improved water treatment in industrial water management can prevent the pollutants from entering the environment at source.

Advanced sensing technologies

For both the development of removal technologies such as sustainable separation technologies and industrial process optimization, advanced sensing tools are essential. Here, the focus will be on the development and application of sensors (preferably miniaturized and affordable) and advanced analytical techniques that are able to monitor composition (both targeted and non-targeted, online and offline) in complex water streams as well as registering process conditions. It is anticipated that combining data with artificial intelligence modelling methods will become more and more instrumental in achieving not only water that is safe to use, but also limit environmental effects (ranging from disposal of the concentrate, to energy use, and chemical use).

Knowledge dissemination and shared knowledge building

The TKI for Green Chemistry and Circularity promotes knowledge dissemination and shared knowledge building. As part of this, project leaders and project participants are expected to participate in a programme day in Q4 2026 / Q1 2027 to share their project results. In addition, the TKI for Green Chemistry and Circularity asks the project leaders to consider whether the system of 'learning communities' (<https://www.wijzijkatapult.nl/files/topsectoren/Topsectoren%20Toolkit.pdf>) can be deployed during the course of the project to promote skills building by students and teachers/researchers. Depending on the TRL phase of the project, this could involve students from universities (lower TRLs) and/or universities of applied science (higher TRLs). For help with the latter, the HCA coordinator of ChemistryNL can also be contacted: onno.devreede@chemistrynl.com.

Requirements for a Water Quality and Water Quality Monitoring application

- Applicants

The call is open for applications from public-private partnerships. The primary applicant must be a researcher with a position at a Dutch knowledge institution for the duration of the project or longer. Furthermore, at least one Dutch private party must be a (financial) participant in the partnership.
- Scope of the call

The application must fit the scope of this call. This can be found on page 1.
- Conditions for using the PPS-i-allowance

The terms and conditions as described in Annex A apply to the PPS-i-allowance 2025.
- Maximum PPS-i-allowance per project and call budget

The maximum PPS-i-allowance 2025 per project is €150,000.
The total budget for the calls 'biobased raw materials', 'water quality' and 'carbon capture and utilisation (CCU)' is €5,000,000. The budget per call is €1,666,666. This amount can be changed in case of under- or over spending in one of the specific calls.
- Application submission – template and deadline

Applications must be submitted via an 'allowance use plan'. Allowance use plans must be drawn up in accordance with the templates in Annexes B and C. The TKI for Green Chemistry and Circularity will only consider applications drawn up in accordance with these templates. Applications must be submitted by email to and aanvragen@chemistrynl.com with 'Aanvraag PPS-i-toeslag 2025 Water' (Application for PPS-i allowance 2025 Water) in the subject line. The deadline for submission is **14:00:00 on 16 September 2025**.

Please note that we will not consider applications that are incomplete or incorrectly drawn up.

To avoid this, you can have your application checked for completeness prior to submitting your definitive version. If you wish to have your application checked, please send your draft application by email to aanvragen@chemistrynl.com by 14:00:00 on 9 September 2025 at the latest.

Your definitive version must be submitted by **14:00:00 on 16 September 2025** at the latest.
- Project end date

This scheme applies to research projects with an end date before or on 31 December 2030. The end date cannot be extended.
- Young researchers and SMEs

The TKI for Green Chemistry and Circularity encourages the participation of young researchers and SMEs.
- Critical raw materials

TKI for Green Chemistry and Circularity also aims to avoid the use of critical raw materials. Research proposals that do not use critical materials are therefore preferred.

➤ Required co-funding by a private party

The project must involve actual public-private collaboration and the private party must co-finance the project. The minimum private co-financing for this call is:

- 30% for fundamental research,
- 50% for industrial research,
- 75% for experimental research.

At least 50% of the co-financing must be in the form of a financial contribution ('in cash'). This rule does not apply to SMEs (small and medium-sized enterprises) that participate as project partners in the project. SMEs may freely distribute their co-financing between contributions in kind ('in kind') or financial contributions ('in cash'). Public parties can also contribute to a project, but this contribution does not count as private co-financing. Project costs of private parties are not eligible for subsidy.

Procedure

1. You have to submit an application in the form of a PPS-i-allowance use plan by means of the templates in Annexes B and C to aanvragen@chemistrynl.com (specifying 'Aanvraag PPS-i-toeslag 2025 Water' in the subject line) **by 14:00:00 on 16 September 2025 at the latest.**
2. After submission, the use plans will be assessed by a committee. This committee consists of, among others, representatives from the ChemistryNL program councils. The committee provides advice to the Board of Directors of the TKI Green Chemistry and Circularity regarding the approval of the application for PPS-i-allowance 2025. Assessment criteria are:
 - alignment with the scope of the call
 - feasibility of the research idea
 - strength of the consortium
 - innovative character and social and/or economic impact.
3. The Board of Directors of the TKI for Green Chemistry and Circularity is expected to make its decision on awarding the PPS-i-allowance 2025 in Q4 2025. Should the budget of €5,000,000 not be sufficient for the number of applications on which the committee has given positive advice, then the Board of Directors will decide on the allocation, taking into account policy considerations and diversity in research topics. You cannot appeal the decision of the Board of Directors.

Questions and information

If you have any questions or require further information, please contact the PPS-i coordinator of the TKI for Green Chemistry and Circularity, Harmen Veldman (phone: +31 6 31976594, email: h.veldman@chemistrynl.com).

The TKI for Green Chemistry and Circularity wishes you good luck in developing your public-private partnership projects and looks forward to receiving your application.

Annexes:

Annex A: Terms and conditions for award and use of a 2025 PPS-i allowance

Annex B: Allowance use plan

Annex C: Budget form (Excel)

Annex A: Terms and conditions for award and use of a 2025 PPS-i-allowance

The following terms and conditions apply for the award and use of the 2025 PPS-i-allowance.

1) Use of the PPS-i allowance

You will use the PPS-i allowance for the allowance use plans involving a real public-private partnership* as granted by the Board of Directors of the TKI for Green Chemistry and Circularity.

**Actual partnership: A collaboration between at least two independent parties to exchange knowledge or technology, or to realise a joint objective on the basis of a division of tasks, where the parties jointly decide on the scope of the partnership project, contribute to its execution, and share the risk and results. One or more parties may cover the total costs of the project, thereby releasing the other parties from the financial risks associated with the project. Contract research and conducting research services are not considered to be a partnership.*

2) The PPS-i-allowance scheme

All activities to be undertaken must comply with the terms and conditions for PPS-I cooperation projects as set forth in the *Regeling Nationale EZK-subsidies* (Scheme for National Subsidies from the Ministry of Economic Affairs and Climate Policy) and as defined by the RVO Netherlands Enterprise Agency ([Link](#)). The obligations of a PPS allowance recipient as defined in these schemes apply in full to your organisation in the context of the funds made available to you by the TKI for Green Chemistry and Circularity.

3) Private contribution

The project must involve actual public-private collaboration and the private party must co-finance the project. The minimum private co-financing for this call is:

- 30% for fundamental research,
- 50% for industrial research,
- 75% for experimental research.

At least 50% of the co-financing must be in the form of a financial contribution ('in cash'). This rule does not apply to SMEs (small and medium-sized enterprises) that participate as project partners in the project. SMEs may freely distribute their co-financing between contributions in kind ('in kind') or financial contributions ('in cash'). Public parties can also contribute to a project, but this contribution does not count as private co-financing. Project costs of private parties are not eligible for subsidy.

4) Costing method

You must calculate the costs specified for partnership projects for which the PPS-i-allowance will be used in accordance with the standard methods as described in articles 10 up to and including 15 of the *Kaderbesluit nationale EZK-en LNV-subsidies* (Framework decision on national subsidies granted by the Ministry for Economic Affairs and Climate Policy and the Ministry of Agriculture, Nature and Food Quality) ([Link](#)). The costs will be considered without VAT if the allowance recipient that incurred the costs is able to deduct VAT.

5) Availability of the allowance

The TKI for Green Chemistry and Circularity will make the allowance available to your organisation as an advance under the terms and conditions applying to the use of the PPS-i-allowance. The allowance will be paid in several tranches amounting to 90% of the allowance granted. The remaining 10% will be settled at the time of the final allowance review. You will receive an allowance tranche scheme with the approval of your allowance use plan.

6) **Period of use**

The period of use for the PPS-i-allowance ends on 31 December 2029. You will not be able to use the PPS-i allowance after this date.

7) **Reporting requirement**

You must submit a research and financial report on the progress of activities in the previous year in Q1 of every year. This is done in the context of monitoring by the RVO Netherlands Enterprise Agency. In addition, the TKI may request information for purposes of the annual report of the TKI for Green Chemistry and Circularity.

8) **Request for allowance review**

You must submit a full *Aanvraag Vaststelling Toeslag* (request for allowance review) to the TKI for Green Chemistry and Circularity within eight weeks following completion of the project. Such a request for allowance review consists of a financial and research justification and an audit statement by an independent auditor when the PPS-i-allowance exceeds €125,000. A statement from the Board of Directors must be included for sums not exceeding €125,000.

9) **Communication**

- Upon the TKI's written request, you must make up-to-date information about the partnership projects for which the allowance is used available to the general public in an easily accessible manner.
- The TKI bureau will provide support in communications relating to the use of the PPS-i-allowance in your organisation, among other things via ChemistryNL's (social) media channels.
- You must also include the following statement or an equivalent thereof in publications resulting from an activity funded in part with an PPS-i allowance: 'This activity was cofunded by the TKI for Green Chemistry and Circularity with a PPS-i allowance from the Ministry of Economic Affairs and Climate Policy'. Please use the ChemistryNL logo where possible.
- The RVO Netherlands Enterprise Agency and ChemistryNL publish a brief description of all projects funded with a PPS-i-allowance on their websites. This brief description includes the names of participating companies.