



# Tender Document for the Provisioning of the Service

## Synthesis and production of PET pellets from chemically recovered BHET monomer

Employers: Fundación GAIKER  
and CTCR

Country: Spain

**LIFE-ECOTEX**

**LIFE15 ENV/ES/000658**

**Demonstration of Polyester of  
Footwear Waste Recycling into  
New Textile Products using  
Glycolysis Technology**



**Logrotex**  
NON WOVENS



ECOLOGIA  
RECICLAJE y  
MEDIO AMBIENTE. S.L.



## INVITATION TO TENDER

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Fundación GAIKER and Asociación para la Promoción, Investigación, Desarrollo e Innovación Tecnológica de la Industria del Calzado y Conexas de La Rioja (CTCR) within the framework of **LIFE-ECOTEX** Project “Demonstration of polyester of footwear waste recycling into new textile products using glycolysis technology” (<http://www.life-ecotex.eu/es/>), under the Project Reference LIFE15 ENV/ES/000658, are pleased to invite offers for the “**Synthesis and production of PET pellets from chemically recovered BHET monomer**”.

The Invitation to Tender (ITT) will open on the **20/04/2018** at **09.00** am.

This ITT sets out the information which is required in order to assess the suitability of applicants in terms of their technical expertise, pricing, service levels and innovative solutions to meet the requirements for the “Synthesis and production of PET pellets from chemically recovered BHET monomer”.

The successful applicant will be required to deliver services in accordance with all the attached documents and the contract that will be signed.

It is the responsibility of the tenderers to ensure that offers are received by **12:00** pm on the **18/05/2018**. Tenders received after this time must not be considered, but must be opened, recorded, marked “Late Tender” and returned to sender.

Any questions concerning this document or the tendering process should be sent via email to, Mr. **Asier Asueta** ([asueta@gaiker.es](mailto:asueta@gaiker.es)) – Researcher of Fundación GAIKER and LIFE-ECOTEX Project Manager no later than **08/05/2018**.

Applicants should complete the TENDER Document (see below) and return it with the completed proposal, as per the instructions set out in this ITT.

## SPECIFICATIONS TO TENDER

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### 1. Scope of the Project

The main objective of the LIFE-ECOTEX is to demonstrate a circular economy concept that is the closed loop recycling of the waste polyester synthetic textiles associated to the footwear sector. The scheme starts with the chemical de-polymerisation of polyester waste generated during shoe manufacture to produce the starting monomer, the bis-(2-hydroxyethyl terephthalate) or BHET, by catalytic glycolysis. Once purified, the recovered BHET is a suitable building block for the synthesis of fibre-grade polyesters that are transformed in staple fibres and non-woven textiles that can be reintroduced in the original footwear application or other, as insulators, for closing the polyester material loop.

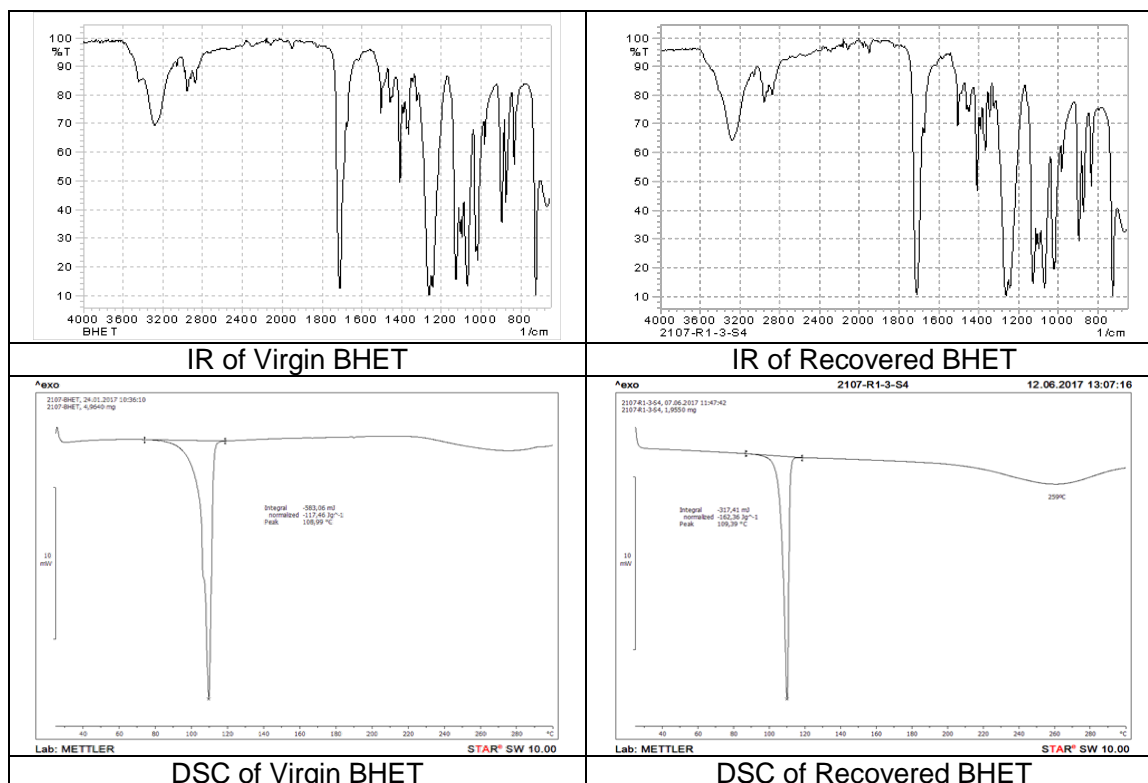
The transformation of the BHET in PET pellets requires specialized technical and scientific knowledge in polyester polymerization pilot tests; and a specific infrastructure to carry out the chemical reaction under appropriate conditions and the pellet manufacturing with the required properties. Therefore, in order to complete the sub-action *B.2.1. BHET2PET polycondensation pilot tests for new polyester synthesis* of the LIFE-ECOTEX Project Fundación GAIKER and CTCR will have to address research institutes, companies or university departments. This task has to be financed as subcontracting.

## 2. Technical Specifications

- Production of PET pellets using 300-350 kg of BHET (bis-(2-hydroxyethyl terephthalate)) supplied by Fundación GAIKER. In Table 1 the technical specifications for the supplied BHET are presented:

Table 1. Specifications for the chemically recovered BHET

Melting point (°C)	109 °C
Chemical structure	-OH bond at 3415 and 1135 C=O bond at 1716 C-H (alkyl group) at 2952 -O-C-C bond at 1097 C-H (aromatic group) at 728, 1411 and 1504
Moisture and EG (%)	Máx. 5%
TiO <sub>2</sub> (%)	≈ 0.3%
Purity BHET content (%)	≥ 90%



- Mandatory properties for the chemically recycled PET:

Table 2. Expected key parameters for chemically recycled PET pellets

PARAMETERS	RESULTS
Intrinsic Viscosity (dL/g)	0.62
Density (g/cm <sup>3</sup> )	1.40
Bulk Density (g/cm <sup>3</sup> )	0.78
Moisture (%)	0.50
Ash (%)	0.08

- The production of antimony free PET pellets will be considered positively.

### **3. Mandatory Requirements**

1. Appropriate Infrastructure to undertake the project
2. A minimum of 5 years experience in the field of polymer synthesis

All the material produced should be delivered to Fundación GAIKER.

### **4. Information and documents to be provided for evaluation**

1. Curriculum Vitae of the Director of the Project
2. Proof of scientific expertise related to the requested services (papers in Conferences/Journals, other research projects, similar applications)

### **5. Tender Conditions**

- 5.1 Applicants shall either destroy or return all documentation related to the tender process if the employers so direct so.
- 5.2 Applicants shall ensure that tenders are both technically correct.
- 5.3 Applicants shall not alter the ITT documents. Tender proposals will be deemed to comply entirely with the terms stated therein unless the Applicant states otherwise in writing. If any alteration is made or if these instructions are not fully complied with, the tender proposal may be rejected.
- 5.4 Applicants will be deemed to have satisfied themselves as to the sufficiency of their tender proposal and to have included in it all costs which may be incurred in the delivery of the services. They shall also be responsible for satisfying themselves as to the accuracy of all information associated with the contract and that all eventualities have been included.
- 5.5 Neither the issue of the ITT to you, your preparation and submission of a tender, or the subsequent receipt and evaluation of your tender commits the employers to award a contract to you or any other bidder, even if all requirements stated in the ITT are met. The employers are not responsible directly or indirectly for any costs incurred by your firm in responding to this ITT and participating in this process.
- 5.6 Information that is supplied to potential suppliers as part of this Procurement Process is supplied in good faith. All participants shall keep strictly confidential any and all information contained in this ITT, and other information or documents made available to it by or on behalf of the employers in connection with this ITT.
- 5.7 The participants shall not disclose, nor allow any such information to be disclosed.
- 5.8 By submitting a tender response, you are agreeing to be bound by the terms of this ITT and the Contract without further negotiation or amendment and confirm your agreement to observe the confidentiality requirements.
- 5.9 The duration of the contract is **11/06/2018 - 28/12/2018**

5.10 In the event that you have any concerns or queries in relation to the Contract, you should submit a clarification request in accordance with the provisions of this ITT by the Clarification Deadline (as defined below in the Timeline section of this ITT). Following such clarification requests, the employers may issue a clarification change to the Contract that will apply to all potential suppliers submitting a tender response.

5.11 The employers are under no obligation to consider any clarifications / amendments to the Contract proposed following the Clarification Deadline, but before the Tender Response Deadline (as defined below in the Timeline section of this ITT). Any proposed amendments that received from a potential supplier as part of its tender response shall entitle the employers to reject that tender response and to disqualify that potential supplier from this process.

## 6. Instructions for Responding

6.1 The documents that must be submitted to form your tender response are listed in Annexes 1-3 of this ITT. All documents required as part of your tender response should be submitted **by email to Mr. Asier Asueta, Technical Director of LIFE-ECOTEX Project at [asueta@gaiker.es](mailto:asueta@gaiker.es), Financial offers must be sent by mail in a sealed envelope to the following address: Mr. Asier Asueta, Fundación GAIKER, Parque Tecnológico de Bizkaia, Ed. 202, 48.170 - Zamudio - Bizkaia - Spain** by the Tender Response Deadline, as set out in the Timeline section of this ITT.

6.2 The following requirements should be complied with when submitting your response to this ITT:

- Please ensure that you send your submission in good time
- Please ensure that information provided as part of its response is of sufficient quality and detail that an informed assessment of it can be made.
- Do not submit any additional supporting documentation with your ITT response except where specifically requested to do so as part of this ITT.
- All supporting documentation should be provided separately to your main tender response and clearly labelled to make it clear as to which part of your tender response it relates.
- If you submit a generic policy / document you must indicate the page and paragraph reference that is relevant to a particular part of your tender response.
- Unless otherwise stated as part of this ITT or its Annexes, all tender responses should be in the format of the employers' requirement with your response to that requirement inserted underneath.
- Where supporting evidence is requested as 'or equivalent' – you must demonstrate such equivalence as part of your tender response.
- Responses should be concise, unambiguous, and should directly address the requirement stated.
- Your tender responses to the tender requirements and pricing will be incorporated into the Contract, as appropriate.

## 7. Evaluation Criteria

Tender responses will be checked to ensure that they have been completed correctly and all necessary information has been provided. Tenders responses correctly completed with all relevant information being provided will proceed to evaluation. Any tender responses not correctly completed in accordance with the requirements of this ITT and/or containing omissions may be rejected at this point. Where a tender response is rejected at this point it will automatically be disqualified and will not be further evaluated.

The Contract will be awarded on the bases on the following weighted award criteria:

	<b>Award Criteria</b>	<b>Weighting</b>
<b>1</b>	<b>Conformance to Specification</b> Submissions which do not, in the opinion of Employers, adequately meet the Performance Specification will not be marked for the Technical Merit and Price Criteria outlined below and will not be taken forward to any subsequent stages of the Tender evaluation.	<b>PASS/FAIL</b>
<b>2</b>	<b>Technical Merit (Quality)</b>	<b>39%</b>
<b>3</b>	<b>Price</b>	<b>51%</b>
<b>4</b>	<b>Interview</b>	<b>10%</b>
	<b>Total</b>	<b>100%</b>

	<b>Technical Merit</b>	<b>Weighting</b>
<b>3.1</b>	Appropriate Infrastructure	<b>10%</b>
<b>3.2</b>	Previous experience on the subject	<b>10%</b>
<b>3.3</b>	Scientific Expertise if the research team, demonstrated by publications in refereed journals or conferences	<b>9%</b>
<b>3.4</b>	Technical experience on the execution of similar synthesis	<b>10%</b>
	<b>Total</b>	<b>39%</b>

The evaluation of submissions will be on the criteria listed above.

The information supplied will be checked for completeness and compliance before Tenders are evaluated. Failure to comply with any of the requirements or any other specified requirements might render a tender liable to disqualification. If any criteria within the specification document are classed as non compliant the employers will not be able to take your tender through to the next stage. Full or partial proposals that in the opinion of the employers are unrealistically low or not reasonable sustainable (in terms of Quality or Price) may be rejected.

Submitted Tenders will be assessed against the above criteria and scored using the following point's system principles:

Scoring Model – Tender responses will be subject to an initial review at the start of Stage 2 of the evaluation process. Any tender responses not meeting mandatory requirements or constraints (if any) will be rejected in full at this point and will not be assessed or scored further. Tender responses not so rejected will be scored by an evaluation panel appointed by the Customer Organisation for all criteria other than commercial using the following scoring model:

<b>Points</b>	<b>Interpretation</b>
<b>10</b>	<b>Excellent</b> – Overall the response demonstrates that the bidder meets all areas of the requirement and provides all of the areas evidence requested in the level of detail requested. This, therefore, is a detailed excellent response that meets all aspects of the requirement leaving no ambiguity as to whether the bidder can meet the requirement.
<b>7</b>	<b>Good</b> - Overall the response demonstrates that the bidder meets all areas of the requirement and provides all of the areas of evidence requested, but contains some trivial omissions in relation to the level of detail requested in terms of either the response or the evidence. This, therefore, is a good response that meets all aspects

	of the requirement with only a trivial level ambiguity due the bidders failure to provide all information at the level of detail requested.
<b>5</b>	<b>Adequate</b> - Overall the response demonstrates that the bidder meets all areas of the requirement, but not all of the areas of evidence requested have been provided. This, therefore, is an adequate response, but with some limited ambiguity as to whether the bidder can meet the requirement due to the bidder's failure to provide all of the evidence requested.
<b>3</b>	<b>Poor</b> – The response does not demonstrate that the bidder meets the requirement in one or more areas. This, therefore, is a poor response with significant ambiguity as to whether the bidder can meet the requirement due to the failure by the bidder to show that it meets one or more areas of the requirement.
<b>0</b>	<b>Unacceptable</b> - The response is non-compliant with the requirements of the ITT and/or no response has been provided.

The weighted scores within each sub-criteria will be added together to arrive at the total score.

## 8. Payment

The total maximum budget available for the fees of the subcontractor is the following:  
**65.000 € (Non-deductible taxes included)**

The subcontractor will be remunerated in various instalments:

- 1<sup>st</sup> payment: 20% of the total budget at the signature of the contract.
- 2<sup>nd</sup> payment: 40% of the total budget once received the produced amount of PET pellets: 21/09/2018 – 15/10/2018.
- Final payment: 40% of the total budget after the submission and approval of the final report by The Employers: 28/12/2018.
- The invoices will be issue to Fundación GAIKER (67.69%) and to CTCR (32.31%), on the same terms, above mentioned.

## 9. Submission of the Tender

Applicants must send all documents required by email to Mr.Asier Asueta, Researcher of GAIKER-IK4 and LIFE-ECOTEX Project Manager at [asueta@gaiker.es](mailto:asueta@gaiker.es) by the Tender Response Deadline, as set out in the Timeline section of this ITT.

## 10. Timeline

Activity	Date
Issue of Contract Notice / availability of ITT documents	<b>20/04/2018</b>
Deadline for clarification questions	<b>08/05/2018</b>
Respond to clarification questions	<b>15/05/2018</b>
Tender Submission Deadline	<b>18/05/2018</b>
Evaluation of Technical Requirements	<b>25/05/2018</b>
Interview	<b>30/05/2018</b>
Contract concluded with winning supplier	<b>04/06/2018</b>
Contract start date	<b>11/06/2018</b>
PET pellets delivery to GAIKER	<b>21/09/2018 – 15/10/2018</b>
Contract End Date	<b>28/12/2018</b>

[ANNEX 1]

### DECLARATION BY TENDERER

#### “Synthesis and production of PET pellets from chemically recovered BHET monomer”

1. I, [insert name] , certify that I am the person duly authorised to sign tenders for and on behalf of [insert company or institution name], the tenderer, and having read the documents, offer to supply the services or works:

- as set out in the letter of invitation to tender, the specification and accompanying tender documents, samples and/or drawings.
- under the terms and conditions indicated
- at the price (or prices) specified in the attached tender documentation.

2. I understand that the Employers reserve the right not to accept the lowest or any tender.

3. I have obeyed the rules regarding confidentiality of tenders and will continue to do so as long as they apply.

4. My company/institution as part of the fulfilment of the project is going to deliver the PET amount in pellet format generated after polymerizing between 300-350 kg of BHET recovered after the chemical recycling of polyester wastes from the footwear industry.

5. My company/institution is also obliged to test the properties and fulfil the key ones defined for the PET pellets.

6. I can confirm that I accept that any breach of any of the conditions could lead to any tender being rejected or to the rescission of the Contract by the Employers.

<b>Authorised Signatory</b>	
<b>Date</b>	
<b>Name in BLOCK LETTERS</b>	
<b>Job Title</b>	
<b>Company/Institution Name</b>	
<b>Telephone Number</b>	
<b>E-mail Address</b>	

Please ensure that the form is completed and signed before being returned with any other supporting documentation requested, by the due date and time.

<b>Signature and Company / Institution stamp</b>



[ANNEX 2]  
FINANCIAL OFFER

<b>“Synthesis and production of PET pellets from chemically recovered BHET monomer”</b>	
<b>Service Provided</b>	<b>Price (VAT is not included)</b>
PET synthesis after polymerizing between 300-350 kg of BHET recovered after the chemical recycling of polyester wastes from the footwear industry	
PET pellets production	
Analysis of produced PET pellets	
Material Delivery	
<b>Total</b>	

<b>Authorised Signatory</b>	
<b>Date</b>	
<b>Name in BLOCK LETTERS</b>	
<b>Job Title</b>	
<b>Company/Institution Name</b>	
<b>Telephone Number</b>	
<b>E-mail Address</b>	

<b>Signature and Company / Institution stamp</b>

[ANNEX 3]  
**TECHNICAL REQUIREMENTS**

<b>1. Company / Institution Infrastructure</b>
Provide appropriate information

<b>2. Previous experience on the subject</b>
Provide appropriate information

<b>3. Scientific Expertise of the research team, demonstrated by publications in refereed journals and conferences</b>
Provide appropriate information

<b>4. Technical experience on the execution of polymerization reactions for the synthesis of thermoplastic polymers</b>
Provide appropriate information

<b>Authorised Signatory</b>	
<b>Date</b>	
<b>Name in BLOCK LETTERS</b>	
<b>Job Title</b>	
<b>Company/Institution Name</b>	
<b>Telephone Number</b>	
<b>E-mail Address</b>	

<b>Signature and Company / Institution stamp</b>