Technical and Administrative Specification

Tender Reference No.: 25LIC.018

1. Equipment Description

Recycled materials display a high degree of heterogeneity, both in terms of material typologies —such as high-hardness polymers, plastic films, textiles, paper or composites— and in their morphology and particle size distribution. Waste streams may contain items ranging from large components (e.g. those derived from End-of-Life Vehicles, ELV) to smaller fractions in the form of flakes, as well as film-type materials or elongated textiles such as garments or mattress covers.

Due to this diversity of materials and morphologies, the acquisition of a **shredding unit** is proposed, capable of handling and processing a wide variety of materials and formats. This equipment constitutes the initial stage of the mechanical recycling process, as its main function is to transform bulky and heterogeneous items into homogeneous fragments suitable for subsequent pre-treatment or for further size reduction using conventional single-shaft mills.

This equipment will be used as a preliminary step before classification and recycling operations; therefore, it is required to have a large cutting chamber and a system for controlling the output particle size through **interchangeable screens**. The unit's capacity shall be suitable for large-size parts in a **pilot or pre-industrial environment**, without reaching the power or throughput levels typical of full-scale industrial systems.

The **shredder** requested by ITENE must be capable of processing contaminated and heterogeneous materials, including:

- Plastics from End-of-Life Vehicles (ELV).
- Fractions from Waste Electrical and Electronic Equipment (WEEE) and other complex waste streams.
- Technical and high-hardness polymers such as ABS, PA, PC or similar materials.
- Textile waste containing impurities or physical contaminants.
- Other complex fractions such as wood, cardboard or packaging materials.

In summary, a **versatile, robust and adaptable** machine is sought, capable of working with multiple material types and morphologies from various industrial sectors. This system will enhance ITENE's experimental capabilities in the valorisation of complex waste, consolidating a comprehensive pre-treatment infrastructure that supports R&D projects and technological developments aligned with the principles of the circular economy.

2. Technical Specifications

The equipment shall comply with the following technical requirements:

- Machine type: low-speed shredder equipped with an interchangeable screen or sieve, suitable for a wide range of heterogeneous and potentially contaminated materials and wastes.
- Processing capacity: capable of handling items larger than 0.35 m².

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- Low shaft rotation speed.
- Output particle size: controlled by a screen; reference diameter Ø 30 mm. The provision of additional screen sets with alternative diameters will be positively assessed.
- Installed power: total between 15–30 kW.
- Configuration: four shafts, with at least two of them motorised.
- Operational capacity: suitable for pilot or pre-industrial scale.
- Safety and compliance: CE marking and conformity with all applicable regulations; to include perimeter guarding, emergency stop, and automatic reverse function in case of overload (or an equivalent system).
- The tenderer shall specify energy consumption, footprint, weight, anchoring requirements, and any auxiliary supplies required.
- Components and maintainability: safe access for maintenance, availability of spare and consumable parts; fault diagnostics and parameter recording systems will be positively valued.
- Delivery terms: DAP (Delivered At Place) ITENE facilities.

3. Other Features

- **Commissioning:** installation, adjustment and functional testing carried out by the supplier will be positively assessed.
- **Technical support and service:** responsiveness, quality of assistance, and availability of additional useful services will be valued.
- **Warranty and spare parts:** minimum warranty in accordance with this specification; spare parts availability for at least 10 years.
- **Demonstrations:** the provision of videos or evidence showing shredding performance on technical polymers and complex waste streams (ELV/WEEE/Textiles) will be valued.
- Inclusion of a **pusher** system for rolling or difficult-to-load items will be valued.

4. Contracting Authority

The contracting authority is **ITENE – Packaging, Transport and Logistics Research Centre** (Instituto Tecnológico del Embalaje, Transporte y Logística).

5. Procurement Procedure

Whenever possible, a minimum of three comparable quotations shall be requested from companies qualified to perform the subject of the contract.

Proposals shall be submitted in accordance with this technical specification and accompanied by the required documentation.

The **ITENE Technical Evaluation Committee** will assess all offers, and the contract will be awarded to the proposal achieving the highest overall score.

6. Matter of the Contract

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The subject of this contract shall be the supply described in the attached technical specification. The contractual scope shall include, at a minimum:

a) Identification of the contracting parties.

b) Definition and description of the object of the contract according to the offered supply, with technical details matching the specifications issued by the contracting authority.

c) The price.

d) Duration of the contract or the estimated start and completion dates, including any extensions, where applicable.

e) Conditions for acceptance, delivery, installation, and commissioning, including transport and delivery to the destination site (ITENE facilities, Parque Tecnológico, C/Albert Einstein 1, 46980 Paterna), as well as all actions necessary for assembly and commissioning.

f) Payment conditions.

g) The objective and temporal scope of the confidentiality obligations, if applicable.

h) Warranty conditions.

7. Contract Formalisation

To formalise the contract, the supplier shall provide proof of the signatories' authority to execute the agreement.

The contract shall be formalised through the submission to the supplier of the **signed and stamped purchase offer**, together with a **purchase order number**, which must be quoted on all related invoices issued by the supplier.

8. Evaluation Criteria

The contract shall be awarded on the basis of multiple award criteria, in accordance with ITENE's internal procurement instructions. Evaluation will be carried out by ITENE's Purchasing Evaluation Committee. The objective criteria and their respective weightings are as follows (or, failing that, in decreasing order of importance):

Criterion	Porcentaje
Quotation	70
Technical support & maintenance	10
Delivery time	10
Warranties	5
Other	5

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9. Solvency of the supplier

Technical solvency

The bidder will provide the following information, when applicable:

- **Location, connection and installation requirements**
- A scale detailed plan
- Weight
- Supplies (air, water, power, etc.)
- Connection

- **Manufacturing materials**
- Normalized type (certificates when applicable)
- Special treatments
- Special care

- **Manuals**
- Installation, operating and service manual will be provided.

- **Technical service**
- Geographical avaliability
- Forms of contacts
- Responsiveness
- Costs

- **Maintenance services / Spare**
- Operations carried out exclusively by the supplier / manufacturer
- Cost and regularity
- Spare stock advised, supplier, cost and delivery time (in case of exclusivity of the supplier or manufacturer)

- **Quotation conditions**
- Payment method
- Guarantee
- Services / materials included: setting up
- Transport, packaging
- Insurance
- Spare stock
- Others

10. Delivery date and place

Quotations shall be sent by e-mail to: licitaciones@itene.com in the term of **10 working days** from the tender publication. The code **25LIC.018** shall be indicated in the e-mail subject.

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