

Ministry of Public Works and Environment

Department of Works and Engineering

Request for Information

For

Battery Shredding Products and Services

Request for Information No.: BSPS01

Issued: July 25th, 2025

Submission Deadline: September 19th, 2025, at 5pm Atlantic Time

1. Introduction

This Request for Information ("RFI") is issued by the Government of Bermuda (the "Government") through the Ministry of Public Works and Environment is requesting information from interested parties for the purposes of gathering information about the marketplace in order to assist in the determination of future purchasing options or requirements. Respondents are asked to respond to the Government and provide the information requested below.

2. RFI Timetable

Issue Date of RFI	July 25th 2025
No Pre-Bid / Site Meeting	No Pre-Bid / Site Meeting
Deadline for Questions	August 15th 2025
Deadline for Addenda	August 22 nd 2025
Submission Deadline	September 19 th 2025 @ 5pm Atlantic Time

All times listed are in Bermuda local time. The RFI timetable is tentative. It may be changed by the Government at any time, and the Government may choose to waive or extend the Deadline for Questions, Deadline for Addenda, and/or the Submission Deadline.

3. Background

The Government, through the Ministry of Public Works, is issuing this RFI to gauge interest and gather relevant information from entities that can provide battery shredding products and services. The information sought will support procurement, construction, operation, and maintenance of a battery shredding facility that can handle a maximum annual capacity of 500 metric tons per year.

Electric Vehicle (EV) adoption is increasing in Bermuda leading to the presence of end-of-life (EOL) batteries at waste facilities. Most of the rental mini car and public bus fleets are electrified, and the Government is considering an EV import requirement policy (i.e., "EVolve Bermuda") for other segments such as two-wheelers, passenger cars, and heavier commercial vehicles. During recent policy consultations, stakeholders and the public identified EOL EV battery disposal and recycling as a primary concern. As such, the Government is prioritizing the development of a safe disposal and recycling facility for all batteries reaching EOL on the island. While EVs are expected to make up the majority of the shredding needs, additional battery waste from segments such as consumer electronics are being considered in disposal plans as well.

Bermuda profile

The Island of Bermuda is a British Overseas Territory located in the Northern Atlantic Ocean (32.3078° N, 64.7505° W). The island is 21 square miles (54 square kilometers) with a GDP of US\$7 billion per year as of 2023. The island has a population of nearly 65,000, making Bermuda one of the most population-dense countries in the world.

Bermuda is a net importer of products with around \$1 billion in imports per year. Economic activity is heavily dependent on the attraction of foreign investment. The Bermudian Dollar (BMD or BD\$) is the official currency of Bermuda and is pegged to the United States Dollar at a one-to-one exchange rate.

As a services territory, Bermuda is driven by international business, insurance, reinsurance, and tourism. Bermuda's system of government is based on the Westminster model of parliamentary democracy and as such law is based on the common law legal system of England and Wales.

4. Information Requested

Battery shredding is expected to provide the Government with a cost-effective and safe alternative to shipping all EOL batteries to North America for processing. The Ministry of Public Works is seeking information on a variety of business models and contract types for battery shredding. The RFI is intended to inform the design, procurement and construction of EV battery shredding in Bermuda. The types of products and services under consideration include, but are not limited to:

- Battery shredding equipment and operational requirements.
- Battery shredding facilities
- Battery storage prior to shredding, and requisite holding facilities for shredded output
- Operational support for battery shredding equipment and/or facilities
- Maintenance support for battery shredding equipment and/or facilities
- Battery disassembly training
- Battery shredding-as-a-service

RFI respondents are at a minimum requested to provide information on battery shredding equipment and operational requirements. Companies that offer one or more of the listed solutions and services – as well as any relevant services not listed – are welcome to submit an RFI response. Companies who can provide a holistic suite of battery shredding related services through partnerships or sub-contracting arrangements are encouraged to submit a single, consolidated RFI response by one company representing the consortia outlining their combined capabilities.

The Ministry of Public Works is providing specific requirements for battery shredding to meet the needs of Bermuda's battery disposal. The details are set forth in Table 1 below. These requirements are intentionally limited to those that are necessary to garner a diverse set of responses.

Batteries type requirements	End of life (EOL) EV batteries
Optional battery recycling	Consumer electronic batteries
feedstock*	
Battery chemistries	Lithium-ion batteries
Optional battery chemistries*	Rechargeable batteries: Nickel metal hydride (Ni-MH), Nickel
	Cadmium(Ni-Cd),Lithium-ion,Zinc-air
	Single use batteries: Alkaline, Silver Oxide, zinc-carbon
Anticipated battery sizes	0.5 kWh – 255 kWh
Initial volume of battery	100 metric ton/yr
shredding (est. 2030)	
Long-term volume of battery	500 metric ton /yr of EOL EV batteries
shredding (est. 2045) for	
primary feedstock	
Optional battery volumes*	The following volumes of EOL consumer electronics batteries
	have been received for disposal by the Solid Waste Section of
	the Department of Works and Engineering.
	 1,200 lbs of small Lithium-ion batteries

Table 1. Mandatory Requirements

	 55,000 lbs of alkaline batteries 7,500 lbs of Ni-Cad batteries
Shredder output specifications	Future volumes of consumer electronic batteries in need of disposal could increase. Shredded output from lithium-ion batteries should not have hazardous waste characteristics as defined by <u>Basel</u> <u>Convention for transboundary movement via shipping</u> , or as defined by <u>U.S. Environmental Protection Agency (EPA)</u> <u>hazardous waste regulations</u> . It is preferable to have the output in a form that is readily accepted by metallurgical processing
Equipment and services	facilities.
requested	 Battery shredding equipment Equipment for auxiliary operations including, but not limited to: Battery pretreatment prior to shredding Postprocessing of shredded output Storage of batteries and/or shredded output Safety sensors and equipment Preparation for shipping Any operational, and/or training support that can be provided to perform operations listed above.

*Should be considered if shredder or service is capable of handling these additional chemistries and formats.

Figure 1 below shows the expected quantities of EOL batteries over time.

Figure 1. Expected Volumes of EOL EV Batteries (metric ton/year): 2025 – 2045

Regulatory considerations for EV battery waste handling and shipping:

The transboundary shipping of lithium-ion batteries can be challenging and expensive. Lithiumion batteries may be subject to <u>hazardous materials regulations</u>, requiring special packaging and hazard labelling instructions for shipments. They may also require <u>additional approval by</u> <u>competent authorities</u> if batteries are damaged.

Shredding operations for lithium-ion batteries are being considered for Bermuda to ensure safe disposal of EV batteries, and to facilitate cost-effective shipment from the Island to a recycling facility. We request processing approaches that ensure the shredded output to be shipped <u>does</u> <u>not</u> exhibit characteristics of hazardous waste as defined by:

- The <u>Basel Convention on the control of transboundary movements of hazardous wastes</u> and their disposal,
- The <u>U.S. Environmental Protection Agency (EPA) hazardous waste regulations</u> for lithiumion batteries.

Furthermore, recent regulatory developments may add requirements which can apply to the transboundary movement of non-hazardous waste.

• Starting January 1, 2025, the <u>Basel Convention amendments</u> require prior written consent of the importing country and any transit countries (i.e., countries shipments may pass through before arrival in the importing country) for international shipments of electrical and electronic waste (e-waste) and scrap, for recovery (including recycling) or disposal This marks the first time that non-hazardous e-waste and scrap are controlled under the Basel Convention.

While Table 1 details the critical requirements, the Solid Waste Section of the Department of Works and Engineering requests detailed specifications of all equipment, facilities, and services submitted to robustly evaluate for local operations. Details of the information requested, including a company questionnaire and technical questionnaire are provided in Annex A.

See Annex A - Company & Technical Questionnaire

5. Submission Instructions

Respondents are asked to submit their information and signed Respondent Submission Form and completed Annex A – Company and Technical Questionnaire by September 19th at 5pm Atlantic Time to the following Procurement Lead and email address.

Aran McKittrick, batteryrecycling@gov.bm Respondents should direct any questions on this RFI process to the same RFI Contact by August 15th All questions and answers will be published anonymously to the RFI Website by August 22nd.

Submissions should include a completed and signed Respondent Submission Form (**Appendix A**) that acknowledges, among other things, that this RFI and any respondent submissions will not create a legal relationship or obligation regarding the procurement of any good or service.

The original and all copies of the response shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the respondent. This authorization shall consist of written authorization and shall be attached to the Submission Form included in

(Appendix A). The name and position held by each person signing the authorization must be typed or printed below the signature. An Electronic Record of Signature will be accepted in the submission only in accordance with the requirements laid out in the *Electronic Transactions Act 1999*. Any interlineation, erasures, or overwriting shall be valid only if they are signed or initialized by the person signing the response.

Respondents downloading this file and intending to respond to this RFI are required to register their interest with the RFI Contact by emailing their company name and contact information to **Aran McKittrick, batteryrecycling@gov.bm** prior to the Submission Deadline noted in the RFI timetable above.

Amendment/addenda (if any) will be posted at <u>https://www.gov.bm/procurement-notices</u>. Respondents should visit the Government Portal on a regular basis during the procurement process.

APPENDIX A – RESPONDENT SUBMISSION FORM

1. Respondent Information

Please fill out the following form, naming one person to be the respondent's contact for the RFI process and for any clarifications or communication that might be necessary.

If the company is incorporated and registered, then a Certificate of Incorporation and a Certificate of Incumbency is required and must be submitted with the Respondent Submission Form.

Declaration of Interest: The respondent shall provide details of its ownership and/or managerial structure upon request from the Government. The respondent shall also provide a statement of whether or not it has any relevant and material interest relevant to the provision of the Goods and Services. Such statement shall be provided at least annually or if there is any change in the interest of the respondent.

Full Legal Name of Respondent or Personal/Given Name:Representative's Name (Person with Signing Authority) and Title:Street Address:City, Province/State, Parish:Postal Code/Zip Code:Country:Phone Number with Area Code:Code:Company Website (if any):Respondent Contact Name and Title:Respondent Contact Phone:Respondent Contact Email:		
(Person with Signing Authority) and Title:Street Address:City, Province/State, Parish:Postal Code/Zip Code:Country:Phone Number with Area Code:Code:Company Website (if any):Respondent Contact Name and Title:Respondent Contact Phone:	Respondent or	
City, Province/State, Parish:Postal Code/Zip Code:Country:Phone Number with Area Code:Company Website (if any):Respondent Contact Name and Title:Respondent Contact Phone:	(Person with Signing	
Postal Code/Zip Code: Country: Phone Number with Area Code: Company Website (if any): Respondent Contact Name and Title: Respondent Contact Phone:	Street Address:	
Country: Phone Number with Area Code: Company Website (if any): Company Website (if any): Respondent Contact Name and Title: Respondent Contact Phone: Company Contact Phone:	City, Province/State, Parish:	
Phone Number with Area Code: Company Website (if any): Respondent Contact Name and Title: Respondent Contact Phone:	Postal Code/Zip Code:	
Code: Company Website (if any): Respondent Contact Name and Title: Respondent Contact Phone:	Country:	
Respondent Contact Name and Title: Respondent Contact Phone:		
and Title: Respondent Contact Phone:	Company Website (if any):	
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Respondent Contact Email:	Respondent Contact Phone:	
	Respondent Contact Email:	

2. Terms of Reference

In responding to this RFI, the respondent acknowledges its acceptance of the following RFI Terms of Reference:

a. Request for Information Not a Formal Competitive Bidding Process

This RFI is issued for information-gathering purposes and is not intended to create legal obligations between the Government and any of the respondents or their representatives. Without limiting the generality of the foregoing, this RFI will not necessarily result in any subsequent negotiations, direct contract award, invitational tendering process or open tendering process, and does not constitute a commitment by the Government to procure any goods or services.

b. RFI Not to Limit the Government's Pre-Existing Rights

This RFI will not limit any of the Government's pre-existing rights. Without limiting the generality of the foregoing, the Government expressly reserves the right, at its discretion, to:

- (i) seek subsequent information or initiate discussions with any potential supplier, including potentials suppliers that did not respond to this RFI;
- (ii) initiate direct negotiations for the procurement of any good or service with any potential supplier or suppliers, regardless of whether the potential supplier or suppliers responded to this RFI;
- (iii) contact a limited number of potential suppliers, which may include only those that responded to this RFI or may include potential suppliers that did not respond to this RFI, for the purpose of a competitive process for the procurement of any good or service;
- (iv) elect to proceed by way of open tender call where all potential respondents, including those that did not respond to this RFI, are eligible to compete for the award of a contract for the supply of any good or service; and
- (v) elect not to procure the good or service that is the subject of this RFI.

These expressly reserved rights are in addition to any and all other rights of the Government that existed prior to the issuance of this RFI.

c. Pricing Information for General Information Purposes Only

Any pricing information provided by respondents is for general information purposes and is not intended to be binding on respondents. Any legally binding pricing or purchasing commitments will be established only where specified by the express terms of a subsequent tender call process or where established through the execution of a written agreement.

d. Information in RFI Only an Estimate

The Government and its advisers make no representation, warranty or guarantee as to the accuracy of the information or empirical data contained in the RFI or issued by way of addenda. Any quantities shown or data contained in this RFI, or provided by way of addenda, are estimates provided only as general background information.

e. Parties to Bear Their Own Costs

The Government will not be liable for any expenses incurred by a respondent, including the expenses associated with the cost of preparing responses to this RFI. The parties will bear their own costs associated with or incurred through this RFI process, including any costs arising out of, or incurred in, (i) the preparation and issuance of this RFI; (ii) the preparation and making of a submission; or (iii) any other activities related to this RFI process.

f. Accuracy of Responses

The respondent acknowledges that the information provided is, to the best of its knowledge, complete and accurate.

g. Submissions Will Not Be Returned

Except where set out to the contrary in this RFI or expressly requested in the respondent's submission, the submission and any accompanying documentation provided by a respondent will not be returned.

h. Confidential Information of the Government

All information provided by or obtained from the Government in any form in connection with this RFI either before or after the issuance of this RFI (i) is the sole property of the Government and must be treated as confidential; (ii) is not to be used for any purpose other than replying to this RFI; (iii) must not be disclosed without prior written authorization from the Government; and (iv) must be returned by the respondent to the Government immediately upon the request of the Government.

The respondent may not at any time directly or indirectly communicate with the media in relation to this RFI without first obtaining the written permission of the Government.

i. Disclosure of Information

The respondent consents to the Government's collection of information as contemplated under the RFI for the uses contemplated under the RFI. Respondents should not include information in their response that is proprietary or confidential. Information provided by a respondent may be released in accordance with governing laws. To the extent that a respondent does include confidential or proprietary information, the respondent should identify any information in its submission or any accompanying documentation supplied in confidence for which confidentiality is to be maintained by the Government. The confidentiality of such information will be maintained by the Government, except where the Public Access to Information Act 2010 or where an order by a tribunal or court requires the Government to do otherwise. The respondent consents to the disclosure, on a confidential basis, of this submission by the Government to advisers retained by the Government for the purpose of reviewing this submission.

The respondent acknowledges that the Government may make public the name of any and all respondents.

j. Governing Law

This RFI process will be governed by and construed in accordance with the laws of Bermuda applicable therein.

Signature of Witness

Signature of Respondent Representative

Name of Witness

Name of Respondent Representative

Title of Respondent Representative

Date

SAMPLE CERTIFICATE OF INCUMBENCY

The undersigned being the Secretary of the company as named below (the "Company"), a company duly organised and existing under the laws of the Islands of Bermuda and having it's registered office as set out below **DO HEREBY CERTIFY** that the following is a true and correct listing of the Directors and Officers of the Company in full force and effect as of the date hereof.

DIRECTORS

ALTERNATE DIRECTORS

OFFICERS

IN WITNESS WHEREOF I have hereunto set my signature in accordance with the By-Laws of the Company.

Company Name:

Date:

Secretary/Director