ASSESSMENT REPORT

LAB NO. : (6624)087-1036
DATE : April 19, 2024

Applicant:
CSE ENERGY & TECHNOLOGY CO., LTD.
NO.777, SIZHUAN ROAD, SONGJIANG, SHANGHAI, CHINA

Date of Submission: 2024-3-27
Test Period: 2024-3-27 to 2024-4-19
Sample Mode: Sample Presentation
BV EE Ref. No.: /

Sample Description:	Sample(s) received is(are) stated to be: Energy storage integrated cabinet		
Manufacturer:	CSE Energy & Technology Co.,Ltd.	Buyer:	/
Style No(s):	EcoPower-Cube-L215A	PO No.:	/
Country of Origin:	Shanghai	Country of Destination:	Oversea Country

SUMMARY OF THE ASSESSMENT

ASSESSMENT Specification – WEEE Directive 2012/19/EU	
Product Category	**Large equipment**
Test reuse and recycling rate (%) / Test recovery rate (%)	**97 / 99**
Minimum reuse and recycling rate (%) / Minimum recovery rate (%)	**80 / 85**
Conclusion: The submitted sample complies with the WEEE directive 2012/19/EU	

Note: Testing as sample submitted by client, this test report is only responsible for the conformity of the tested items. The client is responsible for the representative and authenticity of the submitted samples.

REMARK
If there are questions or concerns on this report, please contact the following persons:

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BUREAU VERITAS
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Photo of the Submitted Sample

TABLE OF CONTENT

1. General Information:

1.1 Assessment Method:

The sample was disassembled into small parts by using appropriate tools, similar materials of each part were grouped and weighed.
The recovery rate and recycling rate were calculated by the principle of best available technique for recovery, recycling and treatment provided by Cleanaway Dienstleistungs GmbH & Co KG. The disposal percentage is determined based on the European directive 2012/19/EU and 75/442/EEC.
The material types of the parts are reference to the Bill of Material (BOM) provided by the client.
The uncertainty is introduced as to eliminate possible weighting error, rounding up error and other errors. It is computed by the summation of all weighted parts subtracted from the total weight.

1.2 Disposal and Recovery stated in Waste 75/442/EEC Annex IIA & Annex IIB:

1.2.1 Disposal Operations

1.2.1.1	Deposit into or onto land (e.g. landfill, etc.)
1.2.1.2	Land treatment (e.g. biodegradation of liquid or sludgy discards in soils, etc.)
1.2.1.3	Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.)
1.2.1.4	Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.)
1.2.1.5	Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.)
1.2.1.6	Release into a water body except seas/oceans
1.2.1.7	Release into seas/oceans including sea-bed insertion
1.2.1.8	Biological treatment not specified elsewhere in the Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered 1.2.1.1 to D 1.2.1.12
1.2.1.9	Physico-chemical treatment not specified elsewhere in the Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered 1.2.1.1 to 1.2.1.12 (e.g. evaporation, drying, calcination, etc.)
1.2.1.10	Incineration on land
1.2.1.11	Incineration at sea
1.2.1.12	Permanent storage (e.g. emplacement of containers in a mine, etc.)
1.2.1.13	Blending or mixing prior to submission to any of the operations numbered 1.2.1.1 to 1.2.1.12
1.2.1.14	Repackaging prior to submission to any of the operations numbered 1.2.1.1 to 1.2.1.13
1.2.1.15	Storage pending any of the operations numbered 1.2.1.1 to 1.2.1.14 (excluding temporary storage, pending collection, on the site where it is produced)

1.2.2 Recovery Operations

1.2.2.1.	Use principally as a fuel or other means to generate energy
1.2.2.2.	Solvent reclamation/regeneration
1.2.2.3.	Recycling/reclamation of organic substances which are not used as solvents (including

composting and other biological transformation processes)
1.2.2.4. Recycling/reclamation of metals and metal compounds
1.2.2.5. Recycling/reclamation of other inorganic materials
1.2.2.6. Regeneration of acids or bases
1.2.2.7. Recovery of components used for pollution abatement
1.2.2.8. Recovery of components from catalysts
1.2.2.9. Oil re-refining or other reuses of oil
1.2.2.10. Land treatment resulting in benefit to agriculture or ecological improvement
1.2.2.11. Use of wastes obtained from any of the operations numbered 1.2.2.1 to 1.2.2.10
1.2.2.12. Exchange of wastes for submission to any of the operations numbered 1.2.2.1 to 1.2.2.11
1.2.2.13. Storage of wastes pending any of the operations numbered 1.2.2.1 to 1.2.2.12 (excluding temporary storage, pending collection, on the site where it is produced)

1.3 Recycling and Reuse stated in WEEE, Article 3

1.3.1 Recycling Operation

"Recycling" means the reprocessing in a production process of the waste materials for the original purpose or for other purposes, but excluding energy recovery which means the use of combustible waste as a means of generating energy through direct incineration with or without other waste but with recovery of the heat.

1.3.2 Reuse Operation

"Reuse" means any operation by which WEEE or components thereof are used for the same purpose for which they were conceived, including the continued use of the equipment or components thereof which are returned to collection points, distributors, recyclers or manufacturers.

1.4 Categories of EEE stated in WEEE Annex I:

1.4.1. Temperature exchange equipment
1.4.2. Screen, monitors, and equipment screens having a surface greater than 100 cm^2
1.4.3. Lamps
1.4.4. Large equipment (any external dimension more than 50 cm)
1.4.5. Small equipment (no external dimension more than 50 cm)
1.4.6. Small IT and telecommunication equipment (no external dimension more than 50 cm)

1.5 List of Abbreviations

Unless specified, the following abbreviations are used through out this assessment report:
IT: Information technology

WEEE: DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE) (recast)

RoHS: DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)

EEE: Electrical and Electronic Equipment defined under 2012/19/EU, WEEE
PC: Polycarbonate
LED: Light Emitting Device
PCB: Printed Circuit Board
PES: Polyester
IC: Integrated Circuit
NA: Not Applicable

1.6 Selective treatment for materials and components of waste electrical and electronic equipment in accordance with WEEE, Article 6 (1), Treatment

As a minimum the following substances, preparations and components have to be removed from any separately collected WEEE:

1.6.1. Polychlorinated biphenyls (PCB) containing capacitors in accordance with Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT) (1),

1.6.2. Mercury containing components, such as switches or backlighting lamps,

1.6.3. Batteries,

1.6.4. Printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimetres,

1.6.5. Toner cartridges, liquid and pasty, as well as colour toner,

1.6.6. Plastic containing brominated flame retardants,

1.6.7. Asbestos waste and components which contain asbestos,

1.6.8. Cathode ray tubes,

1.6.9. Chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC),

1.6.10. Gas discharge lamps,

1.6.11. Liquid crystal displays (together with their casing where appropriate) of a surface greater than 100 square centimeters and all those back-lighted with gas discharge lamps,

1.6.12. External electric cables,

1.6.13. Components containing refractory ceramic fibres as described in Commission Directive 97/69/EC of 5 December 1997 adapting to technical progress Council Directive 67/548/EEC relating to the classification, packaging and labelling of dangerous substances (2),

1.6.14. Components containing radioactive substances with the exception of components that are below the exemption thresholds set in Article 3 of and Annex I to Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation (3),

1.6.15. Electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)

These substances, preparations and components shall be disposed of or recovered in compliance with Article 4 of Council Directive 75/442/EEC.

1.6.2 The following components of WEEE that is separately collected have to be treated as indicated:

1.6.2.1 Cathode ray tubes: The fluorescent coating has to be removed,

1.6.2.2 Equipment containing gases that are ozone depleting or have a global warming potential (GWP) above 15, such as those contained in foams and refrigeration circuits: the gases must be properly extracted and properly treated. Ozone-depleting gases must be treated in accordance with Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer (4).

1.6.2.3 Gas discharge lamps: The mercury shall be removed.

2. ASSESSMENT SUMMARY

2.1 Assessment Summary Table

No.	Description of the sub-assessable	Weight (g)	Weight (%)	Reuse	Recycling	Energy Recovery	Disposal
1	Silvery metal with grey coating	36072	2.8		X		
2	Silvery metal with grey coating	8060	0.6		X		
3	Silvery metal with black coating	4462	0.3		X		
4	Silvery metal with grey coating	19414	1.5		X		
5	Silvery metal	11384	0.9		X		
6	Silvery metal with grey coating	118908	9.3		X		
7	Silvery metal	7050	0.6		X		
8	Silvery metal with white coating	5586	0.4		X		
9	Silvery metal	6148	0.5		X		
10	Silvery metal with grey coating	7084	0.6		X		
11	Green PCB	18306	1.4			X	
12	Black plastic	2068	0.2			X	
13	Black plastic	1804	0.1		X		
14	Transparent plastic	898	0.1		X		
15	Silvery metal	5928	0.5		X		
16	White plastic	1312	0.1		X		
17	Grey plastic	9886	0.8		X		
18	Green plastic	930	0.1		X		
19	Black plastic	2936	0.2		X		X
20	Plastic wire jacket	19730	1.5		X		
21	Coppery metal	30485	2.4		X		
22	Silvery metal with white coating	961549	75.1		X		
	Total	**2600000.00**	**100.0**				
23	Battery	1320000					X
Total disassembly time (min)		60					
Disassembly tools		Screwdriver, Pliers					

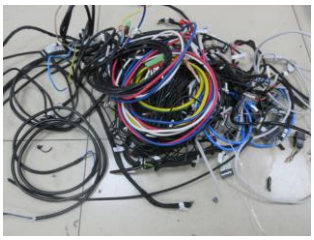
2.2 Conclusion

Product Category Large equipment		
	Actual (%)	Request (%)
Reuse and recycling rate	97	80
Recovery rate	99	85

2.3 Recommended Disassembly Sequence

Housing

Main machine assemble



Wire jacket

Battery

3. Assessment Results of the sub-assemble

3.1 Individual Part 1

1

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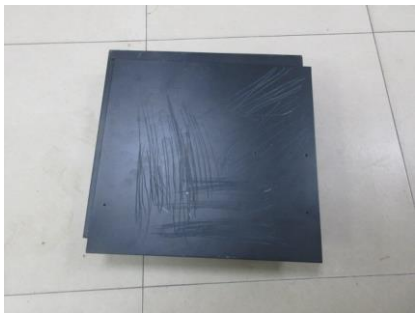

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Assessed part		Part No.	Material	Weight (g)	Weight (%)	Reuse	Recycling	Energy Recovery	Disposal
1	Silvery metal with grey coating		Metal	36072	2.8		X		
2	Silvery metal with grey coating		Metal	8060	0.6		X		
3	Silvery metal with black coating		Metal	4462	0.3		X		
4	Silvery metal with grey coating		Metal	19414	1.5		X		
5	Silvery metal		Metal	11384	0.9		X		
6	Silvery metal with grey coating		Metal	118908	9.3		X		

3.1 Individual Part 1

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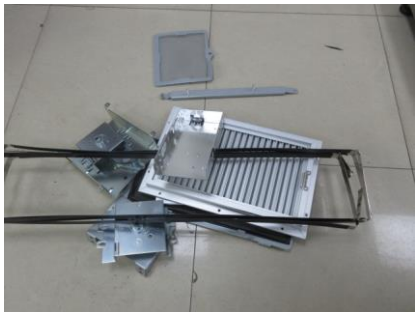

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Assessed part		Part No.	Material	Weight (g)	Weight (%)	Reuse	Recycling	Energy Recovery	Disposal
7	Silvery metal		Metal	7050	0.6		X		
8	Silvery metal with white coating		Metal	5586	0.4		X		
9	Silvery metal		Metal	6148	0.5		X		
10	Silvery metal with grey coating		Metal	7084	0.6		X		
11	Green PCB		PCB	18306	1.4			X	
12	Black plastic		Rubber	2068	0.2			X	

3.1 Individual Part 1

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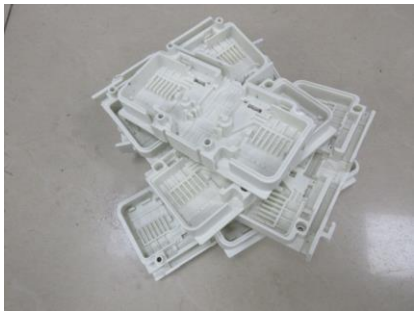

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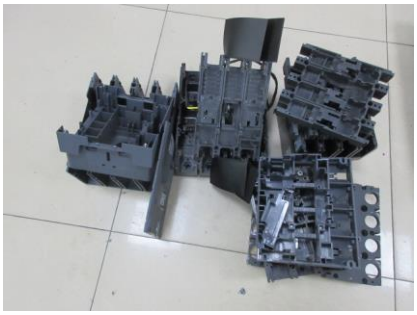

18

Assessed part		Part No.	Material	Weight (g)	Weight (%)	Reuse	Recycling	Energy Recovery	Disposal
13	Black plastic		Known plastic	1804	0.1		X		
14	Transparent plastic		Known plastic	898	0.1		X		
15	Silvery metal		Metal	5928	0.5		X		
16	White plastic		Known plastic	1312	0.1		X		
17	Grey plastic		Known plastic	9886	0.8		X		
18	Green plastic		Known plastic	930	0.1		X		

3.1 Individual Part 1

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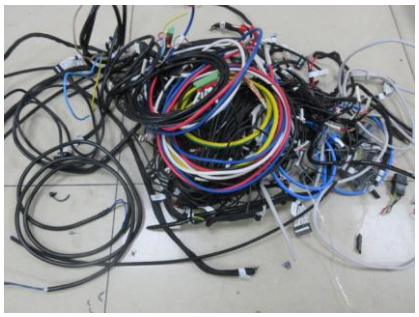

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Assessed part		Part No.	Material	Weight (g)	Weight (%)	Reuse	Recycling	Energy Recovery	Disposal
19	Black plastic		Known plastic	2936	0.2		X		
20	Plastic wire jacket		PVC	19730	1.5		X		X
21	Coppery metal		Metal	30485	2.4		X		
22	Silvery metal with white coating		Metal	961549	75.1		X		
Total				1280000.00	100.0	0.0%	97.2%	1.6%	1.2%

Disassembly Time (min)	58	Disassembly Tools	Screwdriver Pliers

3.2 Individual Part 2

23

Assessed part	Part No.	Material	Weight (g)	Weight (%)	Reuse	Recycling	Energy Recovery	Disposal
23 Battery			1320000.00					X
Total			1320000.00	100.0	0.0%	0.0%	0.0%	100.0%

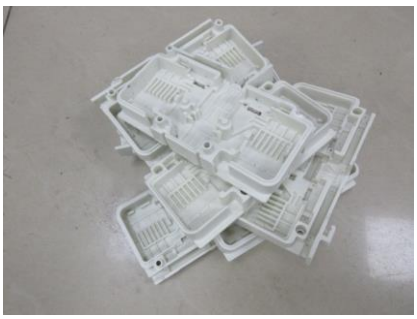
Disassembly Time (min)	2	**Disassembly Tools**	Screwdriver Pliers

4. Appendix
4.1 Bill of Material

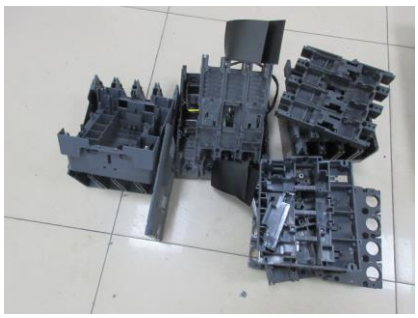
EPDM

PC

PMMA



ABS+PC



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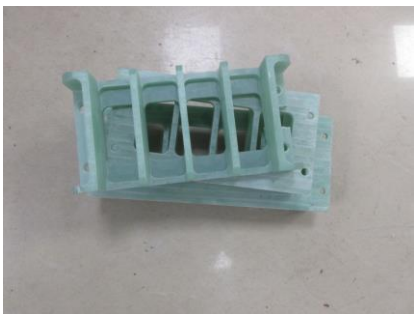

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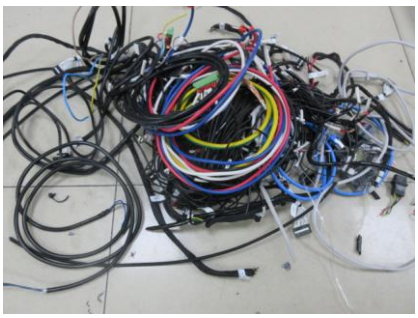

ABS PVC

END