

ಕರ್ನಾಟಕ ವಿಧಾನ ಪರಿಷತ್ತು

ಚುಕ್ಕೆ ಗುರುತಿಲ್ಲದ ಪ್ರಶ್ನೆ ಸಂಖ್ಯೆ : 631 (755)
 ಸದಸ್ಯರ ಹೆಸರು : ಶ್ರೀ ಕೆ.ಎ.ತಿಪ್ಪೇಸ್ವಾಮಿ
 ಉತ್ತರಿಸಬೇಕಾದ ದಿನಾಂಕ : 11.12.2023
 ಉತ್ತರಿಸಬೇಕಾದ ಸಚಿವರು : ಅರಣ್ಯ, ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ ಇಲಾಖೆ

ಕ್ರ. ಸಂ	ಪ್ರಶ್ನೆ	ಉತ್ತರ																		
(ಅ)	ರಾಜ್ಯದಲ್ಲಿ ಕಳೆದ 5 ವರ್ಷಗಳಲ್ಲಿ ಉತ್ಪಾದನೆಯಾದ ಇ-ತ್ಯಾಜ್ಯ ಗಳೆಷ್ಟು; ಜಿಲ್ಲಾವಾರು, ವಲಯವಾರು ಮತ್ತು ವರ್ಷವಾರು ಇ-ತ್ಯಾಜ್ಯ ಉತ್ಪಾದನೆಯ ನೀಡುವುದು;	<p>ರಾಜ್ಯದಲ್ಲಿ ಕಳೆದ 5 ವರ್ಷಗಳಲ್ಲಿ ಉತ್ಪಾದನೆಯಾದ ಇ-ತ್ಯಾಜ್ಯ ಮರುಬಳಕೆ ಘಟಕಗಳಲ್ಲಿ ಸಂಗ್ರಹಿಸಿದ ಇ-ತ್ಯಾಜ್ಯದ ವಿವರ ಕೆಳಕಂಡಂತಿದೆ.</p> <table border="1"> <thead> <tr> <th>ವರ್ಷ</th> <th>ಸಂಗ್ರಹಿಸಿದ ಪ್ರಮಾಣ (ಮೆಟ್ರಿಕ್ ಟನ್ ಗಳಲ್ಲಿ)</th> <th>ಇ-ತ್ಯಾಜ್ಯದ (ಮೆಟ್ರಿಕ್ ಟನ್)</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>16424.62</td> <td></td> </tr> <tr> <td>2019-20</td> <td>44240.04</td> <td></td> </tr> <tr> <td>2020-21</td> <td>96175.00</td> <td></td> </tr> <tr> <td>2021-22</td> <td>111589.92</td> <td></td> </tr> <tr> <td>2022-23</td> <td>59844.00</td> <td></td> </tr> </tbody> </table> <p>2021-22 ರಲ್ಲಿ ಇ-ತ್ಯಾಜ್ಯ ಸಂಸ್ಕರಿಸಿದ ಪ್ರಮಾಣವು ವಾರ್ಷಿಕ 1,11,589.92 ಮೆಟ್ರಿಕ್ ಟನ್‌ಗಳಷ್ಟಿದ್ದು, 2022-23 ರಲ್ಲಿ ಇ-ತ್ಯಾಜ್ಯ ಸಂಗ್ರಹಿಸಿ ಸಂಸ್ಕರಿಸಿದ ಪ್ರಮಾಣವು ವಾರ್ಷಿಕ 59,844.00 ಮೆಟ್ರಿಕ್ ಟನ್ ಗಳಷ್ಟು ಇದೆ. ಇದಕ್ಕೆ ಕಾರಣ ಹೊಸ ಇ-ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ ನಿಯಮ, 2022 ರಲ್ಲಿ ಬೇರ್ಪಡಿಕೆ ಘಟಕಗಳನ್ನು (Dismantling units) ನಿಯಮದ ವ್ಯಾಪ್ತಿಯಿಂದ ಹೊರತುಪಡಿಸಿದ್ದು, ಈ ಘಟಕಗಳಲ್ಲಿನ ಪ್ರಮಾಣವನ್ನು ಅಂಕಿಅಂಶದಲ್ಲಿ ಸೇರ್ಪಡೆ ಮಾಡಿರುವುದಿಲ್ಲ. ಜಿಲ್ಲಾವಾರು ಸಂಗ್ರಹಿಸಿದ ಇ-ತ್ಯಾಜ್ಯ ವಿವರಗಳನ್ನು ಅನುಬಂಧ -1 ನೀಡಿದೆ.</p>	ವರ್ಷ	ಸಂಗ್ರಹಿಸಿದ ಪ್ರಮಾಣ (ಮೆಟ್ರಿಕ್ ಟನ್ ಗಳಲ್ಲಿ)	ಇ-ತ್ಯಾಜ್ಯದ (ಮೆಟ್ರಿಕ್ ಟನ್)	2018-19	16424.62		2019-20	44240.04		2020-21	96175.00		2021-22	111589.92		2022-23	59844.00	
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(ಆ)	ರಾಜ್ಯದಲ್ಲಿ ಇ-ತ್ಯಾಜ್ಯ ವಿಲೇವಾರಿಗೆ ಕೇಂದ್ರ ಮತ್ತು ರಾಜ್ಯ ಸರ್ಕಾರಗಳು ಹೊರಡಿಸಿರುವ ಮಾರ್ಗಸೂಚಿಗಳು ಯಾವುವು;	<p>ಪರಿಸರ, ಅರಣ್ಯ ಮತ್ತು ಹವಾಮಾನ ಬದಲಾವಣೆ ಸಚಿವಾಲಯ, ಭಾರತ ಸರ್ಕಾರ, ನವದೆಹಲಿಯು ಇ-ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ ನಿಯಮ, 2016 ಅನ್ನು ದಿನಾಂಕ: 01.10.2016 ರಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ದಿನಾಂಕ: 23.03.2016 ರಂದು ಅಧಿಸೂಚನೆಯನ್ನು ಹೊರಡಿಸಿದೆ.</p>																		

ಈ ಅಧಿಸೂಚನೆಯು, ಮ್ಯಾನುಫ್ಯಾಕ್ಚರರ್, ಪ್ರೊಡ್ಯೂಸರ್, ಕನ್ಸೂಮರ್, ಕಲೆಕ್ಟರ್ ಸೆಂಟರ್, ಡೀಲರ್, ಇ-ರಿಟೇಲರ್, ರಿಫರ್ಬಿಷರ್, ಡಿಸ್‌ಮಾಂಟ್ಲರ್ ಮತ್ತು ರಿಸೈಕ್ಲರ್‌ಗೆ ಅನ್ವಯಿಸುತ್ತದೆ. ಈ ನಿಯಮಾನುಸಾರದಲ್ಲಿ ಎರಡು ಪ್ರವರ್ಗಗಳಿದ್ದು ಅದರಲ್ಲಿ 21 ಇ-ತ್ಯಾಜ್ಯ ವರ್ಗಗಳನ್ನಾಗಿ ವಿಂಗಡಿಸಿದೆ.

ಕೇಂದ್ರ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿಯು ಇ-ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ ನಿಯಮ, 2016 ರಡಿಯಲ್ಲಿ ಮಾರ್ಗಸೂಚಿಗಳನ್ನು ಹೊರಡಿಸಿದ್ದು, ಈ ಮಾರ್ಗಸೂಚಿಯಲ್ಲಿ ಕನಿಷ್ಠ ಪ್ರದೇಶದ ಬಗ್ಗೆ ಈ ಕೆಳಕಂಡಂತೆ ವಿವರಿಸಿದೆ.

1. ಬೇರ್ಪಡಿಕೆ ಘಟಕಗಳಿಗೆ (Dismantling units) ದಿನಂಪ್ರತಿ 1 ಟನ್ ಇ-ತ್ಯಾಜ್ಯವನ್ನು ಬೇರ್ಪಡಿಸಲು ಕನಿಷ್ಠ 300 ಚದರ ಮೀಟರ್ ವಿಸ್ತೀರ್ಣದ ಪ್ರದೇಶವನ್ನು ಹೊಂದಿರಬೇಕು.
2. ಮರುಬಳಕೆ ಘಟಕಗಳಿಗೆ (Recycling units) ದಿನಂಪ್ರತಿ 1 ಟನ್ ಇ-ತ್ಯಾಜ್ಯವನ್ನು ಸಂಸ್ಕರಿಸಲು ಕನಿಷ್ಠ 500 ಚದರ ಮೀಟರ್ ವಿಸ್ತೀರ್ಣದ ಪ್ರದೇಶವನ್ನು ಹೊಂದಿರಬೇಕು.
3. ನವೀಕರಣ ಘಟಕಗಳಿಗೆ (Refurbishing units) ದಿನಂಪ್ರತಿ 1 ಟನ್ ಇ-ತ್ಯಾಜ್ಯವನ್ನು ನವೀಕರಿಸಲು ಕನಿಷ್ಠ 150 ಚದರ ಮೀಟರ್ ವಿಸ್ತೀರ್ಣದ ಪ್ರದೇಶವನ್ನು ಹೊಂದಿರಬೇಕು.

ಮುಂದುವರಿದಂತೆ, ಪರಿಸರ, ಅರಣ್ಯ ಮತ್ತು ಹವಾಮಾನ ಬದಲಾವಣೆ ಸಚಿವಾಲಯ ಇ-ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ ನಿಯಮ, 2016ರ ಬದಲಾಗಿ ಇ-ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ ನಿಯಮ, 2022 ಅನ್ನು ದಿನಾಂಕ: 01.04.2023 ರಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ದಿನಾಂಕ: 02.11.2022 ರಂದು ಅಧಿಸೂಚನೆಯನ್ನು ಹೊರಡಿಸಿರುತ್ತದೆ.

ಈ ನಿಯಮಾನುಸಾರದಲ್ಲಿ ಏಳು ಪ್ರವರ್ಗಗಳಿದ್ದು, ಅದರಲ್ಲಿ 106 ಇ-ತ್ಯಾಜ್ಯ ವರ್ಗಗಳನ್ನಾಗಿ ವಿಂಗಡಿಸಿದೆ.

ಈ ಅಧಿಸೂಚನೆಯು, ಮ್ಯಾನುಫ್ಯಾಕ್ಚರರ್, ಪ್ರೊಡ್ಯೂಸರ್, ರಿಫರ್ಬಿಷರ್, ಡಿಸ್‌ಮಾಂಟ್ಲರ್ ಮತ್ತು ರಿಸೈಕ್ಲರ್‌ಗೆ ಅನ್ವಯಿಸುತ್ತದೆ ಹಾಗೂ ಈ ಘಟಕಗಳು ಕೇಂದ್ರ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿಯವರು ಇ-ತ್ಯಾಜ್ಯ ವಿಸ್ತೃತ ಉತ್ಪಾದಕರ

		<p>ಜವಾಬ್ದಾರಿ (Extended Producer Responsibility) ಅಡಿ, ಅಭಿವೃದ್ಧಿಪಡಿಸಿರುವ EPR Portal ಅಲ್ಲಿ ನೋಂದಣಿ ಮಾಡಬೇಕಾಗಿರುತ್ತದೆ.</p> <p>ಕೇಂದ್ರ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿಯು ಇ-ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ ನಿಯಮ, 2022 ರಡಿಯಲ್ಲಿ ಮಾರ್ಗಸೂಚಿಯನ್ನು ಹೊರಡಿಸುವ ಹಂತದಲ್ಲಿರುತ್ತದೆ.</p> <p>ಪರಿಸರ, ಅರಣ್ಯ ಮತ್ತು ಹವಾಮಾನ ಬದಲಾವಣೆ ಸಚಿವಾಲಯ, ಭಾರತ ಸರ್ಕಾರ, ನವದೆಹಲಿಯು ಹಾಗೂ ಕೇಂದ್ರ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿಯು ಹೊರಡಿಸಿರುವ ನಿಯಮಾವಳಿಗಳನ್ನು ಮತ್ತು ಮಾರ್ಗಸೂಚಿ ಗಳನ್ನು ಅನುಬಂಧ -2 ಮತ್ತು ಹೆಚ್ಚುವರಿ ಮಾಹಿತಿಯನ್ನು ಅನುಬಂಧ -5 ರಲ್ಲಿ ನೀಡಲಾಗಿದೆ.</p>												
ಇ)	<p>ರಾಜ್ಯದಲ್ಲಿ ಉತ್ಪಾದನೆಯಾಗುವ ಇ-ತ್ಯಾಜ್ಯದಲ್ಲಿ ಎಷ್ಟು ಪ್ರಮಾಣದಲ್ಲಿ ಮರುಬಳಕೆ (Recycle) ಯಾಗುತ್ತದೆ; ವಲಯವಾರು ಮತ್ತು ವರ್ಗವಾರು ಪೂರ್ಣ ಮಾಹಿತಿ ನೀಡುವುದು;</p>	<p>ರಾಜ್ಯದಲ್ಲಿ ಉತ್ಪಾದನೆಯಾಗುವ ಇ-ತ್ಯಾಜ್ಯದಲ್ಲಿ ಪ್ರತಿ ವರ್ಷ ಮರುಬಳಕೆಯಾಗುವ ವಿವರ ಕೆಳಕಂಡಂತಿದೆ.</p> <table border="1"> <thead> <tr> <th>ವರ್ಷ</th> <th>ಇ-ತ್ಯಾಜ್ಯದ ಮರುಬಳಕೆ ವಿವರ (ಮೆಟ್ರಿಕ್ ಟನ್ ಗಳಲ್ಲಿ)</th> </tr> </thead> <tbody> <tr> <td>2018-19</td> <td>16424.62</td> </tr> <tr> <td>2019-20</td> <td>44240.04</td> </tr> <tr> <td>2020-21</td> <td>96175.00</td> </tr> <tr> <td>2021-22</td> <td>111589.92</td> </tr> <tr> <td>2022-23</td> <td>59844.00</td> </tr> </tbody> </table> <p>ಜಿಲ್ಲಾವಾರು ಇ-ತ್ಯಾಜ್ಯ ಮರುಬಳಕೆ ವಿವರಗಳನ್ನು ಅನುಬಂಧ -1 ರಲ್ಲಿ ನೀಡಲಾಗಿದೆ.</p>	ವರ್ಷ	ಇ-ತ್ಯಾಜ್ಯದ ಮರುಬಳಕೆ ವಿವರ (ಮೆಟ್ರಿಕ್ ಟನ್ ಗಳಲ್ಲಿ)	2018-19	16424.62	2019-20	44240.04	2020-21	96175.00	2021-22	111589.92	2022-23	59844.00
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ಈ)	<p>ರಾಜ್ಯದಲ್ಲಿ ಇ-ತ್ಯಾಜ್ಯ ಸಂಸ್ಕರಣೆಗೆ ಗುರುತಿಸಿ ಅನುಮತಿ ನೀಡಿರುವ ಘಟಕಗಳು ಯಾವುವು; ಜಿಲ್ಲಾವಾರು ಹಾಗೂ ಖಾಸಗಿ ಸಂಸ್ಥೆವಾರು ಪೂರ್ಣ ಮಾಹಿತಿ ನೀಡುವುದು;</p>	<p>ರಾಜ್ಯದಲ್ಲಿ ಇದುವರೆಗೂ 198 ಇ-ತ್ಯಾಜ್ಯ ಸಂಸ್ಕರಣೆ ಮತ್ತು ಮರುಬಳಕೆ ಘಟಕಗಳು ಮಂಡಳಿಯಿಂದ ಸ್ಥಾಪನಾ ಸಮ್ಮತಿ ಪತ್ರಗಳನ್ನು ಪಡೆದಿದ್ದು, ಸದರಿ ಘಟಕಗಳ ವಿವರಗಳನ್ನು ಅನುಬಂಧ -3 ರಲ್ಲಿ ನೀಡಲಾಗಿದೆ.</p>												

<p>ಉ) ರಾಜ್ಯದಲ್ಲಿರುವ ಇ-ತ್ಯಾಜ್ಯ ಸಂಸ್ಕರಣೆಯಲ್ಲಿ ತೊಡಗಿರುವ ಸಂಸ್ಥೆಗಳಿಗೆ ಕೇಂದ್ರ ಮತ್ತು ರಾಜ್ಯ ಸರ್ಕಾರಗಳಿಂದ ದೊರೆಯುತ್ತಿರುವ ಆರ್ಥಿಕ ನೆರವು ಮತ್ತು ಪ್ರೋತ್ಸಾಹಗಳು ಯಾವುವು; ಪೂರ್ಣ ಮಾಹಿತಿ ನೀಡುವುದು?</p>	<p>ಪರಿಸರ, ಅರಣ್ಯ ಮತ್ತು ಹವಾಮಾನ ಬದಲಾವಣೆ ಸಚಿವಾಲಯ, ಭಾರತ ಸರ್ಕಾರ, ನವದೆಹಲಿಯು ಇ-ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆ ನಿಯಮ, 2022 ಅನ್ನು ದಿನಾಂಕ: 01.04.2023 ರಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ದಿನಾಂಕ: 02.11.2022 ರಂದು ಅಧಿಸೂಚನೆಯನ್ನು ಹೊರಡಿಸಿದ್ದು, ಸದರಿ ಅಧಿಸೂಚನೆಯಲ್ಲಿ MSME ಕಾರ್ಯವ್ಯಾಪ್ತಿಯಲ್ಲಿ ಬರುವ ಸೂಕ್ಷ್ಮ (Micro) ಘಟಕಗಳಿಗೆ ವಿನಾಯಿತಿಯನ್ನು ನೀಡಲಾಗಿದೆ.</p> <p>ಮುಂದುವರೆದಂತೆ, Ministry of Electronics and Information Technology, ನವದೆಹಲಿಯವರು ಹೊರಡಿಸಿರುವ ಅಧಿಸೂಚನೆಯನ್ವಯ ಇ-ತ್ಯಾಜ್ಯ ಘಟಕಗಳ ಬಂಡವಾಳ ವೆಚ್ಚವು ರೂ.2.00 ಕೋಟಿಗಿಂತ ಹೆಚ್ಚಿರುವ ಘಟಕಗಳಿಗೆ ಪ್ರೋತ್ಸಾಹಧನವನ್ನು ನೀಡುವ ಸಂಬಂಧ ಅಧಿಸೂಚನೆಯನ್ನು ಹೊರಡಿಸಿರುತ್ತದೆ. ಸದರಿ ಅಧಿಸೂಚನೆಯನ್ನು ಅನುಬಂಧ -4 ರಲ್ಲಿ ಲಗತ್ತಿಸಿದೆ.</p>
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ಸಂಖ್ಯೆ: ಅಪಜೀ 183 ಇಎನ್‌ಜಿ 2023


(ಈಶ್ವರ್ ಬಿ. ಖಂಡೆ)

ಅರಣ್ಯ, ಜೀವಿಪರಿಸ್ಥಿತಿ ಮತ್ತು ಪರಿಸರ ಸಚಿವರು

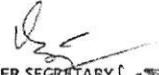

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DETAILS OF DISTRICT WISE E-WASTE COLLECTED IN METRIC TONNE BY THE RECYCLERS FOR THE YEAR 2019-2020 IN KARNATAKA

Sl. No	District	Regional Office	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	CEEW 1	CEEW 2	CEEW 3	CEEW 4	CEEW 5	General & Other	Total		
1	Bengaluru Urban	Anekal	0	25.3	2.74	0	0	5.69	3.25	0	0	0.62	0	1.59	0	0	0.02	0	2.981	16.89	11.29	9.81	0.46	0	39731.38		
		Bommanahalli	1.6354	3.62522	211.28	0.231	0	1.244	0.054	37.9	0	0	0	0.076	0	0	0.11	0	75.51	1.24	0	0	0	0			
		Sarjapura	1.387	6.3567	8.8567	4.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		914.834	
		R.R.Nagar	23.422	101.99	18.94	2.1	2.3	43.18	4.454	6.34	1.3	0.95	0.5	14.5	0.6	1.75	1.45	1.82	7.15	2.1	5	4.2	1.77	0			
		Dasarahalli	188.53	568.716	574.83	0	0.037	118.93	32.37	0.55	105.4	0	0	13.275	0	0	134	0.348	118.74	134.81	638.68	591	9.95	0			
		Peenya	21.05	86.355	45.478	0.16	0	70.11	0.27	5.9	0.003	0	0.71	173.05	0	0	173	0.1	2.05	219.02	0	2.19	14.72	16.3			
		Bng City East	21.1988	0.429	0.124	0.029	0	18.697	0.098	0	0	0	0	0.042	0	0	0	0	0	0	0	0	0	0			
		Bng City West	3312	23618.3	4455	0	382.5	916.98	82.1	0	0	0	0	0	0	0	1017	0	0	0	0	0	0	0			
		Bng City South	22	166.56	8.94	0.9	1	12.2	1.5	0.5	6.3	0.2	2.5	7.18	0.6	0.7	0.86	1.1	1.79	0.77	1.35	2.86	0.8	11.31			
2	Bengaluru Rural	Hoskote	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1922.95	870.901	435.451	634.98	0	0	1838.2		
		Nelemangala	488.567	34.897	320.15	22.16	0.879	242.82	195.74	0	12.623	8.467	0	0.9	0	0	0.97	0	242.3	4.2681	3.153	24.361	3.7254	0			
		Doddaballapura	17.001	311.16	171.54	10.33	0.9	11.695	0.2	5.01	0.9	0	0	1.06	0	0	0	0	0	1.44	3.18	1.31	69.7	69.7			
3	Ramanagara	Ramanagara	375.6	886.8	244.32	0	0	279.6	0	0	0	0	397.34	0	0	0	39.6	0	0	0	996.78	0	686.028	401.84			
4	Chikkaballapura	Chikkaballapura	1.445	2.905	2.935	0	0	0.155	0.03	0	0.08	0	0	0.06	0	0	0	0.04	0	0	0	0	0	0	7.65		
5	Mandya	Mandya	0.045	2.799	2.678	1.846	0	0.072	0.197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.637		
6	Mysuru	Mysuru urban	0	3.5944	2.765	0.095	0	6.608	0	0.37	0	0	0	1.82	0	0	0.17	1.547	0.487	0.2	0	2.5	28.69	0	48.8414		
7	Dakshina Kannada	Dakshina Kannada	74.16	43.26	37.08	30	0	0	0	0	0	0	0	0	0	0	0	0	24.72	0	0	37.08	0	988.8	1235.1		
8	Dharwad	Dharwad	0	0	0	0	0	0.76	0	5.6	0	0	0	1.622	0	0.74	0	0	0	0	0	0	0.34	0	9.062		
9	Tumkuru	Tumkuru	0	506.84	260.11	0	31.75	44.9	0	0	0.18	0	0	45.95	0	1.8	0	0	62.76	0	0	0	1	5.04	960.33		
		Total	4548.04	26369.9	6367.8	71.91	419.37	1773.6	320.26	62.1	126.79	10.24	3.71	658.47	1.2	3.19	1329	44.56	2461.44	1251.64	1098.1	2307.1	131.15	2692.01	44240.04		

* ChamaraJanagar, Hesson, Mysuru Rural, Kodagu, Udupi, Karwar, Chikkamagaluru, Ballary, Koppal, Raichur, Kalaburagi, Bidar, Vijayapura, Yadgir, Belagavi, Haveri, Gadag, Bagalkote, Davanagere, Chitradurga, Shivamogga does not have e-waste recycling units in the Karnataka.


MEMBER SECRETARY (E-WASTE)
KSPCB


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DETAILS OF DISTRICT WISE E-WASTE COLLECTED IN METRIC TONNE BY THE RECYCLERS FOR THE YEAR 2020-2021 IN KARNATAKA

S.No.	District	Regional Office	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	CEEW 1	CEEW 2	CEEW 3	CEEW 4	CEEW 5	General & Other	Total	
1	Bengaluru Urban	Anekal	0.024	33.359	0.499	0	0.004	1.454	0.830	0	0.560	0	0	0.093	0	0	0.064	0	63.203	47.884	19.843	7.164	0	28.64	66750.11	
		Bommanahalli	0	0	1386.529	0	0	0	0	0	0	0	0	0	0	0	0	0	1145.094	32.204	37.884	11.800	5.234	0		0
		Sarjapura	0.036	34.002	0.397	0	0.051	2.453	0.950	0	0.650	0	0	0.091	0	0	0	0	0	0	0	0	0	0		0
		R.R.Nagar	14.17	154.9	23.47	0	0	137.82	4.3	0	0.5	0	2.5	11.7	0	2	1	0	0.39	0	0.65	0	0	0		0
		Dasarahalli	666.2879	1383.135	341.759	133.24	64.836	188.493	8.76	0	55.634	0	0	13.73	0	0	73.96	0	28.217	33.76	448.01	441.14	1.86	0		0
		Peenya	10.88	30.89	85.45	0.0016	0	60.3	0.105	0	20.54	0	0	3.05	0	0	0.30025	0.0017	54.24	282.18	0	8.3	1.84	17.9		0
		Bng City East	9.517	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
		Bng City South	62.53	76.81	31.54	1.5	1.38	13.67	5.91	3	9.69	0.1	0.03	6.88	0.04	3.85	0.06	0.05	3.65	5.1	7.225	19.05	1.68	0.1		0
		Bng City West	-	36,601.94	6576.56	0	1191.45	1621.2	95	0	0	0	0	0	0	0	275.17	0	881	0	0	0	0	0		7076.25
2	Bengaluru Rural	Nelamangala	576.49	465.84	381.693	0	1.03	287.168	231.4608	0	14.93	10.01	0	1.06	0	0	1.14	0	286.815	3.72	3.72	28.8	4.41	0	19813.29	
		Hoskote	0.7	0.9	0.65	0.26	0	0.2	0	0.15	0	0	0	0.124	0	0.08	0	0.019	72.8	2074.41	3281.31	2965.61	0.01	8397.22		
		Doddaballapura	20.459	606.06	8.668	17.09	1.086	21.99	5.954	8.547	0	0	0	8.278	0	0	0.245	0.00011	6.572	0.085	0.064	0.028	0.1	13.349		
3	Ramanagara	Ramanagara	51	60.041	22	0	0	30	20	0	0	0	18	0	0	0	0	0	2.35	0	113.975	0.42	50.745	368.531		
4	Kolar	Kolar	16.95	32.15	26.95	0	0	0	0	0	0	0	0	0	0	0	0	0	3087.27	2263.96	1320.47	0	0	6747.75		
5	Chikkaballapura	Chikkaballapura	2.11	16.07	6.58	0	0	0.59	5.1	0	0.045	0	0	0.02	0	0	0	0	1.625	0	0	0	0	32.14		
6	Mandya	Mandya	0	0	23.933	2.862	0	0.368	0	0	0	0	2.26	0	0	0	0	0.009	0.01	0	0	0	0	29.462		
7	Mysuru	Mysuru-1	0	17.462	0.027	0	0	12.715	1.577	0.175	1.429	0	5	0	0	0	0	2.219	0	0.925	6.217	23.33	0	71.072		
8	Dakshina Kannada	Dakshina Kannada	112.74	65.76	56.37	46.98	0	0	0	0	0	0	0	0	0	0	0	0	34.72	0	0	37.38	0	988.8	1332.45	
9	Tumkuru	Tumkuru	265.3	580.6	0.9	3	0.2	0	0	0	0	0	0.6	0	178.8	0.8	0	0	0	0	0	0	0	0	1030.2	
Total			1,809.19	40,159.92	8,973.974	201.934	1,262.84	2,378.62	379.947	11.87	103.98	10.11	2.53	70.876	0.04	184.7	352.74	3,92381	10,188.20	4,751.326	5,089.02	3,632.58	33.65	16573	96175.005	

* Chamarajanagar, Hassan, Mysuru Rural, Kodagu, Udipi, Karwar, Chikkamagaluru, BaSary, Koppal, Raichur, Kalaburagi, Bidar, Vijayapura, Yadgir, Belagavi, Haveri, Gadag, Bagalkote, Davanagere, Chitradurga, Shivamogga doesnot have e-waste recycling units in the Karnataka.

MEMBER SECRETARY (KSPCB)
KSPCB

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DETAILS OF DISTRICT WISE E-WASTE COLLECTED IN METRIC TONNE BY THE RECYCLERS FOR THE YEAR 2021-2022 IN KARNATAKA

Sl. No	District	Regional Office	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	CEEW 1	CEEW 2	CEEW 3	CEEW 4	CEEW 5	General & Other	Total	
1	Bengaluru Urban	Anekal	85.024	58.295	5.527	0	0.013	11.568	11.072	0	5.087	0.144	0	8.261	0	0	0.008	0	32.297	60.311	12.831	7.197	0.539	923.955	96,200.18	
		Bommanahalli	2.7	7.56	2539.68	0	0	3.3105	0.9653	0	4.2098	0	0	0.66545	0	0	0.20109	0	825.372	0	0	117.76	0	1.39474		
		Sarjapura	3753.2	7242.5	13687.6	6.5	20	2351	0	0	0	0	0	0.5	0.5	0	0	0	23.6	4.45	0	0	2.7	4971		
		R.R.Nagar	92.877	88.4	70.691	14.3	3.5	96.6	23.3	8.95	2.25	0.6	0.95	19.025	16.45	2	1.15	3.5	0	8.5	6.5	11	0	923.955		
		Dasarahalli	713.103	2097.903	339.436	266.91	25.36	226.542	46.125	0	28.461	0	0	8.42	0	0	165.834	7.221	54.198	55.57	338.81	57.99	6.734	923.955		
		Bng City West	0	25.896.00	0	0	1374.65	649.2	31	0	0	0	0	0	0	0	1324.65	0	5056.8	0	0	0	17008.8	0		
		Peenya	34.38	172.85	66.58	1.81	0	61.45	2.1	0.03	47.18	0	0	0	5.02	0	0	30.62	0	99.07	50.43	16.18	66.13	31.26		60.3
		Bng City East	122.129	0	0	0	0	0.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
		Bng City South	108.7	101.59	44.947	6.458	4.208	22.533	12.541	15.267	23.942	12.008	17	21.357	8.004	5.002	4.204	2.566	18.031	12.008	9	17.75	15	1.095		
2	Bengaluru Rural	Nelamangala	228.5	3547.92	2061.51	233.11	6.1064	410.68	60.598	0	37.137	8.56	0.01	1.308	0	439.49	0.396	0	608.775	253.141	255.06	4.859	8.344	268.48	12935.72	
		Hoskote	0	3.38	1.9	0.75	0	35.95	0	0.17	0	0	0	0.218	0	3.73	2.46	0.2	115.67	179.45	1755.53	797.55	0	923.95		
		Doddaballapura	149.046	351.63	17.32	27.69	0.027	18.19	0.42	0	82.02	0	0	6.95	0	0	6.472	0	2.825	0	0	3.902	0.32	9.916		
3	Ramanagara	Ramanagara	34.147	0	81.01	0	0	9.49	0	0	0	0	0	0	0	0	0	0	160	0	0	58.2	0	0	342.85	
		Chikkaballapura	15.47	48.38	16.66	0	0	1.405	1.625	0	2.87	0	0	1.23	0	0	0	0	1.92	0	0	0	0	0		89.56
5	Mandya	Mandya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	Mysuru	Mysuru-1	0	9.48	0.11	0	0	32.09	0	3.7	0	0	0.09	0	0.03	0	0.1	0.03	0	0	0	3.76	3.86	0	53.25	
7	Mangaluru	Mangaluru	59.44	34.71	29.72	24.76	0	0	0	0	0	0	0	0	0	0	0	0	19.81	0	0	29.72	0	792.6	990.76	
8	Dharwad	Dharwad	0	0	0	0	0	5.5	0	45	0	0	0	2.93	0	2.22	0	0	0	0	0	0.21	0	0	55.86	
9	Tumkuru	Tumkuru	20.31	271.51	788.15	6.5	14.17	37.45	0	0	8.59	0	0	1.19	0	0	216.73	0	3.9	2.45	0	3.52	2.12	45.15	921.74	
Total			5,419.03	39,933.11	19,250.84	588.79	1,398.03	3,973.77	189.75	73.12	241.73	21.21	8.0	77.16	24.95	452.5	1,752.73	15.51	7,020.38	626.31	2,398.01	1,179.34	1,7079.88	9865.751	1,11,589.91	

* ChamaraJanagar, Hassan, Mysuru Rural, Kodagu, Udipi, Karwar, Chikkamagaluru, Ballary, Koppal, Raichur, Kalaburagi, Bidar, Vijayapura, Yadgir, Belagavi, Haveri, Gadag, Bagaikote, Davanagere, Chitradurga, Shivamogga doesnot have e-waste recycling units in the Karnataka.

MEMBER SECRETARY
KSPCB
(Signature)

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DETAILS OF DISTRICT WISE E-WASTE COLLECTED IN METRIC TONNE BY THE RECYCLERS FOR THE YEAR 2022-2023 IN KARNATAKA

Sl. No	District	Regional Office	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15	Item 16	CEEW 1	CEEW 2	CEEW 3	CEEW 4	CEEW 5	General & Other	Total	
1	Bengaluru Urban	Anekal	33.7	73.6	78.1	20.9	0.092	18.4	1.5	626.67	19.5	0	0	4.3	0	0	0.02	0	77.2	32.010	19.0	5.7	0	0	21548.8	
		Bommanahalli	1236.26	5.5	2693.1	305.25	0	0.62	0.03	0	1.3	0	0	0.5	0	0	0.3	0	735.4	0	0	0	0	6.7		
		Sarjapura	0.645	18.674	12.996	1236.3	0.02	6.514	5.35	0	305.25	0	0	0.5	0	0	4.90	0	0.02	0	0	0	0	0	0	
		R.R.Nagar	142.3	22.8	31.9	39.4	0	55.2	15.02	72.5	23.8	2.25	3.58	37.92	305.25	0	0.84	0	4.3	7	40.1	65.2	0	0	0	
		Dasarahalli	890.11	1746.14	582.0	312.61	0.04	0.43	433.9	0.05	28.76	1236.3	0	26.11	0	0	45.69	0.06	84.32	32.77	124.8	47.37	8.73	0	0	
		Paenya	81.92	239.11	156.66	1236.3	7.37	21.96	1.76	0.02	16.80	0	0	3.92	0	0	0	0	21.42	21.42	0	0	0.82	14.22	4.96	
		Bng City East	18.97	0.695	0.8	0	1.13	1236.26	0.1	305.25	0	0	0.1	0	0.1	0	0.15	1236.26	0.08	0	0	0	0	0	0	
		Bng City South	23.28	34.58	29.28	13.5	10.5	21.41	18.65	13	29.11	9.1	7.03	12.6	10.04	5.3	7.9	2.55	14.5	12.05	9	27.2	14.58	1239.2		
		Bng City West	23.02	1.26	6.57	1236.3	0	3.24	0.16	0	5.43	0	0	0	0	0	1.92	14.49	0.28	15.92	0	0	0	0	0	
2	Bengaluru Rural	Nelamangala	10.46	1657.1	21.744	765.2	2.02	737.3	35.6	1236.26	177.8	0	0	40.8	0	0	461.8	0	167.3	502.9	232.1	55.5	0.85	100.4	15712.6	
		Hoskote	609.59	0	0	0	0	0.40	0	0.74	0	0	0	0.33	0	0.08	0	0	44.64	211.2	6426.3	363.7	0.028	0	0	
		Doddaballapura	177.5	314.3	45.4	0	0	24.8	1236.26	0	14.1	0	0.11	16.2	0	0	0.05	6.22	0.88	0.19	0.47	1.02	12.89	0	0	
3	Ramanagara	Ramanagara	31.2	1236.26	79.0	0	0	8.6	0	0	0	0	0	0	0	0	0	0	159	0	0	57.3	0	0	1571.3	
4	Kolar	Kolar	1236.26	42.5	80.76	0	18.02	212	0	0	0	0	0	0	0	0	99.9	0	0	671.02	30.03	466.8	0	0	2857.29	
5	Chikkaballapura	Chikkaballapura	0.74	33.23	32.37	1236.3	0.2	0.85	0.11	0	5.67	0	0	1.10	0	0	0	0.19	0	0	0	0	0	0	1310.70	
6	Mysuru	Mysuru-1	1236.26	10.5	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	3.1	0	0.23	4.62	0	1314.71	
		Mysuru-2 (Rural)	0	7.22	9.7	1.6	0.3	2.1	4.9	1236.26	3.8	0	0	1.4	0	0	0	0	0	0	0	0	0	78.13	1345.41	
7	Mangaluru	Mangaluru	45.62	26.61	22.81	19.01	0	1236.26	0	0	0	0	0	0	0	0	0	0	15.21	0	0	22.81	0	608.31	1996.64	
8	Dharwad	Dharwad	1236.26	0	0	0	0	0.592	0	4.65	0	0	0	0.7	0	0.18	0	0	0	0	0	0	0	0.105	18	1260.49
9	Tumkuru	Tumkuru	1236.7	706.26	8518.59	28.04	7.53	9.79	0	0	46.49	0	0	0.85	0	0	102.97	0	6.44	0	0	0	19.77	242.58	10926.01	
		Total	8,270.7	6,176.3	12,401.8	6450.5	47.1	3,656.8	1,753.4	3495.4	675.7	1247.6	11	147.2	315.4	5.6	726.4	1281.2	1,331.0	1,487.6	6,875.9	1,113.6	75.8	2298.24	59844.00	

* Chamarajanager, Hassan, Mysuru Rural, Kodagu, Udipi, Karwar, Chikkamagaturu, Ballary, Koppal, Raichur, Kalaburagi, Bidar, Vijayapura, Yadgi, Belagavi, Haveri, Gadag, Sagalkote, Davanagere, Chitradurga, Shivamogga doesnot have e-waste recycling units in the Karnataka.

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MEMBER SECRETARY (E-Waste)
KSPCB

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[भाग II—खण्ड 3(i)]

भारत का राजपत्र : असाधारण

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70.	वीडियो गेम	टीएलएसई डब्ल्यू4
71.	बाइक चलने, ड्रवकी लगाने, दौड़ने, नाव खेने आदि के लिए कंप्यूटर।	टीएलएसई डब्ल्यू5
72.	विजली या इलेक्ट्रॉनिक उपस्करों सहित खेल उपस्कर	टीएलएसई डब्ल्यू6
73.	सिक्का खांचा मशीनें	टीएलएसई डब्ल्यू7
	चिकित्सा उपस्कर (सभी प्रत्यारोपित और संक्रमित उत्पादों को छोड़कर)	
74.	रेडियोथेरेपी उपस्कर और सहायक उपस्कर	एमडीडब्ल्यू1
75.	कार्डियोलॉजी उपस्कर और सहायक उपस्कर	एमडीडब्ल्यू2
76.	डायलिसिस उपस्कर और सहायक उपस्कर	एमडीडब्ल्यू3
77.	पल्मोनरी वेंटिलेटर और सहायक उपस्कर	एमडीडब्ल्यू4
78.	परमाणु चिकित्सा उपस्कर और सहायक उपस्कर	एमडीडब्ल्यू5
79.	इन विट्रो निदान के लिए प्रयोगशाला उपस्कर और सहायक उपस्कर	एमडीडब्ल्यू6
80.	विश्लेषक और सहायक उपस्कर	एमडीडब्ल्यू7
81.	मैग्नेटिक रेज़नन्स इमेजिंग (एमआरआई), पॉज़िट्रॉन एमिशन टोमोग्राफी (पीईटी) स्कैनर, कंप्यूटेड टोमोग्राफी (सीटी) स्कैनर, और सहायक उपस्कर के साथ अल्ट्रासाउंड उपस्कर	एमडीडब्ल्यू8
82.	फर्टिलिज़ेशन परीक्षण और सहायक उपस्कर	एमडीडब्ल्यू9
83.	अन्य विजली के उपस्कर/ उपस्कर/किट जो मोबाइल सहित बीमारी, बीमारी, विकार, पीड़ा, संक्रमण, चोट, आघात, दुर्ब्यवहार या विकलांगता को रोकने, जांच करने, पता लगाने, निगरानी, मूल्यांकन, समीक्षा, जांच, जांच, जांच, इलाज के लिए उपयोग किए जाते हैं, टैबलेट या कोई अन्य उपकरण जिसमें लौकिकता चयन और उनके सहायक उपकरण की क्षमता है	एमडीडब्ल्यू10
	प्रयोगशाला के उपस्कर	
84.	गैस विश्लेषक	एलआईडब्ल्यू1
85.	विद्युत और इलेक्ट्रॉनिक घटकों वाले उपस्कर	एलआईडब्ल्यू2”.

[फा.सं. 12/136/2021-एचएसएमडी]

नरेश पाल गंगवार, अपर सचिव

टिप्पणी : मूल नियम भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप-खंड (i) में संख्याक सा.का.नि. 801(अ), तारीख 2 नवंबर, 2022 द्वारा प्रकाशित किए गए थे, तत्पश्चात् संख्याक सा.का.नि. 61(अ), तारीख 30 जनवरी, 2023 द्वारा संशोधित किए गए थे।

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

New Delhi, the 24 July, 2023

G.S.R.534(E).— In exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (4) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following rules further to amend the E-Waste (Management) Rules, 2022, namely:

1. (1) These rules may be called E-Waste (Management) Second Amendment Rules, 2023.
- (2) They shall come into force on the date of their publication in the Official Gazette.

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2. In the E-Waste (Management) Rules, 2022 (hereinafter referred to as the said rules), in rule 5, after clause (3), the following clause shall be inserted, namely: -

“ (4) ensure secure, accountable and sustainable management of refrigerant generated during the manufacture of refrigeration and air-conditioning equipment by adopting approved destruction technologies as per the guidelines issued by the Central Pollution Control Board.”.

3. In rule 7 of the said rules, after clause (4), the following clause shall be inserted, namely: -

“ (5) ensure secure, accountable and sustainable management of refrigerant generated from the end-of life refrigeration and air-conditioning equipment by adopting approved destruction technologies as per the guidelines issued by the Central Pollution Control Board.”.

4. In rule 9 of the said rules, after clause (10), the following clause shall be inserted, namely: -

“ (11) ensure secure, accountable and sustainable management of refrigerant generated from the end-of life refrigeration and air-conditioning equipment by adopting approved destruction technologies as per the guidelines issued by the Central Pollution Control Board.”.

5. In rule 14 of the said rules, in sub-rule (1), in clause (ii), after sub-clause (b), the following sub-clause shall be inserted, namely: -

“ (c) In case of multiple end products of recycling, the conversion factor for generation of extended producer responsibility certificate shall be determined as per the guidelines issued by the Central Pollution Control Board with the approval of the Steering Committee.”.

6. In rule 16 of the said rules, -

- (a) for sub-rule (2), the following sub-rules shall be substituted, namely: -

“(2) The provisions of sub-rule (1) shall not apply to components or consumables or parts or spares required for electrical and electronic equipment specified in Schedule – II B placed in the market on or before the 1st May, 2014 provided reduction of hazardous substances compliant parts and spares are not available.

(2A) The provisions of sub-rule (1) shall not apply to electrical and electronic equipment specified in Schedule – II C placed in the market on or before the 1st April, 2025.

(2B) The provisions of sub-rule (1) shall not apply to components or consumables or parts or spares required for electrical and electronic equipment referred in sub-rule (2A) till the 1st April, 2028, provided reduction of hazardous substances compliant parts and spares are not available.”.

- (b) in sub-rule (3) and sub-rule (13), after the words “Schedule II”, the words “and Schedule II A” shall be inserted.

7. In Schedule-II to the said rules, in the Table, S.No. 37 and the entries relating thereto shall be omitted.

8. After Schedule - II to the said rules, the following Schedules shall be inserted, namely: -

“Schedule-II A

[See rules 16(3), 16(13)]

monitoring and control instruments including laboratory equipment as listed in Schedule - I

Sl. No.	Categories of electrical and electronic equipment
	Equipment utilising or detecting ionising radiation:
1.	Lead, cadmium and mercury in detectors for ionising radiation.
2.	Lead bearings in X-ray tubes.

3.	Lead in electromagnetic radiation amplification devices: micro-channel plate and capillary plate.
4.	Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons.
5.	Lead in shielding for ionising radiation.
6.	Lead in X-ray test objects.
7.	Lead stearate X-ray diffraction crystals.
8.	Radioactive cadmium isotope source for portable X-ray fluorescence spectrometers.
	Sensors, detectors and electrodes
9.	Lead and cadmium in ion selective electrodes including glass of pH electrodes.
10.	Lead anodes in electrochemical oxygen sensors.
11.	Lead, cadmium and mercury in infra-red light detectors.
12.	Mercury in reference electrodes: low chloride mercury chloride, mercury sulphate and mercury oxide.
	Others
13.	Cadmium in helium-cadmium lasers.
14.	Lead and cadmium in atomic absorption spectroscopy lamps.
15.	Lead in alloys as a superconductor and thermal conductor in MRI.
16.	Lead and cadmium in metallic bonds to superconducting materials in MRI and SQUID detectors.
17.	Lead in counterweights.
18.	Lead in single crystal piezoelectric materials for ultrasonic transducers.
19.	Lead in solders for bonding to ultrasonic transducers.
20.	Mercury in very high accuracy capacitance and loss measurement bridges and in high frequency RF switches and relays in monitoring and control instruments not exceeding 20 mg of mercury per switch or relay.
21.	Lead in solders in portable emergency defibrillators.
22.	Lead in solders of high performance infrared imaging modules to detect in the range 8-14 μm .
23.	Lead in Liquid crystal on silicon (LCoS) displays.
24.	Cadmium in X-ray measurement filters.

SCHEDULE - II B

[See rule 16 (2)]

Categories of electrical and electronic equipment including their components, consumables, parts and spares covered under the rules

Sl. No.	Categories of electrical and electronic equipment	Electrical and electronic equipment code
	Information technology and telecommunication equipment:	
1.	Centralized data processing: Mainframes, Minicomputers	ITEW1

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2.	Personal Computing: Personal Computers (Central Processing unit with input and output devices)	ITEW2
3.	Personal Computing: Laptop Computers (Central Processing unit with input and output devices)	ITEW3
4.	Personal Computing: Notebook Computers	ITEW4
5.	Personal Computing: Notepad Computers	ITEW5
6.	Printers including cartridges	ITEW6
7.	Copying Equipment	ITEW7
8.	Electrical and Electronic Typewriters	ITEW8
9.	User terminal and Systems	ITEW9
10.	Facsimile	ITEW10
11.	Telex	ITEW11
12.	Telephones	ITEW12
13.	Pay telephones	ITEW13
14.	Cordless telephones	ITEW14
15.	Cellular telephones	ITEW15
16.	Answering System	ITEW16
Consumer Electrical and Electronics and Photovoltaic Panels:		
17.	Television sets (including sets based on Liquid Crystal Display and light Emitting Diode Technology)	CEEW1
18.	Refrigerator	CEEW2
19.	Washing Machine	CEEW3
20.	Air- Conditioners excluding centralised air conditioning plants	CEEW4
21.	Fluorescent and other Mercury containing lamps	CEEW5

SCHEDULE – II C

[See rules 16 (2A) and 16 (2B)]

Categories of electrical and electronic equipment including their components, consumables, parts and spares covered under the rules

	Categories of electrical and electronic equipment	Electrical and electronic equipment code
Information technology and telecommunication equipment:		
1.	Products or equipment of transmitting sound, images or other information by telecommunications	ITEW17
2.	BTS (all components excluding structure of tower)	ITEW18
3.	Tablets, I-PAD	ITEW19
4.	Phablets	ITEW20
5.	Scanners	ITEW21

6.	Routers	ITEW22
7.	GPS	ITEW23
8.	UPS	ITEW24
9.	Inverter	ITEW25
10.	Modems	ITEW26
11.	Electronic data storage devices	ITEW27
	Consumer Electrical and Electronics and Photovoltaic Panels:	
12.	Screen, Electronic Photo frames, Electronic Display Panel, Monitors	CEEW6
13.	Radio sets	CEEW7
14.	Set top Boxes	CEEW8
15.	Video Cameras	CEEW9
16.	Video Recorders	CEEW10
17.	Hi-Fi Recorders	CEEW11
18.	Audio Amplifiers	CEEW12
19.	Other products or equipment for the purpose of recording or reproducing sound or images including signals and other technologies for the distribution of sound and image by telecommunications	CEEW13
20.	Solar panels/cells, solar Photovoltaic panels/cells/modules.	CEEW14
21.	Luminaires for fluorescent lamps with the exception of luminaires in households	CEEW15
22.	High intensity discharge lamps, including pressure sodium lamps and metal halide lamps	CEEW16
23.	Low pressure sodium lamps	CEEW17
24.	Other lighting or equipment for the purpose of spreading or controlling light excluding filament bulbs	CEEW18
25.	Digital camera	CEEW19
	Large and Small Electrical and Electronic Equipment	
26.	Large cooling appliances	LSEEW1
27.	Freezers	LSEEW2
28.	Other large appliances used for refrigeration, conservation and storage of food	LSEEW3
29.	Clothes dryers	LSEEW4
30.	Dish Washing Machines	LSEEW5
31.	Electric cookers	LSEEW6
32.	Electric stoves	LSEEW7
33.	Electric hot plates	LSEEW8
34.	Microwaves, Microwave Oven	LSEEW9
35.	Other large appliances used for cooking and other processing of food	LSEEW10
36.	Electric heating appliances	LSEEW11
37.	Electric radiators	LSEEW12
38.	Other large appliances for heating rooms, beds, seating furniture	LSEEW13

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39.	Electric fans	LSEEW14
40.	Other fanning, exhaust ventilation and conditioning equipment	LSEEW15
41.	Vacuum cleaners	LSEEW16
42.	Carpet sweepers	LSEEW17
43.	Other appliances for cleaning	LSEEW18
44.	Appliances used for sewing, knitting, weaving and other processing for textiles	LSEEW19
45.	Iron and other appliances for ironing, mangling and other care of clothing	LSEEW20
46.	Grinders, coffee machines and equipment for opening or sealing containers or packages	LSEEW21
47.	Smoke detector	LSEEW22
48.	Heating Regulators	LSEEW23
49.	Thermostats	LSEEW24
50.	Automatic dispensers for hot drinks	LSEEW25
51.	Automatic dispensers for hot or cold bottles or cans	LSEEW26
52.	Automatic dispensers for solid products	LSEEW27
53.	Automatic dispensers for money	LSEEW28
54.	All appliances which deliver automatically all kinds of products	LSEEW29
55.	Indoor air purifier	LSEEW30
56.	Hair dryer	LSEEW31
57.	Electric shaver	LSEEW32
58.	Electric kettle	LSEEW33
59.	Electronic display panels/board/visual display unit	LSEEW34
	Electrical and Electronic Tools (With the exception of large- Scale Stationary Industrial Tools)	
60.	Drills	EETW1
61.	Saws	EETW2
62.	Sewing Machines	EETW3
63.	Equipment for turning, milling, sanding, grinding, sawing, cutting, shearing, drilling, making holes, punching, folding, bending or similar processing of wood, metal and other materials	EETW4
64.	Tools for riveting, nailing or screwing or removing rivets, nails, screws or similar uses	EETW5
65.	Tools for welding, soldering, or similar use	EETW6
	Tools for spraying, spreading, dispersing or other treatment of	
	gaseous substance by other means	
67.	Tools for mowing or other gardening activities	EETW8
	Toys, Leisure and Sports Equipment	
68.	Electrical trains or car racing sets	TLSEW1
69.	Hand-held video games consoles	TLSEW2
70.	Video games	TLSEW3

71.	Computers for biking, diving, running, rowing, etc.	TLSEW4
72.	Sports equipment with electric or electronic components	TLSEW5
73.	Coin slot machines	TLSEW6
	Medical Devices (With the Exception of All Implanted and Infected Products)	
74.	Radiotherapy equipment and accessories	MDW1
75.	Cardiology equipment and accessories	MDW2
76.	Dialysis equipment and accessories	MDW3
77.	Pulmonary ventilators and accessories	MDW4
78.	Nuclear Medicine Equipment and accessories	MDW5
79.	Laboratory equipment for in vitro diagnosis and accessories	MDW6
80.	Analysers and accessories	MDW7
81.	Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET) Scanner, Computed Tomography (CT) Scanner, & Ultrasound Equipment along with accessories	MDW8
82.	Fertilization tests equipment and accessories	MDW9
83.	Other electric appliances/equipment/kits used for preventing, screening, detecting, monitoring, evaluating, reviewing, examining, investigating, probing, treating illness sickness, disease, disorder, affliction, infection, injury, trauma, abuse or disability including the Mobiles, Tablets or any other device with the features having the potential of sex selection and their accessories	MDW10
	Laboratory Instruments	
84.	Gas analyser	LIW1
85.	Equipment having electrical and electronic components	LJW2''.

[F. No. 12/136/2021-HSMD]

NARESH PAL GANGWAR, Addl. Secy.

Note: The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide number G.S.R. 801(E), dated the 2nd November, 2022, subsequently amended vide number G.S.R. 61 (E), dated the 30th January, 2023.

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MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 2nd November 2022

G.S.R. 801(E).—Whereas the draft rules, namely the E-Waste (Management) Rules, 2022 were published by the Government of India in the Ministry of Environment, Forest and Climate Change, *vide* notification number S.O. 360 (E), dated the 19th May, 2022 in the Gazette of India, Extraordinary, Part II, section 3, sub-section (i), inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which copies of the Gazette containing the said notification were made available to the public;

AND WHEREAS, the copies of the Gazette containing the said notification were made available to the public on the 19th day of May, 2022;

AND WHEREAS, the objections and suggestions received from the public in respect of the said draft notification within the said period have been duly considered by the Central Government;

NOW, THEREFORE, in exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, and in supersession of the E-waste (Management) Rules, 2016, except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following rules, namely: -

CHAPTER I

PRELIMINARY

1. Short title and commencement. - (1) These rules may be called the E-Waste (Management) Rules, 2022.

(2) They shall come into force from the 1st day of April, 2023.

2. Application. - These rules shall apply to every manufacturer, producer refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, refurbishing, dismantling, recycling and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts and spares which make the product operational but shall not apply to

- (a) waste batteries as covered under the Battery Waste Management Rules, 2022;
- (b) packaging plastics as covered under the Plastic Waste Management Rules, 2016;
- (c) micro enterprise as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006); and
- (d) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made there under.

3. Definitions. (1) In these rules, unless the context otherwise requires, -

- (a) 'Act' means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) 'bulk consumer' means any entity which has used at least one thousand units of electrical and electronic equipment listed in Schedule I, at any point of time in the preceding Financial Year and includes e-retailer;
- (c) 'business' means manufacturing, production, assembling and import of electrical and electronic equipment as listed in Schedule I and refurbishing, recycling, disposal and treatment of e-waste;
- (d) 'component' means one of the parts of a sub-assembly or assembly of which a manufactured product is made up of and into which it may be resolved and includes an accessory or attachment to another component;
- (e) 'consumables' means an item, which participates in or is required for a manufacturing process or for functioning of the electrical and electronic equipment and may or may not form part of

end-product and Items which are substantially or totally consumed during a manufacturing process shall be deemed to be consumables;

- (f) 'dismantler' means any person or entity engaged in dismantling of used electrical and electronic equipment into their components and having authorisation from concerned State Pollution Control Board or Pollution Control Committee as per the guidelines of the Central Pollution Control Board;
 - (g) 'disposal and treatment' means any operation which does not lead to recycling, recovery or reuse and includes physicochemical or biological treatment, incineration and deposition in secured landfill;
 - (h) 'end-of-life' of the product means the time when the product is intended to be discarded by the user;
 - (i) 'environmentally sound management of e-waste' means taking all steps required to ensure that e-waste is managed in a manner which shall protect health and environment against any adverse effects, which may result from such e-waste;
 - (j) 'electrical and electronic equipment' means equipment which are dependent on electric current or electro-magnetic field in order to become functional and also the equipment for the generation, transfer and measurements of the electricity;
 - (k) 'e-retailer' means an individual or company or business entity that uses an electronic network such as internet, social media, telephone or any other media, to sell its goods;
 - (l) 'e-waste' means electrical and electronic equipment, including solar photo-voltaic modules or panels or cells, whole or in part discarded as waste, as well as rejects from manufacturing, refurbishment and repair processes;
 - (m) 'extended producer responsibility' means responsibility of any producer of electrical or electronic equipment as given in Schedule-I for meeting recycling targets as per Schedule-III and Schedule-IV, only through registered recyclers of e-waste to ensure environmentally sound management of such waste;
 - (n) 'facility' means any location wherein the process incidental to the collection, reception, storage, segregation, refurbishing, recycling, disposal and treatment of e-waste are carried out;
 - (o) 'historical e-waste' means e-waste generated from electrical and electronic equipment as specified in Schedule-I which was available on the date from which these rules come into force;
 - (p) 'manufacturer' means a person or an entity or a company as defined in the Companies Act, 2013 (18 of 2013) or a factory as defined in the Factories Act, 1948 (63 of 1948) or Small and Medium Enterprises as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006), which has facilities for manufacture of electrical and electronic equipment as specified in Schedule-I;
 - (q) 'orphaned products' means non-branded or assembled electrical and electronic equipment as specified in Schedule-I or those produced by a company which has closed its operations;
 - (r) 'part' means an element of a sub-assembly or assembly including its component, spares or accessory not normally useful by itself and not amenable to further disassembly for maintenance
-
- (s) 'portal' means the online system developed by the Central Pollution Control Board for the purposes of these rules;
 - (t) 'producer' means any person or entity who, -
 - (i) manufactures and offers to sell electrical and electronic equipment and their components or consumables or parts or spares under its own brand; or
 - (ii) offers to sell under its own brand, assembled electrical and electronic equipment and their components or consumables or parts or spares produced by other manufacturers or suppliers; or

- (iii) offers to sell imported electrical and electronic equipment and their components or consumables or parts or spares; or
- (iv) who imports used electrical and electronic equipment;
irrespective of the selling technique used such as dealer, retailer, e-retailer, etc.;
- (u) 'recycler' means any person or entity who is engaged in recycling and reprocessing of waste electrical and electronic equipment or assemblies or their components or their parts for recovery of precious, semi-precious metals including rare earth elements and other useful recoverable materials to strengthened the secondary sourced materials and having facilities as elaborated in the guidelines of the Central Pollution Control Board made in this regard;
- (v) 'refurbisher' means any person or entity repairing or assembling used electrical and electronic equipment as listed in Schedule-I for extending its working life over its originally intended life and for same use as originally intended, and selling the same in the market;
- (w) 'Schedule' means the Schedule appended to these rules;
- (x) 'spares' means a part or a sub-assembly or assembly for substitution which is ready to replace an identical or similar part or sub-assembly or assembly including a component or an accessory; and
- (y) 'target' means the quantity of e-waste to be recycled through registered recycler by the producer in fulfilment of extended producer responsibility.

(2) Words and expressions used in these rules and not defined but defined in the Act shall have the same meanings as respectively, as assigned to them in the Act.

CHAPTER II

Extended Producer Responsibility Framework

4. **Registration.** - (1) The entities shall register on the portal in any of the following category, namely: -

- (a) manufacturer;
- (b) producer;
- (c) refurbisher; or
- (d) recycler.

(2) In case any entity falls in more than one categories under sub-rule (1), then the entity shall register under those categories separately.

(3) No entity referred in sub-rule (1) shall carry out any business without registration.

(4) The entities registered under sub-rule (1) shall not deal with any unregistered manufacturer, producer, recycler and refurbisher.

(5) Where any registered entity furnishes false information or willfully conceals information for getting registration or return or report or information required to be provided or furnished under these rules or in case of any irregularity, registration of such entity may be revoked by the Central Pollution Control Board for a period up to three-years after giving an opportunity to be heard and in addition, environmental compensation charges may also be levied as per rule 22 in such cases.

(6) The Central Pollution Control Board may charge such registration fee and annual maintenance charges from the entities seeking registration under these rules based on capacity of e-waste generated or recycled or handled by them as laid down by the Central Pollution Control Board with the approval of the Steering Committee.

CHAPTER III
RESPONSIBILITIES

5. Responsibilities of the manufacturer. -- All manufacturer shall have to, -

- (1) register on the portal;
- (2) collect e-waste generated during the manufacture of any electrical and electronic equipment and ensure its recycling or disposal;
- (3) file annual and quarterly returns in the laid down form on the portal on or before end of the month succeeding the quarter or year, as the case may be, to which the return relates.

6. Responsibilities of the producer. - The producer of electrical and electronic equipment listed in Schedule I shall be responsible for -

- (1) registration on the portal;
- (2) obtaining and implementing extended producer responsibility targets as per Schedule-III and Schedule-IV through the portal:

Provided that the producer having extended producer responsibility plan under the provisions of the erstwhile E-Waste (Management) Rules, 2016 shall migrate under these rules as per the procedure laid down by the Central Pollution Control Board with approval of Steering Committee;

- (3) creating awareness through media, publications, advertisements, posters or by any other means of communication;
- (4) file annual and quarterly returns in the laid down form on the portal on or before the end of the month succeeding the quarter or year, as the case may be, to which the return relates.

7. Responsibilities of the refurbisher. -- All refurbisher shall have to, -

- (1) register on the portal;
- (2) collect e-waste generated during the process of refurbishing and hand over the waste to registered recycler and upload information on the portal;
- (3) ensure that the refurbished equipment shall be as per Compulsory Registration Scheme of the Ministry of Electronics and Information Technology and Standards of Bureau of Indian Standards framed for this purpose;
- (4) file annual and quarterly returns in the laid down form on the portal on or before the end of the month succeeding the quarter or year, as the case may be, to which the return relates.

8. Responsibilities of bulk consumer. - Bulk consumers of electrical and electronic equipment listed in Schedule I shall ensure that e-waste generated by them shall be handed over only to the registered producer, refurbisher or recycler.

9. Responsibilities of the recycler. - All recycler shall have to, -

- (1) register on the portal;
- (2) ensure that the facility and recycling processes are in accordance with the standards or guidelines laid down by the Central Pollution Control Board in this regard from time to time;
- (3) ensure that the fractions or material not recycled in its facility is sent to the respective registered recyclers;
- (4) ensure that residue generated during recycling process is disposed of in an authorised treatment storage disposal facility;
- (5) maintain record of e-waste collected, dismantled, recycled and sent to registered recycler on the portal and make available all records for verification or audit as and when required;
- (6) file annual and quarterly returns in the laid down form on the portal on or before the end of the month succeeding the quarter or year, as the case may be, to which the return relates;

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- (7) accept waste electrical and electronic equipment or components not listed in Schedule-I for recycling provided that they do not contain any radioactive material and same shall be uploaded on the portal;
- (8) create awareness through media, publications, advertisements, posters or by such other means of communication;
- (9) account for and upload information about any non-recyclable e-waste or any quantity which is not recycled and disposed of;
- (10) take help of dismantlers for recycling purposes:

Provided that it shall be the responsibility of recycler to ensure proper material flow to and from those dismantlers and the dismantler shall give dismantled material to registered recycler only and maintain record of the same.

10. Responsibilities of State Government or Union territories. - (1) The Department of Industry in the State and Union territory or any other government agency authorised in this regard by the State Government or the Union territory, as the case may be, shall ensure earmarking or allocation of industrial space or shed for e-waste dismantling and recycling in the existing and upcoming industrial park, estate and industrial clusters.

- (2) Department of Labor in the State and Union territory or any other government agency authorised in this regard by the State Government or the Union territory, as the case may be, shall, -
 - (a) ensure recognition and registration of workers involved in dismantling and recycling;
 - (b) assist formation of groups of such workers to facilitate setting up of dismantling facilities;
 - (c) undertake industrial skill development activities for the workers involved in dismantling and recycling;
 - (d) undertake annual monitoring and to ensure safety and health of workers involved in dismantling and recycling.

CHAPTER IV

11. Procedure for storage of e-waste. - Every manufacturer, producer, refurbisher and recycler may store the e-waste for a period not exceeding one hundred and eighty days and shall maintain a record of sale, transfer and storage of e-wastes and make these records available for inspection and the storage of the e-waste shall be done as per the applicable rules or guidelines for the time being in force:

Provided that the Central Pollution Control Board may extend the said period up to three hundred and sixty-five days in case the e-waste needs to be specifically stored for development of a process for its recycling or reuse.

CHAPTER V

12. Management of solar photo-voltaic modules or panels or cells. - (1) These rules shall be applicable to solar photo-voltaic modules or panels or cells, subject to provisions of this chapter.

- (2) Every manufacturer and producer of solar photo-voltaic modules or panels or cells shall, -
 - (i) ensure registration on the portal;
 - (ii) store solar photo-voltaic modules or panels or cells waste generated up to the year 2034-2035 as per the guidelines laid down by the Central Pollution Control Board in this regard;
 - (iii) file annual returns in the laid down form on the portal on or before the end of the year to which the return relates up to year 2034-2035;
 - (iv) ensure that the processing of the waste other than solar photo-voltaic modules or panels or cells shall be done as per the applicable rules or guidelines for the time being in force;

- (v) ensure that the inventory of solar photo-voltaic modules or panels or cells shall be put in place distinctly on portal;
 - (vi) comply with standard operating procedure and guidelines laid down by the Central Pollution Control Board in this regard.
- (3) Recycler of solar photo-voltaic modules or panels or cells shall be mandated for recovery of material as laid down by the Central Pollution Control Board in this regard.

CHAPTER VI

13. Modalities of the extended producer responsibility Regime. – (1) All producers shall fulfil their extended producer responsibility obligation as per Schedule-III and Schedule-IV, in doing so they may also take help of third party organisations such as producer responsibility organisations, collection centres, dealers etc.:

Provided that the extended producer responsibility shall lie entirely on the producer only.

- (2) The extended producer responsibility for each product shall be decided on the basis of the information provided by the producers on the portal and the individual product's life period as laid down by the Central Pollution Control Board in this regard and the targets specified in Schedule-III and Schedule-IV.
- (3) (i) The producer shall fulfill their extended producer responsibility through online purchase of extended producer responsibility certificate from registered recyclers only and submit it online by filing quarterly return.
 - (ii) The details provided by producer and registered recycler shall be cross-checked on the portal.
 - (iii) In case of any difference, the lower figure shall be considered towards fulfilment of extended producer responsibility obligation of the producer.
- (iv) The certificates shall be subject to environmental audit by the Central Pollution Control Board or any other agencies authorized by the Central Pollution Control Board in this regard.

14. Extended producer responsibility Certificate Generation. – (I) Recycling. - (i) The Central Pollution Control Board shall generate extended producer responsibility certificate through the portal in favour of a registered recycler in the format laid down by it in this regard.

- (ii) (a) The quantity eligible for generation of extended producer responsibility certificate shall be calculated by the following formula namely:

$$*Q_{EPR} = Q_p \times C_f$$

**the Q_{EPR} is the quantity eligible for generation of the certificate, Q_p is the quantity of the end product and C_f is the conversion factor (quantity of inputs required for production of one unit of output)*

- (b) Conversion factor C_f for each end product shall be determined by Central Pollution Control Board with the approval of the steering committee.
- (iii) The validity of the extended producer responsibility certificate shall be two years from the end of the financial year in which it was generated and the expired certificate automatically extinguished after the period unless extinguished earlier as per the provisions of these rules.
- (iv) Each extended producer responsibility certificate shall have a unique number containing year of generation, code of end product, recycler code and a unique code and the extended producer responsibility certificates shall be in the denominations of 100, 200, 500 and 1000 kg or such other denominations as may be laid down by the Central Pollution Control Board with the approval of the Steering Committee.

(2) **Refurbishing.** – (i) The e-waste shall also be allowed for refurbishing and refurbisher shall have to get registered on the portal and based on the data provided, refurbishing certificate shall be generated in favour of a registered refurbisher in the format laid down by it in this regard.

(ii) On production of the refurbishing certificates purchased from the registered refurbishers, the extended producer responsibility of the producers shall be deferred by the duration as laid down by the Central Pollution Control Board for the corresponding quantity of e-waste and shall be added to the extended producer responsibility of the producer upon expiry of the extended life of the refurbished product.

(iii) To incentivise refurbishing, only 75 per cent of the deferred quantity shall be added to the extended producer responsibility of the producer for recycling upon expiry of the extended life of the refurbished product.

Example: - If a producer has extended producer responsibility obligation of 100 tonnes in the year 2023-2024 and he purchases recycling certificate of 60 tonnes and refurbishing certificate of 40 tonnes and the concerned item has extended life of five years due to refurbishing.

In this case 60 tonnes of the extended producer responsibility of the producer shall be achieved in the year 2023-2024 itself and 75 per cent of the remaining 40 tonnes i.e. 30 tonnes shall be carried over and added to the extended producer responsibility of that producer for the year 2028-2029 for that item.

(iv) The extended producer responsibility obligation shall be extinguished only after end of life disposal through a registered recycler and producing extended producer responsibility certificate and not by refurbishing certificate.

15. Transaction of extended producer responsibility certificates. - (1) A producer may purchase extended producer responsibility certificates limited to its extended producer responsibility liability of current year (Year Y) plus any leftover liability of preceding years plus 5 per cent of the current year liability.

(2) The extended producer responsibility obligation shall have to be fulfilled by the producers by proportionately purchasing extended producer responsibility certificate on quarterly basis.

(3) As soon as the producer purchases extended producer responsibility certificate, it shall be automatically adjusted against its liability and priority in adjustment shall be given to earlier liability and the extended producer responsibility certificate so adjusted shall be automatically extinguished and cancelled.

(4) As soon as producer purchases refurbishing certificates its extended producer responsibility liability shall be deferred automatically for the relevant quantity of the product, for the duration as laid down by the Central Pollution Control Board.

(5) The availability, requirement and other details of the extended producer responsibility certificate and refurbishing certificates for every producer or recycler or refurbisher shall be made available on the portal.

(6) All the transactions under these rules shall be recorded and submitted by the producers or recyclers on the portal at the time of filing of quarterly returns.

CHAPTER VII

REDUCTION IN THE USE OF HAZARDOUS SUBSTANCES IN THE MANUFACTURE OF ELECTRICAL AND ELECTRONIC EQUIPMENT AND THEIR COMPONENTS OR CONSUMABLES OR PARTS OR SPARES

~~16. Reduction in the use of hazardous substances in the manufacture of electrical and electronic equipment and their components or consumables or parts or spares. - (1) Every producer of electrical and electronic equipment and their components or consumables or parts or spares listed in Schedule I shall ensure that, new electrical and electronic equipment and their components or consumables or parts or spares do not contain Lead, Mercury, Cadmium, Hexavalent Chromium, polybrominated biphenyls and polybrominated diphenyl ethers beyond a maximum concentration value of 0.1 per cent by weight in homogenous materials for lead, mercury, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers and of 0.01 per cent by weight in homogenous materials for cadmium.~~

(2) Components or consumables or parts or spares required for the electrical and electronic equipment placed in the market prior to the 1st May, 2014 may be exempted from the provisions

of sub-rule (1) provided reduction of hazardous substances compliant parts and spares are not available.

- (3) The applications listed in Schedule-II shall be exempted from provisions of sub-rule (1).
- (4) Every producer of applications listed in Schedule-II shall ensure that the limits of hazardous substances as given in Schedule-II are to be complied.
- (5) Every producer shall provide the detailed information on the constituents of the equipment and their components or consumables or parts or spares along with a declaration of conformance to the reduction of hazardous substances provisions in the product user documentation.
- (6) Imports or placement in the market for new electrical and electronic equipment shall be permitted only for those which are compliant to provisions of sub-rules (1) and (4).
- (7) Manufacture and supply of electrical and electronic equipment used for defence and other similar strategic applications shall be excluded from provisions of sub-rule (1).
- (8) Every producer shall provide information on the compliance of the provisions of sub-rule (1) and this information shall be in terms of self-declaration.
- (9) Manufacturer shall use the technology or methods so as to make the end product recyclable;
- (10) Manufacturer shall ensure that component or part made by different manufacturer are compatible with each other so as to reduce the quantity of e-waste.
- (11) The Central Pollution Control Board shall conduct random sampling of electrical and electronic equipment placed on the market to monitor and verify the compliance of reduction of hazardous substances provisions and the cost for sample and testing shall be borne by the producer and the random sampling shall be as per the guidelines laid down by the Central Pollution Control Board in this regard.
- (12) If the product does not comply with reduction of hazardous substances provisions, the producer shall take corrective measures to bring the product into compliance and withdraw or recall the product from the market, within a reasonable period as per the guidelines laid down by the Central Pollution Control Board in this regard.
- (13) The Central Pollution Control Board shall lay down the methods for sampling and analysis of hazardous substances as listed in sub-rule (1) with respect to the items listed in Schedule-I and Schedule-II and also enlist the labs for the said purpose.

CHAPTER VIII

MISCELLANEOUS

17. Duties of Authorities. - Subject to the other provisions of these rules, the authorities shall perform duties as specified in Schedule-V.

18. Annual Report. - The Central Pollution Control Board shall submit an annual report to the Ministry of Environment, Forest and Climate Change regarding status of implementation of the e-waste management rules with quantitative and qualitative analysis along with its recommendations, within one month of the end of the financial year.

19. Transportation of e-waste. - Transportation of e-waste generated from manufacturing or recycling destined for final disposal to a treatment, storage and disposal facility shall follow the provisions under the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

20. Accident reporting. - Where an accident occurs at the facility processing e-waste or during transportation of e-waste, the producer, refurbisher, transporter, dismantler, or recycler, as the case may be, shall report immediately to the concerned State Pollution Control Board about the accident through telephone and e-mail.

21. Appeal. - (1) Any person aggrieved by an order of suspension or cancellation or refusal of registration or its renewal passed by the Central Pollution Control Board, within a period of thirty days

from the date on which the order is communicated to him, prefer an appeal to the Additional Secretary or Joint Secretary, Ministry of Environment, Forest and Climate Change duly nominated by the Central Government in this regard.

- (2) The Appellate Authority may entertain the appeal after expiry of the said period of thirty days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

22. Environmental Compensation. - (1) The Central Pollution Control Board shall lay down guidelines for imposition and collection of environmental compensation on any entity in case of violation of any of the provision of these rules and guidelines issued hereunder and the said guidelines shall be in accordance with these rules and shall be approved by the Ministry of Environment, Forest and Climate Change.

- (2) The Central Pollution Control Board shall also lay down guidelines for imposition and collection of environmental compensation on the producer in case of non-fulfilment of obligations set out in these rules and transaction or use of false extended producer responsibility certificate and the said guidelines shall be in accordance with these rules and shall be approved by the Ministry of Environment, Forest and Climate Change.
- (3) The environmental compensation shall also be levied on unregistered producers, manufacturer, refurbisher, recyclers and any entity which aids or abets the violation of these rules.
- (4) (i) Payment of environmental compensation shall not absolve the producer from the extended producer responsibility as specified in these rules and the unfulfilled extended producer responsibility for a particular year shall be carried forward to the next year and so on and up to three years.
- (ii) In case, the shortfall of extended producer responsibility obligation is addressed after one year, 85 per cent of the environmental compensation levied shall be returned to the producer.
- (iii) In case, the shortfall of extended producer responsibility obligation is addressed after two year, 60 per cent of the environmental compensation levied shall be returned to the producer, and in case, the shortfall of extended producer responsibility obligation is addressed after three year, 30 per cent of the environmental compensation levied shall be returned to the producer, thereafter no environmental compensation shall be returned to the producer.
- (5) False information resulting in over generation of extended producer responsibility certificates by recycler shall result in revocation of registration and imposition of environmental compensation which shall not be returnable and repeat offence, violation of these rules for three times or more shall also result in permanent revocation of registration over and above the environmental compensation charges.
- (6) (i) The funds collected under environmental compensation shall be kept in a separate Escrow account by the Central Pollution Control Board and the funds collected shall be utilized in collection and recycling or end of life disposal of uncollected, historical, orphaned e-waste and non-recycled or non-end of life disposal of e-waste on which the environment compensation is levied, research and development, incentivising recyclers, financial assistance to local bodies for managing waste management projects and on other heads as decided by the committee.
- (ii) The modalities and heads for utilisation of the funds shall be decided by the Steering Committee with the approval of the Ministry of Environment, Forest and Climate Change.

23. Prosecution. - Any person, who provides incorrect information required under these rules for obtaining extended producer responsibility certificates, uses or causes to be used false or forged extended producer responsibility certificates in any manner, willfully violates the directions given under these rules or fails to cooperate in the verification and audit proceedings, may be prosecuted under section 15 of the Act, 1986 and this prosecution shall be in addition to the environmental compensation levied under rule 22.

24. Verification and Audit. - The Central Pollution Control Board by itself or through a designated agency shall verify compliance of these rules by producers, manufacturer, refurbisher, dismantlers and

recyclers through random inspection and periodic audit, as deemed appropriate so as to take action against violations of the provisions of these rules as per rule 22.

25. Steering Committee. - (1) There shall be a Steering Committee under the Chairmanship of Chairman, Central Pollution Control Board to oversee the overall implementation of these rules and the Steering Committee shall comprise of following other members in addition to the chair, namely: -

- (a) one representative of the Ministry of Environment, Forest and Climate Change;
 - (b) one representative of the Ministry of Electronics and Information Technology;
 - (c) one representative of the Ministry of New and Renewable Energy;
 - (d) one representative of the Ministry of Housing and urban Affairs;
 - (e) a maximum of two representatives of electrical and electronic equipment Producer and Manufacturer Association;
 - (f) a maximum of two representatives of E-Waste Recycler Associations;
 - (g) one representative of State Pollution Control Board or Pollution Control Committee as co-opted by the Chairman of the Steering Committee;
 - (h) Head of the Concerned Division of the Central Pollution Control Board – Member- Convener.
- (2) The steering committee shall be responsible for overall implementation, monitoring and supervision of these rules and it shall also decide upon the disputes arisen from time to time and on representations received in this regard, and shall refer to the Ministry of Environment, Forest and Climate Change any substantial issue arisen or pertaining to these rules.
- (3) The steering committee shall review and revise the guidelines or extended producer responsibility target or addition of new Electrical and Electronic Equipment in Schedule I, in view of the technological advancements and other factors with the approval of the Central Government.
- (4) The Steering Committee shall take all such measures as it deems necessary for proper implementation of provisions of these rules.

SCHEDULE - I

[See rules 2, 3 (b), 3 (c), 3 (m), 3 (o), 3 (p), 3 (q), 3 (v), 6, 8, 10 (7), 16 (13)]

Categories of electrical and electronic equipment including their components, consumables, parts and spares covered under the rules

Sl. No.	Categories of electrical and electronic equipment	Electrical and electronic equipment code
(i)	Information technology and telecommunication equipment:	
	Centralized data processing: Mainframes, Minicomputers	ITEW1
	Personal Computing: Personal Computers (Central Processing unit with input and output devices)	ITEW2
	Personal Computing: Laptop Computers (Central Processing unit with input and output devices)	ITEW3
	Personal Computing: Notebook Computers	ITEW4
	Personal Computing: Notepad Computers	ITEW5
	Printers including cartridges	ITEW6
	Copying Equipment	ITEW7
	Electrical and Electronic Typewriters	ITEW8
	User terminal and Systems	ITEW9
	Facsimile	ITEW10
Telex	ITEW11	

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	Telephones	ITEW12
	Pay telephones	ITEW13
	Cordless telephones	ITEW14
	Cellular telephones	ITEW15
	Answering System	ITEW16
	Products or equipment of transmitting sound, images or other information by telecommunications	ITEW17
	BTS (all components excluding structure of tower)	ITEW18
	Tablets, I-PAD	ITEW19
	Phablets	ITEW20
	Scanners	ITEW21
	Routers	ITEW22
	GPS	ITEW23
	UPS	ITEW24
	Inverter	ITEW25
	Modems	ITEW26
	Electronic data storage devices	ITEW27
(ii)	Consumer Electrical and Electronics and Photovoltaic Panels:	
	Television sets (including sets based on Liquid Crystal Display and light Emitting Diode Technology)	CEEW1
	Refrigerator	CEEW2
	Washing Machine	CEEW3
	Air- Conditioners excluding centralised air conditioning plants	CEEW4
	Fluorescent and other Mercury containing lamps	CEEW5
	Screen, Electronic Photo frames, Electronic Display Panel, Monitors	CEEW6
	Radio sets	CEEW7
	Set top Boxes	CEEW8
	Video Cameras	CEEW9
	Video Recorders	CEEW10
	Hi-Fi Recorders	CEEW11
	Audio Amplifiers	CEEW12
	Other products or equipment for the purpose of recording or reproducing sound or images including signals and other technologies for the distribution of sound and image by telecommunications	CEEW13
	Solar panels/cells, solar Photovoltaic panels/cells/modules.	CEEW14
	Luminaires for fluorescent lamps with the exception of luminaires in households	CEEW15
	High intensity discharge lamps, including pressure sodium lamps and metal halide lamps	CEEW16
	Other lighting or equipment for the purpose of spreading or controlling light excluding filament bulbs	CEEW18
	Digital camera	CEEW19
(iii)	Large and Small Electrical and Electronic Equipment	
	Large cooling appliances	LSEEW1
	Freezers	LSEEW2
	Other large appliances used for refrigeration, conservation and storage of food	LSEEW3

	Clothes dryers	LSEEW4
	Dish Washing Machines	LSEEW5
	Electric cookers	LSEEW6
	Electric stoves	LSEEW7
	Electric hot plates	LSEEW8
	Microwaves, Microwave Oven	LSEEW9
	Other large appliances used for cooking and other processing of food	LSEEW10
	Electric heating appliances	LSEEW11
	Electric radiators	LSEEW12
	Other large appliances for heating rooms, beds, seating furniture	LSEEW13
	Electric fans	LSEEW14
	Other fanning, exhaust ventilation and conditioning equipment	LSEEW15
	Vacuum cleaners	LSEEW16
	Carpet sweepers	LSEEW17
	Other appliances for cleaning	LSEEW18
	Appliances used for sewing, knitting, weaving and other processing for textiles	LSEEW19
	Iron and other appliances for ironing, mangling and other care of clothing	LSEEW20
	Grinders, coffee machines and equipment for opening or sealing containers or packages	LSEEW21
	Smoke detector	LSEEW22
	Heating Regulators	LSEEW23
	Thermostats	LSEEW24
	Automatic dispensers for hot drinks	LSEEW25
	Automatic dispensers for hot or cold bottles or cans	LSEEW26
	Automatic dispensers for solid products	LSEEW27
	Automatic dispensers for money	LSEEW28
	All appliances which deliver automatically all kinds of products	LSEEW29
	Indoor air purifier	LSEEW30
	Hair dryer	LSEEW31
	Electric shaver	LSEEW32
	Electric kettle	LSEEW33
	Electronic display panels/board/visual display unit	LSEEW34
(iv)	Electrical and Electronic Tools (With the exception of large- Scale Stationary Industrial Tools)	
	Drills	EETW1
	Saws	EETW2
	Sewing Machines	EETW3
	making holes, punching, folding, bending or similar processing of wood, metal and other materials	
	Tools for riveting, nailing or screwing or removing rivets, nails, screws or similar uses	EETW5
	Tools for welding, soldering, or similar use	EETW6
	Equipment for spraying, spreading, dispersing or other treatment of liquid or gaseous substance by other means	EETW7
	Tools for mowing or other gardening activities	EETW8

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(v)	Toys, Leisure and Sports Equipment	
	Electrical trains or car racing sets	TLSEW1
	Hand-held video games consoles	TLSEW2
	Video games	TLSEW3
	Computers for biking, diving, running, rowing, etc.	TLSEW4
	Sports equipment with electric or electronic components	TLSEW5
	Coin slot machines	TLSEW6
(vi)	Medical Devices (With the Exception of All Implanted and Infected Products)	
	Radiotherapy equipment and accessories	MDW1
	Cardiology equipment and accessories	MDW2
	Dialysis equipment and accessories	MDW3
	Pulmonary ventilators and accessories	MDW4
	Nuclear Medicine Equipment and accessories	MDW5
	Laboratory equipment for in vitro diagnosis and accessories	MDW6
	Analysers and accessories	MDW7
	Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET) Scanner, Computed Tomography (CT) Scanner, & Ultrasound Equipment along with accessories	MDW8
	Fertilization tests equipment and accessories	MDW9
Other electric appliances/equipment/kits used for preventing, screening, detecting, monitoring, evaluating, reviewing, examining, investigating, probing, treating illness sickness, disease, disorder, affliction, infection, injury, trauma, abuse or disability including the Mobiles, Tablets or any other device with the features having the potential of sex selection and their accessories	MDW10	
(vii)	Laboratory Instruments	
	Gas analyser	LIW1
	Equipment having electrical and electronic components	LIW2

SCHEDULE - II

[See rules 16(3), 16(4), 16(13)]

Applications, which are exempted from the requirements of sub-rule (1) of rule 16	
Sl. No.	Substance
1.	Mercury in single capped (compact) fluorescent lamps not exceeding (perburner):
(a)	for general lighting purposes <30 W : 2.5 mg
(b)	for general lighting purposes ≥ 30 W and <50 W : 3.5mg
(c)	for general lighting purposes ≥ 50 W and <150 W : 5mg
(d)	for general lighting purposes ≥ 150 W : 15 mg
	mm : /mg
(f)	for special purposes:5 mg
2.(a)	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):
(1)	Tri-band phosphor with normal life time and a tube diameter < 9mm (e.g.T2): 4mg
(2)	Tri-band phosphor with normal life time and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 3 mg

(3)	Tri- band phosphor with normal life time and a tube diameter >17 mm and ≤ 28 mm(e.g. T8): 3.5 mg
(4)	Tri-band phosphor with normal life time and a tube diameter >28 mm (e.g. T12):3.5 mg
(5)	Tri-band phosphor with long life time (≥25000 h):5mg
2.(b)	Mercury in other fluorescent lamps not exceeding(per lamp):
(1)	Linear halophosphate lamps with tube >28 mm (e.g. T 10 and T12):10 mg
(2)	Non-linear halophosphate lamps(all diameters):15mg
(3)	Non-linear tri-band phosphor lamps with tube diameter >17 mm(e.g. T9):15 mg
(4)	Lamps for other general lighting and special purposes (e.g. inductionlamps):15mg
3.	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL)for special purposes not exceeding (per lamp):
(a)	Short length(≤ 500 mm):3.5mg
(b)	Medium length(>500 mm and ≤1500 mm): 5mg
(c)	Long length(>1500 mm): 13mg
4.(a)	Mercury in other low pressure discharge lamps (per lamp): 15mg
(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner)in lamps with improved colour rendering index Ra>60:
(b)-I	P ≤155 W : 30 mg
(b)-II	155 W < P ≤405 W : 40 mg
(b)-III	P >405 W: 40 mg
(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):
(c)-I	P<155 W:25mg
(c)-II	155 W < P ≤ 405 W:30 mg
(c)-III	P >405 W:40 mg
(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)
(e)	Mercury in metal halide lamps (MH)
(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Schedule
5.(a)	Lead in glass of cathode ray tubes
(b)	Lead in glass of fluorescent tubes not exceeding 0.2% by weight
6.(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight
(b)	Lead as an alloying element in aluminium containing up to 0.4% lead byweight
(c)	Copper alloy containing up to 4% lead by weight
7.(a)	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)
(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications
(c)	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.
(d)	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher

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(e)	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125V AC or 250 V DC
8.(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs
(b)	Cadmium and its compounds in electrical contracts
9.	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in the cooling solution
(a)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) application.
10.(a)	Lead used in C-press compliant pin connector systems
(b)	Lead used in other than C-press compliant pin connector systems
11.	Lead as a coating material for the thermal conduction module C- ring
12.(a)	Lead in white glasses used for optical applications
(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards.
13.	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight
14.	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages.
15.	Lead in linear incandescent lamps with silicate coated tubes
16.	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications.
17.(a)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as specialty lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr, Ba) ₂ Mg Si ₂ O ₇ :Pb)
(b)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (Ba Si ₂ O ₅ :Pb)
18.	Lead with PbBiSn-Hg and PblnSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)
19.	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)
20.	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses
21.	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less
22.	Lead in solders for the soldering to machine through hole discoidal and planar array ceramic multilayer capacitors
23.	Lead oxide in surface conduction electron emitter displays (SED) used in structural
24.	Lead oxide in the glass envelope of black light blue lamps
25.	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers
26.	Lead bound in crystal glass
27.	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB(A) and more

28.	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)
29.	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes
30.	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers
31.	Lead in cermet-based trimmer potentiometer elements
32.	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display
33.	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body
34.	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide
35.	Cadmium in color converting II-VI LEDs (<10 µg Cd per mm ² of light-emitting area) for use in solid state illumination or display systems.

SCHEDULE - III

[See rules 3(m), 6(2), 13(1), 13(2)]

Sl. No.	Year (Y)	E-Waste Recycling Target (by weight)
1.	2023 -2024	60% of the quantity of an EEE placed in the market in year Y-X, where 'X' is the average life of that product
2.	2024 -2025	60% of the quantity of an EEE placed in the market in year Y-X, where 'X' is the average life of that product
3.	2025 -2026	70% of the quantity of an EEE placed in the market in year Y-X, where 'X' is the average life of that product
4.	2026-2027	70% of the quantity of an EEE placed in the market in year Y-X, where 'X' is the average life of that product
5.	2027-2028	80% of the quantity of an EEE placed in the market in year Y-X, where 'X' is the average life of that product
6.	2028-2029 onwards	80% of the quantity of an EEE placed in the market in year Y-X, where 'X' is the average life of that product

Note: (1) E-waste recycling target shall be reviewed and may be increased after the end of year 2028-2029.

(2) The importers of used electrical and electronic equipment shall have 100% extended producer responsibility obligation for the imported material after end of life, if not re-exported.

(3) E-Waste recycling targets shall not be applicable for waste generated from solar photovoltaic modules or panels or cells.

SCHEDULE - IV

[See rules 3(m), 6(2), 13(1), 13(2)]

Extended Producer Responsibility targets for producers, who have started sales operations recently, i.e. number of years of sales operations is less than average life of their products mentioned in the guidelines issued by the Central Pollution Control Board from time to time.

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Sl. No.	Year	E-Waste Recycling Target (by weight)
1.	2023-2024	15% of the sales figure of financial year 2021-22
2.	2024-2025	20% of the sales figure of financial year 2022-23
3.	2025-2026 onwards	20% of the sales figure of the financial year two years back

Note: (1) Once the number of years of sales operation equals the average life of their product mentioned in the guidelines issued by Central Pollution Control Board, their extended producer responsibility obligation shall be as per Schedule-III.

(2) E-Waste recycling targets shall not be applicable for waste generated from solar photo-voltaic modules or panels or cells.

SCHEDULE - V

[See rule (17)]

LIST OF AUTHORITIES AND CORRESPONDING DUTIES

Sl. No.	AUTHORITY	CORRESPONDING DUTIES
1.	Central Pollution Control Board	<ul style="list-style-type: none"> (1) Operation and maintenance of Extended Producer Responsibility Portal and monitoring of Extended Producer Responsibility compliance. (2) Coordination with State Pollution Control Boards (3) Prepare and issue guidelines and Standard Operating procedures for collection, storage, transportation, segregation, refurbishment, dismantling, recycling and disposal of e-waste under these rules from time to time, and also issue necessary Forms/ Returns for implementation of these rules. (4) Conduct random check for ascertaining compliance of the e-waste rules and may take help of Customs/State Government or any other agency (ies). (5) Documentation, compilation of data on e-waste and uploading on websites of Central Pollution Control Board. (6) Actions against violation of these rules. (7) Conducting training programmes to develop capacity including State Pollution Control Boards and Urban Local Bodies officials. (8) Conducting awareness programmes on e-waste management, RE/CE label, legislation to make consumers responsible towards product usage and safe disposal. (9) Integrate all stakeholders with the centralized digital system. (10) Submit Annual Report to the Ministry. (11) Enforcement of provisions regarding reduction in use of hazardous substances in manufacture of electrical and electronic equipment. (12) Interaction with IT industry for reducing hazardous substances. (13) Set and revise targets for compliance to the reduction in use of hazardous
		<ul style="list-style-type: none"> (14) Ensure RoHS compliance and its certifications through a recognized lab and its mandatory checks. (15) Any other function delegated by the Ministry under these rules from time to time.
2.	State Pollution Control Boards or Pollution Control Committees of Union territories	<ul style="list-style-type: none"> (1) Inventorisation of e-waste. (2) Monitoring and compliance of Extended Producer Responsibility as directed by Central Pollution Control Board. (3) Conduct random inspection of recycler and refurbisher and monitoring recycling capacity utilization.

		(4) Implementation of programmes to encourage environmentally sound recycling. (5) Any other function delegated by the Ministry/ Central Pollution Control Board under these rules.
3.	Responsibilities of Local Bodies (Urban and Rural).	(1) To ensure that e-waste if found to be mixed with Municipal Solid Waste is properly segregated, collected and is channelised to registered recycler or refurbisher. (2) To ensure that e-waste pertaining to orphan products is collected and channelized to registered recycler or refurbisher. (3) To facilitate setting up e-waste collection, segregation and disposal systems. (4) Conducting training sessions to develop capacities of the urban and rural local bodies.
4.	Responsibilities of Port authority under Indian Ports Act, 1908 (15 of 1908) and Customs Authority under the Customs Act, 1962 (52 of 1962).	(1) Verify the import or export with respect to Extended Producer Responsibility under these rules. (2) Inform Central Pollution Control Board of any illegal traffic for necessary action. (3) Take action against importer for violations under the Indian Ports Act, 1908 or the Customs Act, 1962.
5.	Responsibilities of Bureau of Indian Standards/ Ministry of Electronics and Information Technology	To issue standards for refurbished products. Bureau of Indian Standards/ Ministry of Electronics and Information Technology shall also develop guidelines for refurbishers with respect to Compulsory Registration Scheme.

[F. No. 12/136/2021-HSMD]

NARESH PAL GANGWAR, Addl. Secy.

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Guidelines on Implementation of E-Waste (Management) Rules, 2016

Implementation Guidelines for E-Waste (Management) Rules, 2016



Central Pollution Control Board, Delhi

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Guidelines on Implementation of E-Waste (Management) Rules, 2016

1.0 Introduction

E- Waste (Management & Handling) Rules, 2011 were notified in 2011 and had come into force since 1st May, 2012. In order to ensure effective implementation of E-Waste Rules and to clearly delineated the role of producers in EPR, MoEF & CC, Government of India in supersession of E-Waste (Management and Handling) Rules, 2011 has notified the E-Waste (Management) Rules, 2016 vide G.S.R. 338(E) dated 23.03.2016 which will be effective from 01-10-2016. These rules are applicable to every producer, consumer or bulk consumer, collection centre, dismantler and recycler of e-waste involved in the manufacture, sale, purchase and processing of electrical and electronic equipment or components specified in schedule – I of these Rules.

Two categories of electrical and electronic equipment namely (i) IT and Telecommunication Equipment and (ii.) Consumer Electricals and Electronics such as TVs, Washing Machines, Refrigerators Air Conditioners including fluorescent and other mercury containing lamps are covered under these Rules. The main feature, of these rules, is Extended Producer Responsibility (EPR).

Target based approach for implementation of EPR has been adopted in the **E-Waste (Management) Rules, 2016**, which stipulate phase wise collection target to producers for the collection of e-waste, either in number or weight, which shall be 30% of the estimated quantity of waste generation during first two year of implementation of rules followed by 40% during third and fourth years, 50% during fifth and sixth years and 70% during seventh year onwards.

The E-Waste (Management) Rules, 2016 mandate CPCB to prepare guidelines on implementation of E-Waste Rules, which includes specific guidelines for extended producer responsibility, channelisation, collection centres, storage, transportation, environmentally sound dismantling and recycling, refurbishment, and random sampling of EEE for testing of RoHS parameters. In this document all the above guidelines have been compiled except guidelines for random sampling of EEE for testing of RoHS parameters. These guidelines are given in separate sections of this document.

2.0 Guidelines for Implementing Extended Producer Responsibility

Extended Producer Responsibility (EPR) is the responsibility of every producer of electrical and electronic equipment (EEE) for channelisation of e-waste to an authorised dismantler / recycler to ensure environmentally sound management of such waste. EPR authorisation is mandatory and has to be obtained by all the producers including Importers, e-retailers/on-line sellers/e-bay etc. of EEE covered in E-Waste (Management) Rules, 2016. A producer can implement its EPR either through take-back system or by setting up collection centres or both for channelisation of e-waste/end of life products to authorised dismantlers/recyclers. The producers are required to have arrangements with authorised dismantlers/recyclers either individually or collectively or through a Producer Responsibility Organisation (PRO) or E-Waste Exchange system as spelt in their EPR Plan which is approved/authorised by Central Pollution Control Board (CPCB). Selling or placing of EEE in the market by any producer without EPR Authorisation shall be considered as violation of the Rules and causing damage to the environment, which shall attract provisions under E (P) Act, 1986.

2.1 Extended Producer Responsibility Plan (EPR-Plan)

EPR Plan is an implementation plan of the producer where the producer gives its overall scheme to fulfil its Extended Producer Responsibility for achieving targets and details out the mechanism for collection and channelisation of e-waste generated by the producer.

The EPR plan requires estimating the quantity of E-waste generated from their end-of-life products, outlining a scheme for collection and channelization of their end-of-life products or products with same EEE code to authorised dismantlers/recyclers, estimated budget for implementing EPR, outline the scheme of creating awareness, declaration on ROHS compliance and submission of documents in this regard. Every producer should make an application seeking EPR authorisation in Form-1 of the E-Waste (M) Rules, 2016 addressed to the Member Secretary, Central Pollution Control Board. Form-1 should contain the relevant information pertaining to collection and channelization of their end-of-life products as detailed

~~in the Form-1. The Producer has liberty to revise their EPR Plan from time to time~~
with information to CPCB. In such cases the EPR authorisation need amendments.

Guidelines on Implementation of E-Waste (Management) Rules, 2016

2.1.1 **Estimation of E-Waste Generation** - E-waste generated by producer for a specific EEE category code is to be estimated on the basis of quantity (number or weight) of EEE placed in the market in the previous years and taking into consideration the average life of the equipment. Such estimate should be carried out using the following method;

The generation of e-waste from end of life products:

E-waste generation (weight or number) in the financial year 'x - y' = Sales in the financial year '(x-z) - (y-z)'

where, 'x - y' = financial year in which generation is estimated, and
z= average life span of EEE (Examples are given at Annexure - I)

Average life of the EEE to be used in the above formula is given below:

Sr. No.	Categories of electrical and electronic equipment	EEE Code	Average Life
i.	Information technology and telecommunication equipment		
	Centralized data processing:	ITEW1	
	Mainframe		10 Years
	Minicomputer		5 Years
	Personal Computing: Personal Computers (Central Processing Unit with input and output devices)	ITEW2	6 Years
	Personal Computing: Laptop Computers(Central Processing Unit with input and output devices)	ITEW3	5 Years
	Personal Computing: Notebook Computers	ITEW4	5 Years
	Personal Computing: Notepad Computers	ITEW5	5 Years
	Printers including cartridges	ITEW6	10 Years
	Copying equipment	ITEW7	8 Years
	Electrical and electronic typewriters	ITEW8	5 Years
	User terminals and systems	ITEW9	6 Years
	Facsimile	ITEW10	10 Years
	Telex	ITEW11	5 Years
	Telephones	ITEW12	9 Years
	Pay telephones	ITEW13	9 Years
Cordless telephones	ITEW14	9 Years	
Cellular telephones	ITEW15		
Feature phones		7 Years	
	Answering systems	ITEW16	5 Years
ii.	Consumer electrical and electronics:		

Guidelines on Implementation of E-Waste (Management) Rules, 2016

Sr. No.	Categories of electrical and electronic equipment	EEE Code	Average Life
	Television sets (including sets based on (Liquid Crystal Display and Light Emitting Diode technology)	CEEW1	9 Years
	Refrigerator	CEEW2	10 Years
	Washing Machine	CCEW3	9 Years
	Air-conditioners excluding centralized air conditioning plants	CCEW4	10 Years
	Fluorescent and other Mercury containing lamps	CEEW5	2 Years

2.1.2 **Estimation of Target for Collection** – the target for collection of E-Waste shall be based on estimated generation calculated for each EEE code for a specific financial year as specified above. E-Waste collection target for the financial year 2016 – 2017 would be 15% of the estimated E-waste generation, and for the year 2017 – 2018, the collection target would be 30%. These targets would increase to 40 % for next 2 financial years between 2018 – 2020, 50% for the financial years between 2020 - 2022 and 70% of the estimated E-waste generation for the financial years 2022 – 2023 onwards. Here it may be observed that collection targets would be applicable depending on life of the product given in above table and accordingly, if a producer enters the business in the year 2016 - 2017 for item code ITEW7(copying equipment), the collection targets for which would be applicable from the year 2021-22 at 50% collection target.

2.1.3 **Details of Extended Producer Responsibility Plan** – Producers should submit their own EPR plans appended to Form-1 for seeking EPR authorization. Producers may submit multiple options and schemes for channelization of E-Waste and such scheme should be described with a brief write-up along with a schematic flow chart/diagram of E-waste movement. The options and schemes for E-Waste channelization may comprise the following;

- Details of scheme/incentive for returning of e-waste by consumers /bulk consumers whether through dealers or buy-back arrangements or take-back systems or exchange
- If producer is opting to manage its EPR responsibility through PRO, then details of PRO's organisational structure and system of collection and channelisation to the authorised dismantlers/recyclers of e-waste.

Guidelines on Implementation of E-Waste (Management) Rules, 2016

- If e-waste exchange is part of channelisation then the details thereof.
- If producer is opting for 'deposit refund scheme' (DRS) or exchange scheme for collection and channelisation of e- waste, then the details of mode of refund of the deposited amount taken from the consumer or bulk consumer at the time of sale has to be specified along with interest that becomes due at the prevalent rate for the period of the deposit at the time of take-back of the end-of life products.
- Producers of item code: CEEW5 (fluorescent and other mercury containing lamp) may provide list of waste deposition centre or collection points financed by them as per their obligation under rule 17 (1) of the Solid Waste Management Rules 2016 for channelizing such wastes to recyclers or TSDFs.

2.1.4 **Collection and Storage plan** - Information pertaining to collection and storage should be appended to Form-1. It should be ensured that collection and storage of E-waste is managed as per the guidelines for 'collection and storage of e-waste' as given in section 3.0 of this document.

Channelization Plan - Form-1 should provide information pertaining to channelization. The following points should be considered in planning a system for E-Waste channelisation;

- make assessment of potential collection of e-waste, area or region wise.
- take help of any professional agency like Producer Responsibility Organisation (PRO) and e-waste exchange.
- identify authorised dismantlers/recyclers for channelisation of quantum of e-waste assessed above. Assess the capacity and capability of each identified authorised dismantlers/recyclers to ensure environmentally sound management of e-waste channelised to them.

2.1.5 **Collection Centres** – Producers shall specify details of their own collections centres or the collection centres with which they have agreement. Following details on collection centres should be provided in Form-1 if the collection centres are part of their channelisation;

- details of collection centres such as address and name(s) of the entity (producer, group of producers, refurbisher, recyclers or dismantlers) who are operating the collection centres in tabular form.

- The number of collection centres should be proportionate and justifiable with the estimated generation for channelization of e-waste. These collections centres or collection points should have facilities as specified in section 4.0 of this document.

2.1.6 Dismantlers & Recyclers – Details such as name, location, processing capacity and contact details of the authorised dismantling /recycling facilities, which are part of channelisation of E-waste of the producer should be provided in a separate table to Form-1. The details provided above should be commensurate and justifiable with the quantum of e-waste estimated as per section 2.1.2 of this document.

2.1.7 Treatment, Storage, Disposal Facilities (TSDFs) – In case there are no recyclers available for recycling of end-of-life EEE item code: CEEW5 (fluorescent and other mercury containing lamps), then the producers should provide list of Treatment Storage and Disposal Facilities with whom they have agreement.

2.2 Documents required with Form-1

~~Every producer of EEE listed in Schedule-I has to apply in Form-1 address to the Member Secretary, CPCB for seeking EPR Authorisation within a period of ninety (90) days starting from 01/10/2016. In case of renewal of EPR Authorisation, the application to CPCB has to be made before one hundred and twenty (120) days of its expiry. The following documents are required to be submitted along with Form-1:~~

- Documents related to EPR plan as envisaged in sections 2.1.
- Details of proposed awareness programmes and allied initiatives.
- Estimated budget earmarked for Extended Producer Responsibility (EPR)
- Copies of agreement document with dealers, collection centres, dismantlers, recyclers, treatment, storage and disposal facilities (TSDFs) etc.
- Self-declaration for compliance of RoHS as per the format given at Annexure – II.
- The technical documents (supplier declaration- description of product, document for materials, parts, and/or sub-assemblies and analytical test result) as an evidence that the reduction of hazardous substance (RoHS) provisions are complied by the product based on standard EN 50581 of EU as at Annexure - III

Guidelines on Implementation of E-Waste (Management) Rules, 2016

- Copy of the permissions/licences from the relevant ministry/department for marketing various products or for doing the business as given below:
 - i. TIN details
 - ii. PAN details
 - iii. Incorporation certificate
 - iv. Copy IEC in case of importers
- Copy of authorisation issued by the SPCBs/PCCs earlier under E-Waste (Management & Handling) Rules, 2011 in case of those producers who are operating in the country prior to 01-10-2016.

3.0 Guidelines for Collection and Storage of E-Waste

- After assessing their requirement of collection of e-waste, producers may devise a collection mechanism which may include take-back through dealers, collection centres or directly through authorised dismantlers/recyclers.
- For collection of e-waste producer may take help of any professional agency like Producer Responsibility Organisation (PRO)/e-waste exchange. Producer may manage a system directly for collection of e-waste by involving relevant stakeholders such as consumer, bulk consumer, informal sector, resident associations, retailers and dealers, etc.
- Producers may also have an arrangement of collection of e-waste from individual consumers and bulk consumers as well.
- The producers may publicize their collection system which may include details of their collection points, bins and collection vans linked to collection centres, take-back system, deposit refund scheme, e-waste exchange, retailers/dealers and PRO etc. for making collection system effective and workable.
- If take - back system is being provided, then it should be accessible to any citizen located anywhere in the country and may be provided through retailers/dealers or through service centres.
- The producers may provide consumer/ bulk consumer following details of take-back system:
 - (i) Link of their web site where information pertaining to take-back system is available
 - (ii) Toll free number to be available during working hours (10 A.M. to 6 P.M.) for consumers / bulk consumers.
 - (iii) Phone number/mobile numbers of grievance redressal in case, toll free number is not working
 - (iv) Details of their dealers, retailers, collection points/bins/pick up vans linked to collection centres for depositing of e-waste by the consumer/bulk consumers if they are part of the take-back system
 - (v) Details of any incentive scheme for consumers / bulk consumers for returning of e-waste
 - (vi) Details of authorised dismantlers/recyclers who can take-back e-waste on behalf of the producer if dismantlers/recyclers are part of take-back system
- Producers may maintain data base of consumers while selling EEE so that consumers/ bulk consumers can be approached for collection of e-waste / end of life products.

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Guidelines on Implementation of E-Waste (Management) Rules, 2016

- Every Producer, collection centre, dealer, dismantler, recycler and refurbisher may store the e-waste for a period not exceeding one hundred and eighty (180) days and shall maintain a record of collection, sale, transfer and storage of wastes and make these records available for inspection. The period of storage of one hundred and eighty (180) days may be extended by the concerned SPCBs/PCCs up to three hundred and sixty-five (365) days in case the e-waste needs to be specifically stored for research development of a process for its recycling or reuse.
 - Storage of end of life products may be done in a manner which does not lead to breakage of these products and safe to workers handling such products.
 - During storage of e-waste care may be taken:
 - (i) To avoid damage to refrigerators and air-conditioner so as to prevent release of refrigerant gases such as CFC, HFS, HCFC etc. and to prevent spillage of oils (mineral or synthetic oil) and other emissions.
 - (ii) To avoid damage to Cathode Ray Tube
 - (iii) To avoid damage to fluorescent and other mercury containing lamps
 - (iv) To avoid damage to equipment containing asbestos or ceramic fibres to avoid release of asbestos or ceramic fibres in the environment.
 - ~~➤ After collection of fluorescent and other mercury containing lamps, it should be sent only to a mercury recycler or to a TSDF in case no recycler is available.~~
 - Loading, transportation, unloading and storage of E-Waste / end of life products should be carried out in such a way that its end use such as re-use after refurbishing or recycling or recovery is unaffected.
 - The storage area should have fire protection system in place.
-

4.0 Guidelines for Collection Centre

- Collection centre or collection points are part of E-waste channelisation, and can be established by producers, refurbishers, dismantlers and recyclers. Collection Centre may collect and store e-waste, on behalf of producer / dismantler / recycler /refurbisher and transfer the same to authorised dismantlers / recyclers.
- Only those collection centres may operate which are specified in EPR-Authorisation of the producers including the collection centres established by dismantlers / recyclers / refurbishers and having agreement with Producers.
- If the collection centres are operating on behalf of many producers, then all such producers should provide this information in their EPR application.
- Collection centres have to collect e-waste on behalf of producers including those arising from orphaned products. Collection centres established by producers can be managed by their PRO or dismantler and recycler having agreement with producers.
- The collection points/bins can be at designated places where e-waste can be collected from residential areas, office complexes, commercial complexes, retail outlets, customer care stores, educational and research institutions, resident welfare associations (RWAs). These collection points have to be part of producer's collection and channelisation plan.
- Mobile collection vans can be used for door to door collection of e-waste from institutions/ individuals/small enterprises and such vans shall be linked to collection centres, and if provided by producers, shall be part of their EPR Plan.
- Material from collection centres should be send only to the authorised dismantlers and Recyclers except in case of used Fluorescent and other mercury containing lamps, which can be sent to TSDF in case recyclers are not available.

4.1 Facilities at Collection Centres

- Collection Centre should have weighing equipment for weighing each delivery received by it and maintain a record in this regard.
- Loading, transportation and unloading, storage of end of life product should be carried out in such a way that there should not be any damage to health, environment and to the product itself particularly care should be taken for Cathode Ray Tubes (CRT), LCD/LED/Plasma TV, Refrigerator, Air Conditioners and fluorescent and other mercury containing lamps so as to avoid breakage.

Guidelines on Implementation of E-Waste (Management) Rules, 2016

- > Cathode Ray Tubes (CRT), LCD / LED / Plasma TV and fluorescent and other mercury containing lamps should be stored either in containers or stored in stable manner to avoid damage or breakage.
- > The storage capacity of any collection centre should commensurate with volume of operations (weight and numbers) and category of E-waste. Space needed for storage of different category of e-waste is given below:

(i) ITEW1 to ITEW6	- 4.0 m ³ /tonne
(ii) Monitors (CRT)	- 5.0 m ³ /tonne
(iii) ITEW7 to ITEW10	- 5.0 m ³ /tonne
(iv) ITEW11 to ITEW14	- 3.0 m ³ /tonne
(v) ITEW15	- 1.0 m ³ /tonne
(vi) ITEW16	- 3.0 m ³ /tonne
(vii) CEEW1	- 6.5 m ³ /tonne
(viii) CEEW2	- 10.0 m ³ /tonne
(ix) CEEW3	- 7.5 m ³ /tonne
(x) CEEW4	- 6.0 m ³ /tonne
(xi) CEEW5	- 1.0 m ³ /tonne

-
- > Collection Centre should store e-waste product category wise.
 - > Collection Centre should maintain the records of E-Waste collected and account the same to respective producers.
 - > The collection centre where refrigerator and air conditioners are also stored should have adequate facilities for managing leakage of compressor oils, coolant/refrigerant gases such as CFCs/HCFCs and mercury from end of life fluorescent and other mercury containing lamp etc. Spills involving broken Fluorescent lamps, Oils spills should first be contained to prevent spread of the material to other areas. This may involve the use of dry sand, proprietary booms / absorbent pads, stabilizing chemicals etc. for subsequent transfer of hazardous waste to TSDFs.
 - > Covered shed/spaces have to be used for storage of E-Waste.
 - > Collection Centre should necessarily have adequate fire-fighting arrangement, escape route, for emergency exit.
-

5.0 Guidelines for Transportation of E-Waste

- The sender of E-Waste, that may be a producer, manufacturer, recyclers, dismantler, bulk-consumer, refurbisher and collection centre should identify transporter or make arrangements for a transporting e-waste in such a manner that environmental consequences of hazards associated with its transport could be kept at minimum.
 - Transport of E-Waste should be carried out as per the manifest system as per the provisions made in rule 19 of the E-Waste (M) Rules, 2016 and the transporter will be required to carry a document (three copies) as per form 6 of the rules provided by the sender. The responsibility of safe transportation of E-waste shall be with the sender of E-Waste.
 - Fluorescent and other mercury containing lamps may be transported to TSDF in the cases where no recyclers of CFL are available
 - The manufacturers and recyclers while transporting waste generated from manufacturing or recycling destined for final disposal to a treatment, storage and disposal facility will follow the provisions under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.
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6.0 Guidelines for Environmentally Sound Dismantling of E-Waste

6.1 Dismantler

- Any person or organisation or registered society or a designated agency or a company or an association can engage in dismantling of e-waste into their components by obtaining authorisation from the respective SPCBs/PCCs. Dismantlers may set up their collection centre, details of which shall be entered in their authorisation. These collection centres shall not require separate authorisation.
- A dismantler shall be connected to either Producers or PRO or e-waste exchange or take-back system or authorised recycler.
- A dismantler has to obtain consent to establish from SPCBs/PCCs under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981
- A dismantler has to obtain consent to operate from SPCBs/PCCs under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981
- A dismantler has to obtain authorisation from SPCBs/PCCs under E Waste-(Management) Rules, 2016, provided that any person authorised/registered under the provisions of the Hazardous Wastes (Management, Handling and Transboundary Movements) Rules, 2008, and the E-waste (Management & Handling) Rules, 2011 prior to the date of coming into force of these rules shall not be required to make an application for authorisation till the period of expiry of such authorisation/registration.
- A dismantler should have weigh bridge and other appropriate weighing equipment for weighing each delivery received by it and maintain a record in this regard.
- The unloading of e-waste/end of life products should be carried out in such a way that there should not be any damage to health, environment and to the product itself. Unloading of Cathode Ray Tubes (CRT), LCD / LED / Plasma TV, refrigerator, air conditioners and fluorescent and other mercury containing lamps should be carried out under supervision in such a way to avoid breakage.
- A dismantler should have facilities for destroying or permanently deleting data stored in the memory of end of life products (Hard Disk, Smartphones, Mobile phones) either through hammering or through data eraser.

6.2 Dismantling Process

Dismantling operation is essentially manual operation for segregating various components/ parts and sending them to respective users/ recyclers. Directly usable components can be sent only to an authorised refurbisher. The other parts can be sent to recyclers having valid CTO / authorised e-waste recyclers depending upon the nature of the part. For example, steel or aluminium part which contains no hazardous constituents can be sent to respective recyclers. Other parts which may contain hazardous constituents have to be sent to authorised e-waste recyclers.

➤ Dismantlers may perform the following operations

- (i) De-dusting
- (ii) Manual dismantling

➤ Dismantling operation shall comprise of physical separation and segregation after opening the electrical and electronic equipment into the component by manual operations.

➤ Dismantler may use screwdrivers, wrenches, pliers, wire cutters, tongs and hammers etc. for dismantling. The dismantled components should be sent to authorised e-waste recyclers or recyclers having valid consent to operate (CTO).

➤ Manual dismantling operations should be carried out over the dismantling table with space de-dusting system so as to maintain desirable work zone air quality as per the factories Act as amended from time to time. The de dusting system should consist of suction hoods over dismantling table connected with a cyclone, bag filter and venting through a chimney of three-meter height above roof level.

➤ Collection boxes should be placed near dismantling table for keeping the dismantled components.

➤ The workers involved in dismantling operation should have appropriate equipment such as screwdrivers, wrenches, pliers, wire cutters, tongs and hammers etc. for dismantling the e-waste.

➤ During dismantling operations, the workers should use proper personal protective equipment such as goggles, masks, gloves, helmet and gumboot etc.

➤ The following dismantled items and components must be removed from end of life products and stored in a safe manner for transportation to recyclers:

- (i) Batteries
- (ii) Printed Circuit Boards (PCBs) of EEE
- (iii) Toner cartridges

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- (iv) Plastic
- (v) External Electrical Cables

- Volume/Size reduction may be carried out after dismantling operations for the parts like steel/aluminium/plastic, for ease of transportation. Dismantled and segregated plastic from e-waste shall only be given to registered plastic recyclers having registration under Plastic Waste (Management) Rules, 2016.
- During the volume/size reduction of dismantled steel/aluminium/plastic parts, the dismantlers should have arrangement for dust and noise controls. These operations should be under acoustic enclosure for noise reduction.
- Dismantlers shall not carry out shredding / crushing / fine grinding/wet grinding/ enrichment operations and gravity/ magnetic/density/eddy current separation of printing circuit board or the components attached with the circuit board.
- Dismantlers shall not be permitted for dismantling of fluorescent and other mercury containing lamps, CRT / LCD / Plasma TV.
- Dismantlers shall not be permitted for chemical leaching or heating process or melting the material.
- In case of dismantling refrigerators and air conditioners, only skilled manpower having required tools and personal protective equipment (PPEs) must be deployed to manually separate compressors. Prior to dismantling the compressors, adequate facilities should be provided for collection of coolant/refrigerant gases and compressor oil.
- Dismantled circuit boards, capacitors, batteries, capacitors containing PCBs (Polychlorinated biphenyls) or PCTs (Polychlorinated terphenyls) etc. shall not be stored in open.
- Dismantlers should have adequate facilities for managing leakage of compressor oils, coolant/refrigerant gases such as CFCs/HCFs and mercury from end of life fluorescent and other mercury containing lamp etc. Spills involving broken Fluorescent lamps, Oils spills should first be contained to prevent spread of the material to other areas. This may involve the use of dry sand, proprietary booms / absorbent pads, stabilizing chemicals etc. for subsequent transfer to hazardous waste TSDFs.
- The premise for dismantling operation should fulfil the following requirements:
 - a) Water proof roofing and impermeable surfaces.
 - b) Storage space for disassembled spare parts.
 - c) Separate containers for storage of batteries, capacitors containing PCBs (Polychlorinated biphenyls) or PCTs (Polychlorinated terphenyls)

6.3 Space requirement for Dismantlers

A dismantler needs space for storage of electrical and electronic equipment up to 180 days, for process of dismantling and volume reduction and space for storage of dismantled and segregated material and free space for movement and office/ administration and other utilities. It is estimated that a minimum of 300 square meter area for a dismantling capacity of 1T/day is required for storage of raw material, segregated material, dismantling operations and office/ administration & other utilities.

7.0 Guidelines for Environmentally Sound Recycling of E-Waste

7.1 Recycler

- As per these rules any person who is engaged in recycling and reprocessing of waste electrical and electronic equipment or assemblies or their component is a recycler. Recyclers may set up their collection centres, details of which shall be entered in their authorisation. These collection centres shall not require separate authorisation. Recyclers can obtain raw material such as waste electrical and electronic assemblies or components or used components from producers/PRO/e-waste exchange/dismantlers and consumers / bulk consumers.
- The Product of recyclers has to be sent or sold to users or other recyclers having valid CTO from SPCBs/PCCs. Any hazardous waste generated during the recycling processing will be sent to TSDF'
- A recycler should be part of producer's channelisation system.
- A recycler has to obtain consent to establish from SPCBs/PCCs under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981
- A recycler has to obtain consent to operate from SPCBs/PCCs under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981
- A recycler has to obtain authorisation from SPCBs/PCCs under E Waste (Management) Rules, 2016, provided that any person authorised/registered under the provisions of the Hazardous Wastes (Management, Handling and Transboundary Movements) Rules, 2008, and the E-waste (Management & Handling) Rules, 2011 prior to the date of coming into force of these rules shall not be required to make an application for authorisation till the period of expiry of such authorisation/registration.
- A recycler should have weigh bridge and other appropriate weighing equipment for weighing each delivery received by it and maintain a record in this regard.
- The unloading of end of life product should be carried out in such a way that there should not be any damage to health, environment and to the product itself. Unloading of Cathode Ray Tubes (CRT), LCD/LED/Plasma TV, Refrigerator, Air Conditioners and fluorescent and other mercury containing lamps should be carried out under supervision in such a way to avoid breakage.

- A recycler should have facilities for destroying or permanently deleting data stored in the memory of end of life products (Hard Disk, Telephones, Mobile phones) either through shredding or grinding or through data eraser.

7.2 Recycling Process

- The functions of the recyclers include dismantling along with recovery operation. There shall be no restriction on degree of operations that can be permitted for recyclers provided they have requisite facilities. The following processes should be employed by recyclers:
 - (i) Manual / semi- automatic / automatic dismantling operations
 - (ii) Shredding / crushing / fine grinding/wet grinding/ enrichment operations, gravity/ magnetic/density/eddy current separation
 - (iii) Pyro metallurgical operations - Smelting furnace
 - (iv) Hydro metallurgical operations
 - (v) Electro-metallurgical operations
 - (vi) Chemical leaching
 - (vii) CRT/LCD/Plasma processing
 - (viii) Toner cartridge recycling
 - (ix) Melting, casting, moulding operations (for metals and plastics)
- A recycling facility may accept e-waste and even those electrical and electronic assemblies or components not listed in Schedule- I for recycling, provided that they do not contain any radioactive materials and same shall be declared while taking the authorisation from concerned SPCBs/PCCs;
- The recycling facilities shall comply with the requirements as specified for dismantlers in the guidelines for dismantling in section 6.0.
- A recycling facility shall install adequate wastewater treatment facilities for process wastewater and air pollution control equipment (off gas treatment, wet/alkaline/packed bed scrubber and carbon filters) depending on type of operations undertaken.
- De dusting equipment such as suction hood shall be installed where manual dismantling is carried out.
- ~~➤ Fume hoods connected with bag dust collectors followed wet (chemical) scrubbers and carbon filters shall be installed for control of fugitive emissions from furnaces or reactor.~~
- Noise control arrangement for equipment like crusher, grinder and shredder needs to be provided.

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- The discharges from the facility shall comply with general standards under E (P) Act, 1986 for discharge of wastewater. Discharge standard are at Annexure IV
- In case of air emissions, the unit shall comply with emission norms prescribed under Air (Prevention and Control of Pollution) Act, 1981. In case of furnace, a minimum stack height of 30 meter shall be installed depending on emission rate of SO₂. Emission Standards are at Annexure V.
- The workers involved in recycling operations shall use proper personal protective equipment such as goggles, masks, gloves, helmet and gumboot etc.
- Adequate facilities for onsite collection and storage of bag filter residues, floor cleaning dust and other hazardous material shall be provided and sent to secure landfill by obtaining membership of TSDF.
- The CRT / LCD / Plasma TV should be processed only at a recycler's facility.
- For recycling of CRT monitor and TVs care should be taken to contain release of harmful substances. The steps for processing of CRT are as below:
 - (i) CRT monitors and TVs should be manually removed from plastic/ wooden casing. The CRT should be split into funnel and panel glass using different splitting technology such as Ni-Chrome hot wire cutting, Diamond wire method or Diamond saw separation in a closed chamber under low vacuum conditions (650 mm of Hg).
 - (ii) The funnel section is then lifted off from the panel glass section and the internal metal gasket is removed for facilitating the removal of internal phosphor coating.
 - (iii) The internal phosphor coating from the inner side of panel glass is removed by using an abrasive wire brush with suction arrangement under low pressure as given above at (i). The extracted air is cleaned through high efficiency bag-filter system and collected in appropriate labelled containers and then disposed at an authorised TSDF.
 - (iv) Manual shredding, cutting, and segregation operations for CRTs should be carried out in low vacuum (650 mm of Hg) chambers where the dust is extracted through cyclones, bag filters, ID fan and a suitable chimney.
 - (v) Segregated CRTs can also be shredded in mechanical/automatic shredding machines connected with dust control systems. The mixed shredded glass is separated into leaded glass and glass cullet using electro-magnetic field or by density separation.
- For LCD and Plasma TV a recycler should have sealed vacuum dismantling platform for dismantling of LCD / Plasma panels. The LCD / Plasma TV should be dismantled piece by piece, starting with the removal of the plastic backing shell, printed circuit boards, aluminium or

steel frame, screen, PET plastics, LCD Panel and backlight. The metal frame, wire, other metallic material and plastic backing cabinet may be sent to recyclers with valid CTO. Printed Circuit Board and LCD panel may be recycled or in case recycling facility is not available then sent to respective authorised recycling facility.

- The user of the products obtained in the recycler facility should be identified and an agreement may be entered with them for selling of the products obtained in these recycling facilities. This is for tracking the product of recycling, to ascertain where the products are going.
- Recovery of resource and particularly of precious metals present in the e-waste should be given importance.
- For fluorescent and other mercury containing lamp recycling, the unit shall have at least following systems:
 - (i) Mechanical feeding system.
 - (ii) Mercury spill collection system.
 - (iii) Lamp Crushing System, under vacuum, for separation of mercury-contaminated phosphor powder & mercury vapors from other crushed components, so as not to cause release of any pollutant, including mercury vapor.
 - (iv) System for segregation of mercury vapour from the phosphor powder through a distillation system for separation & recovery of mercury.
 - (v) Air pollution control system (APCS) which shall include HEPA (High Efficiency Particulate Arrestor) filter system or activated carbon filter system or any other equivalent efficient system for separation/ removal of mercury vapor from mercury-contaminated phosphor powder'
 - (vi) Arrangement for disposal of mercury contaminated filter pads to TSDF.
 - (vii) On line mercury monitoring system, to have check on emission of mercury, which has to be in compliance to the consented norms.
- The fluorescent and other mercury containing lamp recycling unit shall have following obligations:
 - (i) The emission outlet shall comply with the norms for mercury prescribed in the consent document. ~~The norm for mercury emission is 0.2 mg/m³ (Normal) as prescribed under E (P) Act, 1986 for mercury emission from other category of industries.~~
 - (ii) For discharge of effluent the limit for mercury as (Hg) should be less than equal to 0.01mg /liter as prescribed under E (P) Act, 1986.

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- (iii) The unit shall have trained / skilled manpower to handle hazardous substances such as mercury mixed phosphor in respect of treatment/recycling.
- (iv) The unit shall dispose all the unrecoverable wastes from the treatment site, to a TSDF
- (v) The unit shall maintain record of used fluorescent and other mercury containing lamp collected & recycled, recovery of mercury and other components. It shall, also, maintain the records pertaining to the generation, storage, transport and disposal of the wastes generated in the process.
- (vi) The unit shall take up ambient air quality monitoring, particularly, in reference to mercury levels with a frequency of once in a month through a recognized laboratory, for third party verification.

7.3 Space requirement for Recyclers

As a general rule a recycler of capacity of 1 Ton per day shall require a minimum of 500 square meters area. Authorisation to recyclers may be preferred if they have minimum operational capacity of 5 MT/day with an area of about 2500 square meter.

8.0 Guidelines for Refurbisher

- Refurbishment means repairing of used electrical and electronic equipment and it should be carried out in such a way that there should not be any damage to health and environment.
 - A refurbisher has to obtain consent to establish under the Water (Prevention and Control of Pollution) Act, 1974, (25 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (21 of 1981) from the concerned State Pollution Control Board/Pollution Control Committee.
 - A refurbisher has to obtain certificate of registration and proof of Installed capacity from District Industries Centre or any other government agency authorised in this regard;
 - A refurbisher has to obtain one-time authorization from concerned State Pollution Control Board/Pollution Control Committee.
 - A refurbisher should have system to manage leakage of coolant/refrigerant gases and compressor oils from used electrical and electronic equipment during refurbishing operations.
 - The refurbishing area should be ventilated and have proper dust control equipment.
 - De-dusting system over refurbishment tables should be provided
 - Any e-waste generated during refurbishment should be collected separately and sent to collection centre /authorised recycler. In case of refurbisher not having own collection centre, the e-waste so generated may be channelized to an authorised recycler.
 - The premise for refurbishing should fulfil the following requirements:
 - (i) Water proof roofing and impermeable surfaces
 - (ii) As a general rule a refurbisher of capacity of 1 Ton per day shall require a minimum of 150 square meters' area for refurbishing, temporary storage of e waste generated and space for refurbished EEE
 - If refurbisher opts to sell refurbished EEE then he is required to seek EPR authorisation from CPCB. In no circumstances, the refurbisher shall sell any refurbished EEE without having EPR authorization.
-

9.0 Guidelines for Consumers and Bulk Consumers

9.1 Consumers:

- The Consumers should channelised their e-waste through collection centre or dealer of authorised producer or dismantler or recycler or through the designated take back service provider of the producer to authorised dismantler/recycler.
- The consumer should not throw e-waste in municipal bins.
- The consumers shall ensure that they do not throw end of life fluorescent and other mercury containing lamp in the municipal bin but hands them over (in a properly packed form) to take back system / collection and channelisation system of producer or to a collection centre of an authorised recycler who is part of producer channelisation system.
- The end of life intact fluorescent and other mercury containing lamp may be stored either in the same boxes in which new lamps are brought or other boxes of similar size. They should be sorted upright. The due precaution may be taken while packing more than one used lamp, so as not to cause the possibility of breakage during the storage and transpiration.

9.2 Bulk Consumers:

- The bulk consumers may ensure that e waste generated by them is handed over only to producer take back system or to authorised dismantler/recycler who is part of producers take back/channelisation system.
- The bulk consumers should ensure that used lamps are not disposed in the municipal bin but handed over (in a properly packed form) to take back system / collection and channelisation system of producer or to a collection centre of an authorised recycler who is part of producer channelisation system.
- The bulk consumers must create special type of disposal bins (suitable for the purpose) at site for depositing the end of life intact fluorescent and other mercury containing lamp only. The management of the institute may issue necessary instructions, to ensure this, to staff and workers handling such lamps.
- The end of life intact fluorescent and other mercury containing lamp, as collected above, may be stored either in the same boxes in which new lamps are brought or other boxes of similar size. They should be stored upright. The due precaution may be taken while packing more than one used lamps, so as not to cause the possibility of breakage during the storage and transportation.

ABBREVIATIONS

BFR	-	Brominated Flame Retardant
CCC	-	Common Collection Centre
CFC	-	Chloro Fluro Carbon
CFL	-	Compact Fluorescent Lamp
CPCB	-	Central Pollution Control Board
CRT	-	Cathode Ray Tube
CTE	-	Consent to Establish
CTO	-	Consent to Operate
DRS	-	Deposit Refund Scheme
EEE	-	Electrical Electronic Equipment
EoL	-	End of Life
EPR	-	Extended Producer Responsibility
EST	-	Environmentally Sound Technology
HCFC	-	Hydro Chloro Fluro Carbon
HW (M)	-	Hazardous Waste (Management)
IT& TE	-	Information Technology & Telecommunication Equipment
IEC	-	Importer/ Exporter Code
LCD	-	Liquid Crystal Display
LED	-	Light Emitting Diode
MoEF& CC	-	Ministry of Environment, Forest and Climate Change
MT	-	Metric Ton
NGOs	-	Non-Governmental Organisation
PAN	-	Permanent Account Number
PCB	-	Printed Circuit Board
PCBs	-	Polychlorinated Biphenyls
PCC	-	Pollution Control Committees
PCTs	-	Polychlorinated Terphenyls
PRO	-	Producer Responsibility Organization
PWB	-	Printed Wire Board
RoHS	-	Reduction of Hazardous Substances
RWAs	-	Resident Welfare Associations
SPCB	-	State Pollution Control Board
TIN	-	Taxpayer Identification Number
TSDF	-	Treatment, Storage & Disposal Facility
TV	-	Television

REFERENCES:

1. CPCB's guidelines for Environmentally Sound Management of E-waste
 2. CPCB's guidelines for Implementation of E-waste Rules 2011
 3. CPCB's guidelines for environmentally sound mercury management in fluorescent lamp sector
 4. Department of electronics and information Technology's (DeitY) SOP's for dismantler and Recycler
 5. UNU-IAS E-Waste Statics, Guidelines on classification, reporting and indicators
 6. Estimation of outflows of e-waste in India by Shri R.K. Mittal and Shri Maheshwar Dwivedy
 7. An Investigation into E-waste flows in India by Shri R.K. Mittal and Shri Maheshwar Dwivedy
 8. Forecasting e-waste amounts in India - by Shri Sirajuddin Ahmed, Ms. Rashmi Makkar, Shri Anubhav Sharma (Department of civil Engineering, Jamia Millia Islamia, Delhi)
 9. UNEP Report - E-Waste volume II (E-waste Management Manual)
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Example for Calculation of E-waste Generation

E-waste generation (weight or number) in the financial year 'x - y'

= Sales in the financial year '(x-z) - (y-z)'

'x - y' = financial year in which generation estimated,

z = average life span of EEE)

For example

For financial year 2016 -17,

x - y = 2016 -17 (April 2016 to March 2017)

If EEE, for which generation is to be estimated, is **ITEW 15**

means cellular phones that is either smart phone or feature phones then

z = 5 years or z = 7 years as from the table in chapter 2.1

1. The estimated generation of end of life **ITEW 15 – smart phone** in the FY 2016-17

= Sales in the (FY year 2016-5 – 2017-5)

= Sales in the financial year 2011-12

OR

2. The estimated generation of end of life **ITEW 15 – feature phone** in the FY 2016-17

= Sales in the (FY year 2016-7 – 2017-7) either in terms of weight or number

= Sales in the financial year 2009-10 in terms of weight or number

❖ Therefore, generation of end of life of **smart phone in the FY 2016-17** = Sales in the financial year 2011 – 12 either in terms of weight or number

❖ Similarly, generation of end of life of **feature phone** = Sales in the financial year 2009-2010 either in terms of weight or number

3. Also during financial year 2016 -17 the collection target is to be for the period October, 2016 to March 2017 (six months) so generation calculation should also be on pro-rata

~~and accordingly target may be estimated.~~

4. For financial year 2017 - 18 and subsequent financial year, the generation of end of life should be calculated as given in the example above.

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Annexure – II

Date:

Self-Declaration Form
(As per E-Waste (Management) Rules, 2016)

Producer Details:

S.No.	Required Information	Details
1.	Company Name with Complete Address from where business/sale in the entire country is being managed:	
2.	Name of Authorised Person Email: Telephone: Fax: Mobile Number: Complete Postal Address:	
3.	Brand name (if any):	

Self-Declaration for Compliance of
Reduction in the use of Hazardous Substances (RoHS)
(As per E-Waste (Management) Rules, 2016)

We _____ being the Producer as per E-Waste (Management) Rules, 2016, hereby declare that all the EEE, being offered for sale in the country by our company and covered in the Schedule – I of the E-Waste (Management) Rules, 2016 and listed at enclosure - A comply with the sub rule (1) of the Rule 16 of the above said Rule.

Authorizing Signatory
(Name/Signature/Seal)

Date:

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Enclosure – A

S. No.	Product Category & Code* (as per Schedule I of E-Waste (M) Rules, 2016)	Product name**	Model No.**	Weight of Product (kgs) or Numbers	Date of placing on market (In case of import, date of entry in the country)	Compliance with RoHS Yes/No/Partial	RoHS Information provided on product information booklet Yes/No	In case Product is imported from other country, name of the country where product is manufactured

**Add additional rows for products and models

Date:

Authorizing Signatory
(Name/Signature/Seal)

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Annexure – III

Technical Documents for RoHS(EN 50581 of EU)

1. General description of the product
 2. Documents for materials, parts and/or sub-assemblies
 3. Supplier declarations (covering specific material, part and/or sub-assembly, or a specific range of materials, part and/or sub-assemblies) and/or contractual agreement, such as:
 - (i) Supplier declarations, confirming that the restricted substance content of the material, part, or sub-assembly is within the permitted levels and identifying any exemptions that have been applied
 - (ii) Signed contracts confirming that the producer's specification for the maximum content of restricted substances in a material, part, or sub-assembly is fulfilled.
 4. Material Declarations:
 - (i) Material declarations providing information on specific substance content and identifying any exemptions that have been applied.

and/or
 5. Analytical test results:
 - (i) Analytical test results using the methods described or referenced in EN 62321
-
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Annexure – IV

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTIONS: - EFFLUENTS

S.No.	Parameter	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	(a)	(b)	(c)	(d)
1.	Colour and odour	Not desirable	---	Not desirable	Not desirable
2.	Suspended solids mg/l, Max.	100	600	200	(a) For process waste water- 100 (b) For cooling water effluent 10 percent above total suspended matter or influent.
3.	Particulate size of suspended solids	Shall pass 850 Micron IS Sieve	--	--	(a) Floatable solids, Max. 3 mm. Settle able solids, Max. 850 microns.
4.	pH Value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5.	Temperature	Shall not exceed 5°C above the receiving water temperature	---	---	Shall not exceed 5°C above the receiving water temperature
6.	Oil and grease mg/l Max.	10	20	10	20
7.	Total residual chlorine mg/l- Max	1.0	---	--	1.0
8.	Ammonical nitrogen (as N), mg/l Max.	50	50	--	50
9.	Total Kjeldahl Nitrogen (as NH ₃) mg/l, Max.	100	--	--	100
10.	Free ammonia (as NH ₃) mg/l, Max.	5.0	--	--	5.0
11.	Biochemical Oxygen demand [3 days at 27°C] mg/l max.	30	350	100	100
12.	Chemical Oxygen	250	--	--	250
	Max.				
13.	Arsenic (as As), mg/l, Max.	0.2	0.2	0.2	0.2
14.	Mercury (as Hg), mg/l, Max.	0.01	0.01	--	0.01

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S.No.	Parameter	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	(a)	(b)	(c)	(d)
15.	Lead (as Pb) mg/l, max.	0.1	1.0	--	2.0
16.	Cadmium (as Cd) mg/l, Max.	2.0	1.0	--	2.0
17.	Hexavalent chromium (as Cr+6), mg/l max.	0.1	2.0	--	1.0
18.	Total Chromium (as Cr.) mg/l, max.	2.0	2.0	--	2.0
19.	Copper (as Cu) mg/l, Max.	3.0	3.0	--	3.0
20.	Zinc (As Zn.) mg/l, Max.	5.0	15	--	15
21.	Selenium (as Se.) mg/l Max.	0.05	0.05	--	0.05
22.	Nickel (as Ni) mg/l, Max.	3.0	3.0	--	5.0
23.	Cyanide (as CN) mg/l Max.	0.2	2.0	0.2	0.2
24.	Fluoride (as F) mg/l Max.	2.0	15	--	15
25.	Dissolved phosphates (as P), mg/l Max.	5.0			
26.	Sulphide (as S) mg/l Max.	2.0	--	--	5.0
27.	Phenolic compounds (as C ₆ H ₅ OH) mg/l, Max.	1.0	5.0	--	5.0
28.	Radioactive Materials:				
	(a) Alpha emitter micro curie/ml.	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸	10 ⁻⁷
	(b) Beta emitter micro curie/ml.	10 ⁻⁶	10 ⁻⁶	10 ⁻⁷	10 ⁻⁶
29.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
30.	Manganese (as Mn)	2 mg/l	2 mg/l	--	2 mg/l
31.	Iron (as Fe)	3 mg/l	3 mg/l	--	3 mg/l
32.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l

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S.No.	Parameter	Standards			
		Inland surface water	Public Sewers	Land for irrigation	Marine coastal areas
1	2	(a)	(b)	3 (c)	4 (d)
33.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l

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Annexure – V

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutant	Time Weighted Average	Concentration in Ambient Air		
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1	Sulphur Dioxide (SO ₂), µg/m ³	Annual * 24 hours** -	50 80	20 80	- Improved West and Geake - Ultraviolet Fluorescence
2	Nitrogen Dioxide (NO ₂), µg/m ³	Annual * 24 hours**	40 80	30 80	- Modified Jacob & Hochheiser (Na- arsenite) - Chemiluminescence
3	Particulate Matter (size less than 10 µg/m ₃) or PM ₁₀ µg/m ³	Annual * 24 hours**	60 100	60 100	- Gravimetric - TOEM - Beta Attenuation
4	Particulate Matter (size less than 2.5µm) or PM _{2.5} µg/m ³	Annual * 24 hours**	40 60	40 60	- Gravimetric - TOEM - Beta attenuation
5	Ozone (O ₃) µg/m ³	8 hours ** 1 Hour**	100 180	100 180	- UV photometric - Chemiluminescence - Chemical Method
6	Lead (Pb) µg/m ³	Annual * 24 hours**	0.50 1.0	0.50 1.0	- AAs/ICP method after sampling on EPM 2000 or equivalent filter paper - ED-XRF using Teflon filter
7	Carbon Monoxide (CO) mg/m ³	8 hours** 1 hour**	02 04	02 04	- Non Dispersive Infra-Red (NDIR) Spectroscopy
8	Ammonia (NH ₃) µg/m ³	Annual * 24 hours**	100 400	100 400	- Chemiluminescence - Indophenol blue method
9	Benzene (C ₆ H ₆) µg/m ³	Annual *	05	05	- Gas chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10	Benzo (a) Pyrene (Bap)- Particulate phase only, ng/m ³	Annual *	01	01	- Solvent extraction followed by HPCL/GC analysis
11	Arsenic (As), ng/m ³	Annual *	06	06	- AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel (Ni), ng/m ³	Annual *		20	- AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.
 ** 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.
 Note. – Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

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[PUBLISHED IN THE GAZETTE OF INDIA, EXTRAORDINARY PART-II, SECTION-3, SUB-SECTION (i)]

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 23rd March, 2016

G.S.R 338(E). - Whereas the draft rules, namely the e-waste (Management) Rules, 2015, were published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* number G.S.R. 472(E), dated the 10th June, 2015 in the Gazette of India, Extraordinary Part II, section 3, sub-section (ii) inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which copies of the Gazette containing the said notification were made available to the public;

AND WHEREAS the copies of the Gazette containing the said notification were made available to the public on the 10th day of June, 2015;

AND WHEREAS the objections and suggestions received within the specified period from the public in respect of the said draft rules have been duly considered by the Central Government;

NOW, THEREFORE, in exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), and in supersession of the e-waste (Management and Handling) Rules, 2011, published in the Gazette of India, section 3, sub-section (ii), *vide* number S.O. 1035(E), dated the 12th May, 2011, except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following rules, namely:-

CHAPTER I

PRELIMINARY

1. **Short title and commencement.** - (1) These rules may be called the E-Waste (Management) Rules, 2016.

(2) They shall come into force from the 1st day of October, 2016.

2. **Application.** - These rules shall apply to every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of electrical and electronic equipment listed in

Schedule I, including their components, consumables, parts and spares which make the product operational but shall not apply to -

- (a) used lead acid batteries as covered under the Batteries (Management and Handling) Rules, 2001 made under the Act;
- (b) micro enterprises as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006); and

- (c) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made there under.

3. Definitions. - (1) In these rules, unless the context otherwise requires, -

- (a) 'Act' means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) 'authorisation' means permission for generation, handling, collection, reception, storage, transportation, refurbishing, dismantling, recycling, treatment and disposal of e-waste, granted to manufacturer, dismantler, refurbisher and recycler;
- (c) 'bulk consumer' means bulk users of electrical and electronic equipment such as Central Government or State Government Departments, public sector undertakings, banks, educational institutions, multinational organisations, international agencies, partnership and public or private companies that are registered under the Factories Act, 1948 (63 of 1948) and the Companies Act, 2013 (18 of 2013) and health care facilities which have turnover of more than one crore or have more than twenty employees;
- (d) 'Central Pollution Control Board' means the Central Pollution Control Board constituted under sub-section (1) of section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);
- (e) 'collection centre' means a centre or a collection point or both established by producer individually or as association jointly to collect e-waste for channelising the e-waste to recycler and play such role as indicated in the authorisation for Extended Producer Responsibility granted to the producer and having facilities as per the guidelines of Central Pollution Control Board, including the collection centre established by the dismantler or refurbisher or recycler which should be a part of their authorisation issued by the State Pollution Control Board where the facility exists;
- (f) 'component' means one of the parts of a sub-assembly or assembly of which a manufactured product is made up and into which it may be resolved and includes an accessory or attachment to another component;
- (g) 'consumables' means an item, which participates in or is required for a manufacturing process or for functioning of the electrical and electronic equipment and may or may not form part of end-product. Items, which are substantially or totally consumed during a manufacturing process, shall be deemed to be consumables;
- (h) 'consumer' means any person using electrical and electronic equipment excluding the bulk consumers;
- (i) 'channelisation' means to direct the path for movement of e-wastes from collection onwards to authorised dismantler or recycler. In case of fluorescent and other mercury containing lamps, where recyclers are not available, this means path for movement from collection centre to Treatment, Storage and Disposal Facility;
- (j) 'dealer' means any individual or firm that buys or receives electrical and electronic equipment as listed in Schedule I of these rules and their components or consumables or parts or spares from producers for sale;
- (k) 'deposit refund scheme' means a scheme whereby the producer charges an additional amount as a deposit at the time of sale of the electrical and electronic equipment and returns it to the consumer along with interest when the end-of-life electrical and electronic equipment is returned;
- (l) 'dismantler' means any person or organisation engaged in dismantling of used electrical and electronic equipment into their components and having facilities

- as per the guidelines of Central Pollution Control Board and having authorisation from concerned State Pollution Control Board;
- (m) 'disposal' means any operation which does not lead to recycling, recovery or reuse and includes physico-chemical or biological treatment, incineration and deposition in secured landfill;
 - (n) 'end-of-life' of the product means the time when the product is intended to be discarded by the user;
 - (o) 'environmentally sound management of e-waste' means taking all steps required to ensure that e-waste is managed in a manner which shall protect health and environment against any adverse effects, which may result from such e-waste;
 - (p) 'electrical and electronic equipment' means equipment which are dependent on electric current or electro-magnetic field in order to become functional;
 - (q) 'e-retailer' means an individual or company or business entity that uses an electronic network such as internet, telephone, to sell its goods;
 - (r) 'e-waste' means electrical and electronic equipment, whole or in part discarded as waste by the consumer or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes;
 - (s) 'e-waste exchange' means an independent market instrument offering assistance or independent electronic systems offering services for sale and purchase of e-waste generated from end-of-life electrical and electronic equipment between agencies or organisations authorised under these rules;
 - (t) 'Extended Producer Responsibility' means responsibility of any producer of electrical or electronic equipment, for channelisation of e-waste to ensure environmentally sound management of such waste. Extended Producer Responsibility may comprise of implementing take back system or setting up of collection centres or both and having agreed arrangements with authorised dismantler or recycler either individually or collectively through a Producer Responsibility Organisation recognised by producer or producers in their Extended Producer Responsibility - Authorisation;
 - (u) 'Extended Producer Responsibility - Authorisation' means a permission given by Central Pollution Control Board to a producer, for managing Extended Producer Responsibility with implementation plans and targets outlined in such authorisation including detail of Producer Responsibility Organisation and e-waste exchange, if applicable;
 - (v) 'Extended Producer Responsibility Plan' means a plan submitted by a producer to Central Pollution Control Board, at the time of applying for Extended Producer Responsibility - Authorisation in which a producer shall provide details of e-waste channelisation system for targeted collection including detail of Producer Responsibility Organisation and e-waste exchange, if applicable;
 - (w) 'facility' means any location wherein the process incidental to the collection, reception, storage, segregation, refurbishing, dismantling, recycling, treatment and disposal of e-waste are carried out;
 - (x) 'Form' means a form appended with these rules;
 - (y) 'historical e-waste' means e-waste generated from electrical and electronic equipment as specified in Schedule I, which was available on the date from which these rules come into force;
 - (z) 'manufacturer' means a person or an entity or a company as defined in the Companies Act, 2013 (18 of 2013) or a factory as defined in the Factories Act, 1948 (63 of 1948) or Small and Medium Enterprises as defined in Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006), which has facilities for manufacture of electrical and electronic equipment;

- (aa) 'orphaned products' means non-branded or assembled electrical and electronic equipment as specified in Schedule I or those produced by a company, which has closed its operations;
- (bb) 'part' means an element of a sub-assembly or assembly not normally useful by itself, and not amenable to further disassembly for maintenance purposes. A part may be a component, spare or an accessory;
- (cc) 'producer' means any person who, irrespective of the selling technique used such as dealer, retailer, e-retailer, etc.;
 - (i) manufactures and offers to sell electrical and electronic equipment and their components or consumables or parts or spares under its own brand; or
 - (ii) offers to sell under its own brand, assembled electrical and electronic equipment and their components or consumables or parts or spares produced by other manufacturers or suppliers; or
 - (iii) offers to sell imported electrical and electronic equipment and their components or consumables or parts or spares;
- (dd) 'Producer Responsibility Organisation' means a professional organisation authorised or financed collectively or individually by producers, which can take the responsibility for collection and channelisation of e-waste generated from the 'end-of-life' of their products to ensure environmentally sound management of such e-waste;
- (ee) 'recycler' - means any person who is engaged in recycling and reprocessing of waste electrical and electronic equipment or assemblies or their components and having facilities as elaborated in the guidelines of Central Pollution Control Board;
- (ff) 'refurbishment' means repairing of used electrical and electronic equipment as listed in Schedule I for extending its working life for its originally intended use and selling the same in the market or returning to owner;
- (gg) 'refurbisher' for the purpose of these rules, means any company or undertaking registered under the Factories Act, 1948 or the Companies Act, 1956 or both or district industries centre engaged in refurbishment of used electrical and electronic equipment;
- (hh) 'Schedule' means the Schedule appended to these rules;
- (ii) "spares" means a part or a sub-assembly or assembly for substitution which is ready to replace an identical or similar part or sub-assembly or assembly including a component or an accessory;
- (jj) 'State Government in relation to an Union territory means, the Administrator thereof appointed under article 239 of the Constitution;
- (kk) 'State Pollution Control Board' means the concerned State Pollution Control Board or the Pollution Control Committee of the Union Territories constituted under sub-section (1) of section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);
- (ll) 'target' means the quantity of e-waste to be collected by the producer in ~~the Schedule of Extended Producer Responsibility~~;
- (mm) 'transporter' means a person or company or entity engaged in the off-site transportation of e-waste by air, rail, road or water carrying a manifest system issued by the person or company or entity who has handed over the e-waste to the transporter, giving the origin, destination and quantity of the e-waste being transported;

(2) Words and expressions used in these rules and not defined but defined in the Act shall have the meanings respectively assigned to them in the Act.

CHAPTER II
RESPONSIBILITIES

- 4. Responsibilities of the manufacturer.** - (1) collect e-waste generated during the manufacture of any electrical and electronic equipment and channelise it for recycling or disposal;
- (2) apply for an authorisation in Form 1 (a) in accordance with the procedure prescribed under sub-rule (2) of rule 13 from the concerned State Pollution Control Board, which shall give the authorisation in accordance with Form 1 (bb);
- (3) ensure that no damage is caused to the environment during storage and transportation of e-waste;
- (4) maintain records of the e-waste generated, handled and disposed in Form-2 and make such records available for scrutiny by the concerned State Pollution Control Board;
- (5) file annual returns in Form-3, to the concerned State Pollution Control Board on or before the 30th day of June following the financial year to which that return relates.

5. Responsibilities of the producer. - The producer of electrical and electronic equipment listed in Schedule I shall be responsible for -

- (1) implementing the Extended Producers Responsibility with the following frameworks, namely:-
- (a) collection and channelisation of e-waste generated from the 'end-of-life' of their products or 'end-of-life' products with same electrical and electronic equipment code and historical waste available on the date from which these rules come into force as per Schedule I in line with the targets prescribed in Schedule III in Extended Producer Responsibility - Authorisation;
- (b) the mechanism used for channelisation of e-waste from 'end-of-life' products including those from their service centres to authorised dismantler or recycler shall be in accordance with the Extended Producer Responsibility - Authorisation. In cases of fluorescent and other mercury containing lamps, where recyclers are not available, channelisation may be from collection centre to Treatment, Storage and Disposal Facility;
- (c) for disposal in Treatment, Storage and Disposal Facility, a pre-treatment is necessary to immobilise the mercury and reduce the volume of waste to be disposed off;
- (d) Extended Producer Responsibility - Authorisation should comprise of general scheme for collection of waste Electrical and Electronic Equipment from the Electrical and Electronic Equipment placed on the market earlier, such as through dealer, collection centres, Producer Responsibility Organisation, through buy-back arrangement, exchange scheme, Deposit Refund System, etc. whether directly or through any authorised agency and channelising the items so collected to authorised recyclers;
- (e) providing contact details such as address, e-mail address, toll-free telephone numbers or helpline numbers to consumer(s) or bulk consumer(s) through their website and product user documentation so as to facilitate return of end-of-life electrical and electronic equipment;
- (f) creating awareness through media, publications, advertisements, posters, or by any other means of communication and product user documentation accompanying the equipment, with regard to -

- (i) information on address, e-mail address, toll-free telephone numbers or helpline numbers and web site;
- (ii) information on hazardous constituents as specified in sub-rule 1 of rule 16 in electrical and electronic equipment;
- (iii) information on hazards of improper handling, disposal, accidental breakage, damage or improper recycling of e-waste;
- (iv) instructions for handling and disposal of the equipment after its use, along with the Do's and Don'ts;
- (v) affixing a visible, legible and indelible symbol given below on the products or product user documentation to prevent e-waste from being dropped in garbage bins containing waste destined for disposal;



- (vi) means and mechanism available for their consumers to return e-waste for recycling including the details of Deposit Refund Scheme, if applicable;
 - (g) the producer shall opt to implement Extended Producer Responsibility individually or collectively. In individual producer responsibility, producer may set up his own collection centre or implement take back system or both to meet Extended Producer Responsibility. In collective system, producers may tie-up as a member with a Producer Responsibility Organisation or with e-waste exchange or both. It shall be mandatory upon on the individual producer in every case to seek Extended Producer Responsibility - Authorisation from Central Pollution Control Board in accordance with the Form-1 and the procedure laid down in sub-rule (1) of rule 13;
- (2) to provide information on the implementation of Deposit Refund Scheme to ensure collection of end-of-life products and their channelisation to authorised dismantlers or recyclers, if such scheme is included in the Extended Producer Responsibility Plan.
 Provided that the producer shall refund the deposit amount that has been taken from the consumer or bulk consumer at the time of sale, along with interest at the prevalent rate for the period of the deposit at the time of take back of the end-of-life product;
- (3) the import of electrical and electronic equipment shall be allowed only to producers having Extended Producer Responsibility authorisation;
- (4) maintaining records in Form-2 of the e-waste handled and make such records available for scrutiny by the Central Pollution Control Board or the concerned State Pollution Control Board;
- (5) filing annual returns in Form-3, to the Central Pollution Control Board on or before the 30th day of June following the financial year to which that return relates. In case of the Producer with multiple offices in a State, one annual return combining information from all the offices shall be filed;

- (6) the Producer shall apply to the Central Pollution Control Board for authorisation in Form 1, which shall thereafter grant the Extended Producer Responsibility - Authorisation in Form 1(aa).
- (7) Operation without Extended Producer Responsibility-Authorisation by any producer, as defined in this rule, shall be considered as causing damage to the environment.

6. Responsibilities of collection centres. - (1) collect e-waste on behalf of producer or dismantler or recycler or refurbisher including those arising from orphaned products;

Provided the collection centres established by producer can also collect e-waste on behalf of dismantler, refurbisher and recycler including those arising from orphaned products

- (2) ensure that the facilities are in accordance with the standards or guidelines issued by Central Pollution Control Board from time to time;
- (3) ensure that the e-waste collected by them is stored in a secured manner till it is sent to authorised dismantler or recycler as the case may be;
- (4) ensure that no damage is caused to the environment during storage and transportation of e-waste;
- (5) maintain records in Form-2 of the e-waste handled as per the guidelines of Central Pollution Control Board and make such records available for scrutiny by the Central Pollution Control Board or the concerned State Pollution Control Board as and when asked for.

7. Responsibilities of dealers. - (1) in the case the dealer has been given the responsibility of collection on behalf of the producer, the dealer shall collect the e-waste by providing the consumer a box, bin or a demarcated area to deposit e-waste, or through take back system and send the e-waste so collected to collection centre or dismantler or recycler as designated by producer;

- (2) the dealer or retailer or e-retailer shall refund the amount as per take back system or Deposit Refund Scheme of the producer to the depositor of e-waste;
- (3) every dealer shall ensure that the e-waste thus generated is safely transported to authorised dismantlers or recyclers;
- (4) ensure that no damage is caused to the environment during storage and transportation of e-waste.

8. Responsibilities of the refurbisher. - (1) collect e-waste generated during the process of refurbishing and channelise the waste to authorised dismantler or recycler through its collection centre;

- (2) make an application in Form 1(a) in accordance with the procedure laid down in sub-rule (4) of rule 13 to the concerned State Pollution Control Board for grant of one time authorisation;

(a) the concerned State Pollution Control Board shall authorise the Refurbisher on one time basis as per Form 1(b) and authorisation would be deemed to be considered if not objected to within a period of thirty days;

- (b) the authorised Refurbisher shall be required to submit details of e-waste generated to the concerned State Pollution Control Board on yearly basis;
- (3) ensure that no damage is caused to the environment during storage and transportation of e-waste;
- (4) ensure that the refurbishing process do not have any adverse effect on the health and the environment;

- (5) ensure that the e-waste thus generated is safely transported to authorised collection centres or dismantlers or recyclers;
- (6) file annual returns in Form-3 to the concerned State Pollution Control Board, on or before the 30th day of June following the financial year to which that return relates;
- (7) maintain records of the e-waste handled in Form-2 and such records should be available for scrutiny by the appropriate authority.

- 9. Responsibilities of consumer or bulk consumer.** – (1) consumers or bulk consumers of electrical and electronic equipment listed in Schedule I shall ensure that e-waste generated by them is channelised through collection centre or dealer of authorised producer or dismantler or recycler or through the designated take back service provider of the producer to authorised dismantler or recycler;
- (2) bulk consumers of electrical and electronic equipment listed in Schedule I shall maintain records of e-waste generated by them in Form-2 and make such records available for scrutiny by the concerned State Pollution Control Board;
 - (3) consumers or bulk consumers of electrical and electronic equipment listed in Schedule I shall ensure that such end-of-life electrical and electronic equipment are not admixed with e-waste containing radioactive material as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made there under;
 - (4) bulk consumers of electrical and electronic equipment listed in Schedule I shall file annual returns in Form-3, to the concerned State Pollution Control Board on or before the 30th day of June following the financial year to which that return relates. In case of the bulk consumer with multiple offices in a State, one annual return combining information from all the offices shall be filed to the concerned State Pollution Control Board on or before the 30th day of June following the financial year to which that return relates

- 10. Responsibilities of the dismantler.** - (1) ensure that the facility and dismantling processes are in accordance with the standards or guidelines prescribed by Central Pollution Control Board from time to time;
- (2) obtain authorisation from the concerned State Pollution Control Board in accordance with the procedure under sub-rule (3) of rule 13;
 - (3) ensure that no damage is caused to the environment during storage and transportation of e-waste;
 - (4) ensure that the dismantling processes do not have any adverse effect on the health and the environment;
 - (5) ensure that dismantled e-waste are segregated and sent to the authorised recycling facilities for recovery of materials;
 - (6) ensure that non-recyclable or non-recoverable components are sent to authorised treatment storage and disposal facilities;
 - (7) maintain record of e-waste collected, dismantled and sent to authorised recycler in Form-2 and make such record available for scrutiny by the Central Pollution Control Board or the concerned State Pollution Control Board;
 - (8) file a return in Form-3, to the concerned State Pollution Control Board as the case may be, on or before 30th day of June following the financial year to which that return relates;
 - (9) not process any e-waste for recovery or refining of materials, unless he is authorised with concerned State Pollution Control Board as a recycler for refining and recovery of materials;
 - (10) operation without Authorisation by any dismantler, as defined in this rule, shall be considered as causing damage to the environment.

- 11. Responsibilities of the recycler.** – (1) shall ensure that the facility and recycling processes are in accordance with the standards or guidelines prescribed by the Central Pollution Control Board from time to time;
- (2) obtain authorisation from concerned State Pollution Control Board in accordance with the procedure under the sub-rule (3) of rule 13;
 - (3) ensure that no damage is caused to the environment during storage and transportation of e-waste;
 - (4) ensure that the recycling processes do not have any adverse effect on the health and the environment;
 - (5) make available all records to the Central Pollution Control Board or the concerned State Pollution Control Board for inspection;
 - (6) ensure that the fractions or material not recycled in its facility is sent to the respective authorised recyclers;
 - (7) ensure that residue generated during recycling process is disposed of in an authorised treatment storage disposal facility;
 - (8) maintain record of e-waste collected, dismantled, recycled and sent to authorised recycler in Form-2 and make such record available for scrutiny by the Central Pollution Control Board or the concerned State Pollution Control Board;
 - (9) file annual returns in Form-3, to the concerned State Pollution Control Board as the case may be, on or before 30th day of June following the financial year to which that return relates;
 - (10) may accept waste electrical and electronic equipment or components not listed in Schedule I for recycling provided that they do not contain any radioactive material and same shall be indicated while taking the authorisation from concerned State Pollution Control Board;
 - (11) operation without Authorisation by any recycler, as defined in this rule, shall be considered as causing damage to the environment.

12. Responsibilities of State Government for environmentally sound management of E-waste. – (1) Department of Industry in State or any other government agency authorised in this regard by the State Government, to ensure earmarking or allocation of industrial space or shed for e-waste dismantling and recycling in the existing and upcoming industrial park, estate and industrial clusters;

- (2) Department of Labour in the State or any other government agency authorised in this regard by the State Government shall:
- a. ensure recognition and registration of workers involved in dismantling and recycling;
 - b. assist formation of groups of such workers to facilitate setting up dismantling facilities;
 - c. undertake industrial skill development activities for the workers involved in dismantling and recycling;
 - d. undertake annual monitoring and report on safety & health of workers involved in dismantling and recycling;

(3) State Government to prepare integrated plan for effective implementation of these provisions, and to submit annual report to Ministry of Environment, Forest and Climate Change.

CHAPTER III

PROCEDURE FOR SEEKING AND GRANT OF AUTHORISATION FOR MANAGEMENT OF E-WASTE

13. Procedure for Seeking and Grant of Authorisation. -

- (1) **Extended Producer Responsibility - Authorisation of Producers.** – (i) every producer of electrical and electronic equipment listed in Schedule I, shall make an application for Extended Producer Responsibility - Authorisation within a period of ninety days starting from the date of these rules coming into force in Form-1 to Central Pollution Control Board;
- (ii) on receipt of the application complete in all respects, the Central Pollution Control Board will carry out evaluation of the Extended Producer Responsibility Plan and on being satisfied that the producer has detailed out an effective system to manage Extended Producer Responsibility in the country, shall grant Extended Producer Responsibility - Authorisation, in Form 1(aa) within a period of one hundred and twenty days. The Extended Producer Responsibility - Authorisation shall be valid for a period of five years;

This authorisation shall include among others the targeted quantity of e-waste, product code wise, to be collected during the year. The actual target for collection of e-waste for dismantling or recycling will be fixed on the basis of quantity of electrical and electronic equipment, product code wise, placed in the market in the previous years and taking into consideration the average life of the equipment. The estimated quantity of e-waste generated during the current year will be indicated by the producer and the quantity expected to be collected with the collection scheme proposed to be implemented by the producer will be indicated in the Extended Producer Responsibility plan. The Central Pollution Control Board shall fix the targets in accordance with Schedule III.

- (iii) the Central Pollution Control Board, after giving reasonable opportunity of being heard to the applicant shall refuse to grant Extended Producer Responsibility – Authorisation;
- (iv) in the event of refusal of Extended Producer Responsibility - Authorisation by the Central Pollution Control Board, the producer will forfeit his right to put any Electrical and Electronic Equipment in the market till such time the Extended Producer Responsibility - Authorisation is granted;
- (v) the Central Pollution Control Board after grant of Extended Producer Responsibility - Authorisation shall forward the Extended Producer Responsibility Plan to respective State Pollution Control Board for monitoring;
- (vi) an application for the renewal of Extended Producer Responsibility-Authorisation shall be made in Form-1 before one hundred and twenty days of its expiry to Central Pollution Control Board. The Central Pollution Control Board may renew the authorisation for a period of five years after receipt of compliance report from the concerned State Pollution Control Board which shall submit the compliance report to Central Pollution Control Board within sixty days from the date of the receipt of the application. In case of non receipt of the compliance report from the State Pollution Control Board within stipulated time period of sixty days, Central Pollution Control Board may renew the Extended Producer Responsibility-Authorisation after examining such case on merit basis, subject to no report of violation of the provisions of the Act or the rules made there under or the conditions specified in the Extended Producer Responsibility - Authorisation;

- (vii) every producer of Electrical and Electronic Equipment listed in Schedule I, shall take all steps, wherever required, to comply with the conditions specified in the Extended Producer Responsibility – Authorisation;
- (viii) the concerned State Pollution Control Board shall monitor the compliance of Extended Producer Responsibility - Authorisation, take cognizance of any non-compliance and inform Central Pollution Control Board for taking action, as necessary;
- (ix) Central Pollution Control Board shall conduct random check and if in its opinion, the holders of the Extended Producer Responsibility - Authorisation has failed to comply with any of the conditions of the authorisation or with any provisions of the Act or these rules and after giving a reasonable opportunity of being heard and after recording reasons thereof in writing cancel or suspend the Extended Producer Responsibility - Authorisation issued under these rules for such period as it considers necessary in the public interest and inform the concerned State Pollution Control Board within ten days of cancellation.
- (x) the Central Pollution Control Board shall maintain an online register of Extended Producer Responsibility - Authorisation granted with conditions imposed under these rules for environmentally sound management of e-waste, and which shall be accessible to any citizen of the country.
- (xi) The producer authorised under the provision of this rule shall maintain records in Form-2 and shall file annual returns of its activities of previous year in Form-3 to the Central Pollution Control Board on or before 30th day of June of every year;

(2) Authorisation of Manufacturer. – (i) the manufacturer generating e-waste shall obtain an authorisation from the concerned State Pollution Control Board;

- (ii) the manufacturer shall make an application for authorisation, within a period of ninety days from the date of these rules coming into force in Form 1(a) to the concerned State Pollution Control Board for grant of authorisation;
- (iii) on receipt of the application complete in all respects for the authorisation, the concerned State Pollution Control Board may, after such enquiry as it considers necessary and on being satisfied that the applicant possesses appropriate facilities, technical capabilities and equipment to handle e-waste safely, grant within a period of one hundred and twenty days an authorisation in Form 1(bb) to the applicant to carry out safe operations in the authorised place only, which shall be valid for a period of five years;
- (iv) the concerned State Pollution Control Board after giving reasonable opportunity of being heard to the applicant may refuse to grant any authorisation;
- (v) every person authorised under these rules shall maintain the record of e-waste handled by them in Form-2 and prepare and submit to the concerned State Pollution Control Board, an annual return containing the details specified in Form-3 on or before the 30th day of June following the financial year to which that return relates;
- (vi) an application for the renewal of an authorisation shall be made in Form-1(a) ~~within a period of ninety days of its expiry to the concerned State Pollution Control Board~~ may renew the authorisation for a period of five years after examining each case on merit and subject to the condition that there is no report of violation of the provisions of the Act or the rules made thereunder or the conditions specified in the authorisation;
- (vii) manufacturer shall take all steps to comply with the conditions specified in the authorisation;
- (viii) the concerned State Pollution Control Board shall maintain an online register of authorisations granted with conditions imposed under these rules for

environmentally sound management of e-waste, and which shall be accessible to any citizen of the country.

(3) Procedure for grant of authorisation to dismantler or recycler. - (i) every Dismantler or Recycler of e-waste shall make an application, within a period of one hundred and twenty days starting from the date of coming into force of these rules, in Form-4 in triplicate to the concerned State Pollution Control Board accompanied with a copy of the following documents for the grant or renewal of authorisation, namely:-

- (a) consent to establish granted by the concerned State Pollution Control Board under the Water (Prevention and Control of Pollution) Act, 1974, (25 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981(21 of 1981);
- (b) certificate of registration issued by the District Industries Centre or any other government agency authorised in this regard;
- (c) proof of installed capacity of plant and machinery issued by the District Industries Centre or any other government agency authorised in this behalf;
- (d) in case of renewal, a certificate of compliance of effluent and emission standards, treatment and disposal of hazardous wastes as applicable from the concerned State Pollution Control Board or any other agency designated for this purpose:

Provided that any person authorised or registered under the provisions of the Hazardous Wastes (Management, Handling and Transboundary Movements) Rules, 2008, and the E-waste (Management & Handling) Rules, 2011 prior to the date of coming into force of these rules shall not be required to make an application for authorisation till the period of expiry of such authorisation or registration:

- (ii) the concerned State Pollution Control Board, on being satisfied that the application is complete in all respects and that the applicant is utilising environmentally sound technologies and possess adequate technical capabilities, requisite facilities and equipment to dismantle or recycle and process e-waste in compliance to the guidelines specified by Central Pollution Control Board from time to time and through site inspection, may grant authorisation to such applicants stipulating therein necessary conditions as deemed necessary for carrying out safe operations in the authorised place only;
- (iii) the concerned State Pollution Control Board shall dispose of the application for authorisation within a period of one hundred and twenty days from the date of the receipt of such application complete in all respects;
- (iv) the authorisation granted under these rules shall be valid for a period of five years from the date of its issue and shall be accompanied with a copy of the field inspection report signed by that Board indicating the adequacy of facilities for dismantling or recycling of e-waste and compliance to the guidelines specified by Central Pollution Control Board from time to time;
- (v) the concerned State Pollution Control Board may refuse, cancel or suspend an authorisation granted under these rules, if it has reasons to believe that the authorised dismantler or recycler has failed to comply with any of the conditions of authorisation, or with any provisions of the Act or rules made thereunder, after giving an opportunity to the dismantler or recycler to be heard and after recording the reasons thereof;
- (vi) an application for the renewal of authorisation shall be made in Form - 4 before one hundred and twenty days of its expiry and the concerned State Pollution Control Board may renew the authorisation for a period of five years after

examining each case on merit and subject to the condition that there is no report of violation of the provisions of the Act or the rules made there under or the conditions specified in the authorisation;

- (vii) the Dismantler and Recycler shall maintain records of the e-waste purchased, processed in Form-2 and shall file annual returns of its activities of previous year in Form-3 to the concerned State Pollution Control Board on or before 30th day of June of every year;
- (viii) the Central Government and the Central Pollution Control Board may issue guidelines for standards of performance for dismantling and recycling processes from time to time.

(4) **Procedure for grant of authorisation to refurbisher.** – (i) every refurbisher of e-waste shall make an application, with in a period of one hundred and twenty days starting from the date of coming into force of these rules, in Form 1 (a) in triplicate to the concerned State Pollution Control Board accompanied with a copy of the following documents for the grant or renewal of authorisation, namely:-

- (a) consent to establish granted by the concerned State Pollution Control Board under the Water (Prevention and Control of Pollution) Act, 1974, (25 of 1974) and the Air (Prevention and Control of Pollution) Act, 1981 (21 of 1981);
- (b) certificate of registration issued by the District Industries Centre or any other government agency authorised in this regard;
- (c) proof of installed capacity of plant and machinery issued by the District Industries Centre or any other government agency authorised in this behalf.

(ii) the concerned State Pollution Control Board, on being satisfied that the application is complete in all respects and complies with the guidelines prescribed by Central Pollution Control Board from time to time, may grant one time authorisation in Form 1 (bb) to such applicants stipulating therein necessary conditions as deemed necessary for carrying out refurbishing activities in the authorised place only;

(iii) the concerned State Pollution Control Board shall dispose of the application for authorisation within a period of one hundred and twenty days from the date of the receipt of such application complete in all respects;

(iv) the concerned State Pollution Control Board may refuse, cancel or suspend a authorisation granted under these rules, if it has reasons to believe that the authorised refurbisher has failed to comply with any of the conditions of authorisation, or with any provisions of the Act or rules made thereunder, after giving an opportunity to the refurbisher to be heard and after recording the reasons thereof;

(v) the Refurbisher shall maintain records of the e-waste purchased and refurbished in Form-2 and shall file annual returns of its activities of previous year in Form-3 to the concerned State Pollution Control Board on or before 30th day of June of every year.

14. Power to suspend or cancel an authorisation.- (1) The State Pollution Control Board may, if in its opinion, the holder of Manufacturer or Dismantler or Recycler or Refurbisher Authorisation has failed to comply with any of the conditions of the authorisation or with any provisions of the Act or these rules and after giving a reasonable opportunity of being heard and after recording reasons thereof in writing

cancel or suspend the authorisation issued under these rules for such period as it considers necessary in the public interest and inform Central Pollution Control Board within ten days of cancellation;

(2) The Central Pollution Control Board, if in its opinion, the holders of the Extended Producer Responsibility- Authorisation has failed to comply with any of the conditions of the authorisation or with any provisions of the Act or these rules and after giving a reasonable opportunity of being heard and after recording reasons thereof in writing cancel or suspend the Extended Producer Responsibility- Authorisation issued under these rules for such period as it considers necessary in the public interest and inform State Pollution Control Boards or Pollution Control Committees within ten days of cancellation;

(3) Upon suspension or cancellation of the authorisation, the Central Pollution Control Board or State Pollution Control Board may give directions to the persons whose authorisation has been suspended or cancelled for the safe storage and management of the e-waste and such persons shall comply with such directions.

CHAPTER IV

15. Procedure for storage of e-waste. - Every manufacturer, producer, bulk consumer, collection centre, dealer, refurbisher, dismantler and recycler may store the e-waste for a period not exceeding one hundred and eighty days and shall maintain a record of collection, sale, transfer and storage of wastes and make these records available for inspection.

Provided that the concerned State Pollution Control Board may extend the said period up to three hundred and sixty five days in case the waste needs to be specifically stored for development of a process for its recycling or reuse.

CHAPTER V

REDUCTION IN THE USE OF HAZARDOUS SUBSTANCES IN THE MANUFACTURE OF ELECTRICAL AND ELECTRONIC EQUIPMENT AND THEIR COMPONENTS OR CONSUMABLES OR PARTS OR SPARES

16. Reduction in the use of hazardous substances in the manufacture of electrical and electronic equipment and their components or consumables or parts or spares. - (1) Every producer of electrical and electronic equipment and their components or consumables or parts or spares listed in Schedule I shall ensure that, new Electrical and Electronic Equipment and their components or consumables or parts or spares do not contain Lead, Mercury, Cadmium, Hexavalent Chromium, polybrominated biphenyls and polybrominated diphenyl ethers beyond a maximum concentration value of 0.1% by weight in homogenous materials for lead, mercury, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers and of 0.01% by weight in homogenous materials for cadmium.

(2) Components or consumables or parts or spares required for the electrical and electronic equipment placed in the market prior to 1st May, 2014 may be exempted from the provisions of sub-rule (1) of rule 16 provided Reduction of Hazardous Substances compliant parts and spares are not available.

(3) The applications listed in Schedule II shall be exempted from provisions of sub-rule (1) of rule 16.

- (4) Every producer of applications listed in Schedule II shall ensure that the limits of hazardous substances as given in Schedule II are to be complied.
- (5) Every producer shall provide the detailed information on the constituents of the equipment and their components or consumables or parts or spares alongwith a declaration of conformance to the Reduction of Hazardous Substances provisions in the product user documentation.
- (6) Imports or placement in the market for new electrical and electronic equipment shall be permitted only for those which are compliant to provisions of sub-rule (1) and sub rule (4) of rule 16.
- (7) Manufacture and supply of electrical and electronic equipment used for defence and other similar strategic applications shall be excluded from provisions of sub-rule (1) of rule 16.
- (8) Every producer while seeking Extended Producer Responsibility - Authorisation will provide information on the compliance of the provisions of sub-rule (1) of rule 16. This information shall be in terms of self-declaration.
- (9) Central Pollution Control Board shall conduct random sampling of electrical and electronic equipment placed on the market to monitor and verify the compliance of Reduction of Hazardous Substances provisions and the cost for sample and testing shall be borne by the Producer. The random sampling shall be as per the guidelines of Central Pollution Control Board.
- (10) If the product does not comply with Reduction of Hazardous Substances provisions, the Producers shall take corrective measures to bring the product into compliance and withdraw or recall the product from the market, within a reasonable period as per the guidelines of the Central Pollution Control Board.
- (11) Central Pollution Control Board shall publish the methods for sampling and analysis of Hazardous Substances as listed in sub-rule(1) of rule 16 with respect to the items listed in Schedule I and II and also enlist the labs for this purpose.

CHAPTER VI

MISCELLANEOUS

17. Duties of authorities. - Subject to other provisions of these rules, the authorities shall perform duties as specified in Schedule IV.

18. Annual Report. - (1) The concerned State Pollution Control Board shall prepare and submit to the Central Pollution Control Board an annual report with regard to the implementation of these rules by the 30th day of September every year in Form-5.

(2) The Central Pollution Control Board shall prepare the consolidated annual review report on management of e-waste and forward it to the Central Government along with its recommendations before the 30th day of December every year.

19. Transportation of e-waste. -The transportation of e-waste shall be carried out as per the manifest system whereby the transporter shall be required to carry a document (three copies) prepared by the sender, giving the details as per Form-6:

Provided that the transportation of waste generated from manufacturing or recycling destined for final disposal to a treatment, storage and disposal facility shall follow the provisions under Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.

20. Accident reporting.- Where an accident occurs at the facility processing e-waste or during transportation of e-waste, the producer, refurbisher, transporter, dismantler, or recycler, as the case may be, shall report immediately to the concerned State Pollution Control Board about the accident through telephone and e-mail.

21. Liability of manufacturer, producer, importer, transporter, refurbisher, dismantler and recycler.- (1) The manufacturer, producer, importer, transporter, refurbisher, dismantler and recycler shall be liable for all damages caused to the environment or third party due to improper handling and management of the e-waste;

(2) The manufacturer, producer, importer, transporter, refurbisher, dismantler and recycler shall be liable to pay financial penalties as levied for any violation of the provisions under these rules by the State Pollution Control Board with the prior approval of the Central Pollution Control Board.

22. Appeal.- (1) Any person aggrieved by an order of suspension or cancellation or refusal of authorisation or its renewal passed by the Central Pollution Control Board or State Pollution Control Board may, within a period of thirty days from the date on which the order is communicated to him, prefer a appeal in Form 7 to the Appellate Authority comprising of the Environment Secretary of the State.

(2) The Appellate Authority may entertain the appeal after expiry of the said period of thirty days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

(3) Every appeal filed under this rule shall be disposed of within a period of sixty days from the date of its filing.

23. The collection, storage, transportation, segregation, refurbishment, dismantling, recycling and disposal of e-waste shall be in accordance with the procedures prescribed in the guidelines published by the Central Pollution Control Board from time to time. Implementation of e-waste (Management and Handling) Amendment Rules, 2011 shall be in accordance with the guidelines prescribed by the Central Pollution Control Board from time to time.

24. Urban Local Bodies (Municipal Committee or Council or Corporation) shall ensure that e-waste pertaining to orphan products is collected and channelised to authorised dismantler or recycler.

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SCHEDULE I

[See rules 2, 3(j), 3(y), 3(aa) and 3(ff); 5; 9; 11(10); 13 (1) (i), 13 (1) (vii) and 16(1), 16(11)]

Categories of electrical and electronic equipment including their components, consumables, parts and spares covered under the rules

Sr. No.	Categories of electrical and electronic equipment	Electrical and electronic equipment code
i.	Information technology and telecommunication equipment :	
	Centralised data processing: Mainframes, Minicomputers	ITEW1
	Personal Computing: Personal Computers (Central Processing Unit with input and output devices)	ITEW2
	Personal Computing: Laptop Computers(Central Processing Unit with input and output devices)	ITEW3
	Personal Computing: Notebook Computers	ITEW4
	Personal Computing: Notepad Computers	ITEW5
	Printers including cartridges	ITEW6
	Copying equipment	ITEW7
	Electrical and electronic typewriters	ITEW8
	User terminals and systems	ITEW9
	Facsimile	ITEW10
	Telex	ITEW11
	Telephones	ITEW12
	Pay telephones	ITEW13
	Cordless telephones	ITEW14
	Cellular telephones	ITEW15
Answering systems	ITEW16	
ii.	Consumer electrical and electronics:	
	Television sets (including sets based on (Liquid Crystal Display and Light Emitting Diode technology)	CEEW1
	Refrigerator	CEEW2
	Washing Machine	CEEW3
	Air-conditioners excluding centralised air conditioning plants	CEEW4
	Fluorescent and Mercury containing lamps	CEEW5

SCHEDULE II

[See rules 16 (3), 16 (4) and 16 (11)]

Applications, which are exempted from the requirements of sub-rule (1) of rule 16	
	Substance
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):
1(a)	For general lighting purposes <30 W : 2.5 mg
1(b)	For general lighting purposes ≥ 30 W and <50 W : 3.5mg
1(c)	For general lighting purposes ≥ 50 W and <150 W : 5mg
1(d)	For general lighting purposes ≥ 150 W : 15 mg
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm : 7mg
1(f)	For special purposes:5 mg
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):
2(a)(1)	Tri-band phosphor with normal life time and a tube diameter < 9mm (e.g. T2): 4mg
2(a)(2)	Tri-band phosphor with normal life time and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5): 3 mg
2(a)(3)	Tri- band phosphor with normal life time and a tube diameter >17 mm and ≤ 28 mm(e.g. T8): 3.5 mg
2(a)(4)	Tri-band phosphor with normal life time and a tube diameter >28 mm (e.g. T12):3.5 mg
2(a)(5)	Tri-band phosphor with long life time (≥ 25000 h):5mg
2(b)	Mercury in other fluorescent lamps not exceeding(per lamp):
2(b)(1)	Linear halophosphate lamps with tube >28 mm (e.g. T 10 and T12):10 mg
2(b)(2)	Non-linear halophosphate lamps(all diameters):15mg
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter >17 mm(e.g.T9): 15 mg
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps):15mg
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL)for special purposes not exceeding (per lamp):
3(b)	Medium length(>500 mm and ≤ 1500 mm): 5mg
3(c)	Long length(>1500 mm): 13mg
4(a)	Mercury in other low pressure discharge lamps (per lamp): 15mg
4(b)	Mercury in High Pressure Sodium(vapour) lamps for general lighting purposes not exceeding (per burner)in lamps with improved colour rendering index $R_a > 60$:

4(b)-I	P ≤155 W : 30 mg
4(b)-II	155 W < P ≤405 W : 40 mg
4(b)-III	P >405 W: 40 mg
4(c)	Mercury in other High Pressure Sodium(vapour)lamps for general lighting purposes not exceeding (per burner):
4(c)-I	P≤155 W:25mg
4(c)-II	155 W < P ≤ 405 W:30 mg
4(c)-III	P >405 W:40 mg
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)
4(e)	Mercury in metal halide lamps (MH)
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Schedule
5(a)	Lead in glass of cathode ray tubes
5(b)	Lead in glass of fluorescent tubes not exceeding 0.2% by weight
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight
6(b)	Lead as an alloying element in aluminium containing up to 0.4% lead by weight
6(c)	Copper alloy containing up to 4% lead by weight
7(a)	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher
7(c)-III	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC
8(b)	Cadmium and its compounds in electrical contracts
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in the cooling solution
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) application.

11(a)	Lead used in C-press compliant pin connector systems
11(b)	Lead used in other than C-press compliant pin connector systems
12	Lead as a coating material for the thermal conduction module C- ring
13(a)	Lead in white glasses used for optical applications
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards.
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages.
16	Lead in linear incandescent lamps with silicate coated tubes
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications.
18(a)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as specialty lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr, Ba) ₂ Mg Si ₂ O ₇ :Pb)
18(b)	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (Ba Si ₂ O ₅ :Pb)
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65 mm and less
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring.
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers
29	Lead bound in crystal glass

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30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB(A) and more
31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes
33	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers
34	Lead in cermet-based trimmer potentiometer elements
36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide
39	Cadmium in colour converting II-VI LEDs (<10 µg Cd per mm ² of light-emitting area) for use in solid state illumination or display systems.

SCHEDULE III

[See rules 5 (1) (a) and 13 (1) (ii)]

Targets for Extended Producer Responsibility - Authorisation

No.	Year	E-Waste Collection Target (Number/Weight)
(i)	During first two year of implementation of rules	30% of the quantity of waste generation as indicated in Extended Producer Responsibility Plan.
(ii)	During third and fourth years of implementation of rules	40% of the quantity of waste generation as indicated in Extended Producer Responsibility Plan.
(iii)	During Fifth and Sixth years of implementation of rules	50% of the quantity of waste generation as indicated in Extended Producer Responsibility Plan.
(iv)	Seventh year onward of implementation of rules	70% of the quantity of waste generation as indicated in Extended Producer Responsibility Plan.

SCHEDULE IV

[See rule (17)]

LIST OF AUTHORITIES AND CORRESPONDING DUTIES

Sr. No	AUTHORITY	CORRESPONDING DUTIES
1.	Central Pollution Control Board, Delhi	<ul style="list-style-type: none"> (i) Grant and Renewal of Extended Producer Responsibility - Authorisation and monitoring of its compliance. (ii) Maintain information on Extended Producer Responsibility - Authorisation on its web site. (iii) Set and revise targets for collection of e-waste from time to time. (iv) Coordination with State Pollution Control Boards (v) Preparation of Guidelines for Environmentally Sound Management of e-waste. (vi) Conduct random check for ascertaining compliance of the e-waste rules and identification of such importers or producers who have not applied for Extended Producer Responsibility authorisation or are not complying with RoHS provision. Wherever necessary, Central Pollution Control Board will seek the help of customs department or any other agency of the Government of India. (vii) Conduct random inspection of dismantler or recycler or refurbisher. (viii) Documentation, compilation of data on e-waste and uploading on websites of Central Pollution Control Board (ix) Actions against violation of these rules. (x) Conducting training programmes. (xi) Submit Annual Report to the Ministry. (xii) Enforcement of provisions regarding reduction in use of hazardous substances in manufacture of electrical and electronic equipment. (xiii) Interaction with IT industry for reducing hazardous substances. (xiv) Set and revise targets for compliance to the reduction in use of hazardous substance in manufacture of electrical and electronic equipment from time to time. (xv) Any other function delegated by the Ministry under these rules from time to time.
2.	State Pollution Control Boards or Committees of Union territories	<ul style="list-style-type: none"> (i) Inventorisation of e-waste. (ii) Grant and renewal of authorisation to manufacturers, dismantlers, recyclers and refurbishers. (iii) Monitoring and compliance of Extended Producer Responsibility - Authorisation as directed by Central Pollution Control Board and that of dismantlers, recyclers and refurbishers authorisation. (iv) Conduct random inspection of dismantler or recycler or refurbisher. (v) Maintain online information regarding authorisation granted to manufacturers, dismantlers, recyclers and refurbishers.

Sr. No	AUTHORITY	CORRESPONDING DUTIES
		(vi) Implementation of programmes to encourage environmentally sound recycling. (vii) Action against violations of these rules. (viii) Any other function delegated by the Ministry under these rules.
3.	Urban Local Bodies (Municipal Committee or Council or Corporation)	(i) To ensure that e-waste if found to be mixed with Municipal Solid Waste is properly segregated, collected and is channelised to authorised dismantler or recycler. (ii) To ensure that e-waste pertaining to orphan products is collected and channelised to authorised dismantler or recycler.
4.	Port authority under Indian Ports Act, 1908 (15 of 1908) and Customs Authority under the Customs Act, 1962 (52 of 1962)	(i) Verify the Extended Producer Responsibility - Authorisation. (ii) Inform Central Pollution Control Board of any illegal traffic for necessary action. (iii) Take action against importer for violations under the Indian Ports Act, 1908/Customs Act, 1962.

FORM-1

[See Rules 5(1) (g), 13(1) (i), 13(1) (vi)]

**Applicable to producers seeking Extended Producer Responsibility -
Authorisation**

The application form should contain the following information:

1.	Name and full address along with telephone numbers, e-mail and other contact details of Producer (It should be the place from where sale in entire country is being managed)	:	
2.	Name of the Authorised Person and full address with e-mail, telephone and fax number	:	
3.	Name, address and contact details of Producer Responsibility Organisation, if any with full address, e-mail, telephone and fax number, if engaged for implementing the Extended Producer Responsibility	:	
4.	Details of electrical and electronic equipment placed on market year-wise during previous 10 years in the form of Table 1 as given below:	:	

Table 1: Details of Electrical and Electronic Equipment placed on the market in previous years - Code wise

Sr. No.	Electrical and Electronic Equipment Item	Electrical and Electronic Equipment Code	Quantity, number and weight placed on market (year-wise)									
A	Information technology and telecommunication equipment:											
1	Centralised data processing: Mainframes, Minicomputers	ITEW1										
2	Personal Computing: Personal Computers (Central Processing Unit with input and output devices)	ITEW2										
3	Personal Computing: Laptop Computers(Central Processing Unit with input and	ITEW3										

	output devices)																			
4	Personal Computing: Notebook Computers	ITEW4																		
5	Personal Computing: Notepad Computers	ITEW5																		
6	Printers including cartridges	ITEW6																		
7	Copying equipment	ITEW7																		
8	Electrical and electronic typewriters	ITEW8																		
9	User terminals and systems	ITEW9																		
10	Facsimile	ITEW10																		
11	Telex	ITEW11																		
12	Telephones	ITEW12																		
13	Pay telephones	ITEW13																		
14	Cordless telephones	ITEW14																		
15	Cellular telephones	ITEW15																		
16	Answering systems	ITEW16																		
B	Consumer electrical and electronics:																			
17	Television sets (including sets based on (Liquid Crystal Display and Light Emitting Diode technology)	CEEW1																		
18	Refrigerator	CEEW2																		
19	Washing Machine	CEEW3																		
20	Air-conditioners excluding centralised air conditioning plants	CEEW4																		
21	Fluorescent and other Mercury containing lamps	CEEW5																		

- 5. Estimated generation of Electrical and Electronic Equipment waste item-wise and estimated collection target for the forthcoming year in the form of Table 2 including those being generated from their service centres, as given below:

Table 2: Estimated generation of Electrical and Electronic Equipment waste item-wise and estimated collection target for the forthcoming year

Sr. No.	Item	Estimated electrical and electronic equipment generation	Targeted collection
		Number and weight	Number and weight

- 6. Extended Producer Responsibility Plans:

(a) Please provide details of your overall scheme to fulfil Extended Producer Responsibility obligations including targets. This should comprise of general scheme of collection of used/waste Electrical and Electronic Equipment from the Electrical and Electronic Equipment placed on the market earlier such as through dealers and collection centres, Producer Responsibility Organisation, through buy-back arrangement, exchange scheme, Deposit Refund Scheme, etc. whether directly or through any authorised agency and channelising the items so collected to authorised recyclers.

(b) Provide the list with addresses along with agreement copies with dealers, collection centres, recyclers, Treatment, Storage and Disposal Facility, etc. under your scheme.

- 7. Estimated budget for Extended Producer Responsibility and allied initiatives to create consumer awareness.

- 8. Details of proposed awareness programmes.

- 9. Details for Reduction of Hazardous Substances compliance (to be filled if applicable):

(a) Whether the Electrical and Electronic Equipment placed on market complies with the rule 16 (1) limits with respect to lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers;

(b) Provide the technical documents, supplier declarations, Material declarations/Analytical reports) as evidence that the Reduction of Hazardous Substances (RoHS) provisions are complied by the product based on standard EN 50581 of EU;

- (c) Documents required:

- i. Extended Producer Responsibility plan;
- ii. Copy of the permission from the relevant Ministry/Department for selling their product;

- iii. Copies of agreement with dealers, collection centre, recyclers, Treatment, Storage and Disposal Facility, etc.;
- iv. Copy of Directorate General of Foreign Trade license/permission as applicable;
- v. Self-declaration regarding Reduction of Hazardous Substances provision;
- vi. Any other document as required.

(Authorised signature)

Place: _____

Date: _____

FORM 1(a)

[See rules 4(2), 8 (2), 13(2) (ii), 13(2) (vi) and 13(4) (i)]

APPLICATION FOR OBTAINING AUTHORISATION FOR GENERATION OR STORAGE OR TREATMENT OR DISPOSAL OF E-WASTE BY MANUFACTURER OR REFURBISHER*

From:

To

The Member Secretary,
..... Pollution Control Board or..... Pollution Control Committee
.....
.....

Sir,

I / We hereby apply for authorisation/renewal of authorisation under rule 13(2) (i) to 13(2) (viii) and/or 13 (4) (i) of the E-Waste (Management) Rules, 2016 for collection/storage/ transportation/ treatment/ refurbishing/disposal of e-wastes.

For Office Use Only

Code No. :

Whether the unit is situated in a critically polluted area as identified by Ministry of Environment and Forests (yes/no);

To be filled in by Applicant

- 1. Name and full address:
2. Contact Person with designation and contact details such as telephone Nos, Fax No. and E-mail:

- 3. Authorisation required for (Please tick mark appropriate activity/ies*)
(i) Generation during manufacturing or refurbishing*
(ii) Treatment, if any
(iii) Collection, Transportation, Storage
(iv) Refurbishing

- 4. E-waste details:
(a) Total quantity e-waste generated in MT/A
(b) Quantity refurbished (applicable to refurbisher)
(c) Quantity sent for recycling
(d) Quantity sent for disposal

5. Details of Facilities for storage/handling/treatment/refurbishing:

6. In case of renewal of authorisation previous authorisation no. and date and details of annual returns:

Place : _____

Signature _____

Date : _____

(Name _____)

Designation: _____

Note:-

(1) * The authorisation for e-waste may be obtained along with authorisation for hazardous waste under the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, if applicable.

(2) Wherever necessary, use additional sheets to give requisite and necessary details.

FORM 1 (aa)
[See rules 5 (6) and 13(1)(ii)]

FORMAT OF EXTENDED PRODUCER RESPONSIBILITY - AUTHORISATION

[Extended Producer Responsibility Authorisation for Producer of the Electrical & Electronic Equipment]

Ref: Your application for Grant of Extended Producer Responsibility - Authorisation for following Electrical & Electronic Equipment under E-Waste (Management) Rules, 2016

1. Number of Authorisation:

Date:

2. M/s. ----- is hereby granted Extended Producer Responsibility - Authorisation based on:

- (a) overall Extended Producer Responsibility plan
- (b) proposed target for collection of e-waste

3. The Authorisation shall be valid for a period of ___ years from date of issue with following conditions:

(i) you shall strictly follow the approved Extended Producer Responsibility plan, a copy of which is enclosed herewith;

~~(ii) you shall ensure that collection mechanism or centre are set up or designated as per the details given in the Extended Producer Responsibility plan. Information on collection mechanism/centre including the state-wise setup should be provided;~~

(iii) you shall ensure that all the collected e-waste is channelised to authorised dismantler or recycler designated as per the details. Information on authorised dismantler or recycler designated state-wise should be provided;

(iv) you shall maintain records, in Form-2 of these Rules, of e-waste and make such records available for scrutiny by Central Pollution Control Board;

(v) you shall file annual returns in Form-3 to the Central Pollution Control Board on or before 30th day of June following the financial year to which that returns relates;

(vi) General Terms & Conditions of the Authorisation:

~~The authorisation shall comply with the provisions of the Environment (Protection) Act, 1986 and the Rules made there under;~~

b. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the Central Pollution Control Board;

c. Any change in the approved Extended Producer Responsibility plan should be informed to Central Pollution Control Board on which decision

shall be communicated by Central Pollution Control Board within sixty days;

- d. It is the duty of the authorised person to take prior permission of the concerned State Pollution Control Boards and Central Pollution Control Board to close down the facility;
- e. An application for the renewal of authorisation shall be made as laid down in sub-rule (vi) of rule of 13(1) the E-Waste (Management) Rules, 2016;
- f. The Board reserves right to cancel/amend/revoke the authorisation at any time as per the Policy of the Board or Government.

**Authorized signatory
(with designation)**

**To,
Concerned Producer**

Copy to:

1. Member Secretary, Concerned State.
2. In-charge, concerned Zonal Office, Central Pollution Control Board.

FORM 1(bb)
[See rules 4(2), 8(2)(a), 13(2) (iii) and 13(4)(ii)]

FORMAT FOR GRANTING AUTHORISATION FOR GENERATION OR STORAGE
OR TREATMENT OR REFURBISHING OR DISPOSAL OF E-WASTE BY
MANUFACTURER OR REFURBISHER

Ref: Your application for Grant of Authorisation

1. (a) Authorisation no. and (b) date of issue
2. of is hereby granted an authorisation for generation, storage, treatment, disposal of e-waste on the premises situated at for the following:
 - a. quantity of e-waste;
 - b. nature of e-waste.
3. The authorisation shall be valid for a period from to
4. The e-waste mentioned above shall be treated/ disposed off in a manner at
5. The authorisation is subject to the conditions stated below and such conditions as may be specified in the rules for the time being in force under the Environment (Protection) Act, 1986.

Signature _____
Designation _____

Date: _____

Terms and conditions of authorisation

1. The authorisation shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made thereunder.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorized by the concerned State Pollution Control Board.
3. Any unauthorised change in personnel, equipment as working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorisation.
4. It is the duty of the authorised person to take prior permission of the concerned State Pollution Control Board to close down the operations.
5. An application for the renewal of an authorisation shall be made as laid down in sub-rule (vi) of rule 13(2).

FORM-2

[See rules 4(4), 5(4), 6(5), 8(7), 9(2), 10(7), 11(8), 13 (1) (xi), 13(2)(v), 13(3)(vii) and 13 (4)(v)]

FORM FOR MAINTAINING RECORDS OF E-WASTE HANDLED OR GENERATED

Generated Quantity in Metric Tonnes (MT) per year

1.	Name & Address: Producer or Manufacturer or Refurbisher or Dismantler or Recycler or Bulk Consumer*	
2.	Date of Issue of Extended Producer Responsibility Authorisation*/ Authorisation*	
3.	Validity of Extended Producer Responsibility Authorisation*/ Authorisation*	
4.	Types & Quantity of e- waste handled or generated**	Category
		Quantity
5.	Types & Quantity of e-waste stored	Category
		Quantity
6.	Types & Quantity of e-waste sent to collection centre authorised by producer/ dismantler/recycler / refurbisher or authorised dismantler/recycler or refurbisher**	Category
		Quantity
7.	Types & Quantity of e-waste transported*	Category
		Quantity
8.	Types & Quantity of e-waste refurbished*	Category
		Quantity
9.	Types & Quantity of e-waste dismantled*	Category
		Quantity

10.	Types & Quantity of e-waste recycled*	Category	Quantity
	Types & Quantity of materials recovered	Item Description	
		Quantity	
Name, address and contact details of the destination			
11.	Types & Quantity of e-waste sent to recyclers by dismantlers	Category	Quantity
		Item Description	
	Name, address and contact details of the destination		
12.	Types & Quantity of other waste sent to respective recyclers by dismantlers/recyclers of e-waste	Category	Quantity
		Item Description	
	Name, address and contact details of the destination		
13.	Types & Quantity of e-waste treated & disposed	Category	Quantity
		Item Description	
	Name, address and contact details of the destination		

Note:-

- (1) * Strike off whichever is not applicable
- (2) Provide any other information as stipulated in the conditions to the authoriser
- (3) ** For producers this information has to be provided state-wise

FORM-3

[See rules 4(5), 5(5), 8(6), 9(4), 10(8), 11(9), 13 (1) (xi), 13(2)(v), 13(3)(vii) and 13(4)(v)]

FORM FOR FILING ANNUAL RETURNS

[To be submitted by producer or manufacturer or refurbisher or dismantler or recycler by 30th day of June following the financial year to which that return relates].

Quantity in Metric Tonnes (MT) and numbers

1	Name and address of the producer or manufacturer or refurbisher or dismantler or recycler			
2	Name of the authorised person and complete address with telephone and fax numbers and e-mail address			
3	Total quantity of e-waste collected or channelised to recyclers or dismantlers for processing during the year for each category of electrical and electronic equipment listed in the Schedule I (Attach list) by PRODUCERS			
	Details of the above	TYPE	QUANTITY	No.
3(A)*	BULK CONSUMERS: Quantity of e-waste			
3(B)*	REFURBISHERS: Quantity of e-waste:			
3(C)*	DISMANTLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials or components recovered and sold; iii. Quantity of e-waste sent to recycler; iv. Residual quantity of e-waste sent to Treatment, Storage and Disposal Facility.			
3(D)*	RECYCLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials recovered and sold in the market; iii. Details of residue sent to Treatment, Storage and Disposal Facility.			
4	Name and full address of the destination with respect to 3(A)-3(D) above			
5	Type and quantity of materials segregated or recovered from e-waste of different codes as applicable to 3(A)-3(D)	Type	Quantity	

✓ Enclose the list of recyclers to whom e-waste have been sent for recycling.

Place _____

Date _____

Signature of the authorised person

Note:-

- (1) * Strike off whichever is not applicable
- (2) Provide any other information as stipulated in the conditions to the authoriser
- (3) In case filing on behalf of multiple regional offices, Bulk Consumers and Producers need to add extra rows to 1 & 3(A) with respect to each office.

FORM-4

[See rules 13(3)(i) and 13(3)(vi)]

APPLICATION FORM FOR AUTHORISATION OF FACILITIES POSSESSING ENVIRONMENTALLY SOUND MANAGEMENT PRACTICE FOR DISMANTLING OR RECYCLING OF E-WASTE

(To be submitted in triplicate)

1.	Name and Address of the unit													
2.	Contact person with designation, Tel./Fax													
3.	Date of Commissioning													
4.	No. of workers (including contract labour)													
5.	Consents Validity	a. Water (Prevention and Control of Pollution) Act, 1974; Valid up to _____ b. Air (Prevention and Control of Pollution) Act, 1981; Valid up to _____												
6.	Validity of current authorisation if any	e-waste (Management & Handling) Rules, 2011; Valid up to _____												
7.	Dismantling or Recycling Process	Please attach complete details												
8.	Installed capacity in MT/year	Products Installed capacity (MTA)												
9.	E-waste processed during last three years	<table border="1"> <thead> <tr> <th>Year</th> <th>Product</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Year	Product	Quantity									
Year	Product	Quantity												
10.	Waste Management:													
	a. Waste generation in processing e-waste	Please provide details material wise												
	b. Provide details of disposal of residue.	Please provide details												
	c. Name of Treatment Storage and Disposal Facility utilized for													
11.	Details of e-waste proposed to be procured from re-processing	Please provide details												
12.	Occupational safety and health aspects	Please provide details												
13.	Details of Facilities for dismantling both manual as well as mechanised:													

14.	Copy of agreement with Collection Centre	
15.	Copy agreement with Producer	
16.	Details of storage for dismantled e-waste	
17.	Copy of agreement with Recycler	
18.	Details of Facilities for Recycling	
19.	Copy of agreement with Collection Centre	
20.	Copy agreement with Producer	
21.	Details of storage for raw materials and recovered materials	

II. In case of renewal of authorisation, previous registration or authorisation no. and date

I hereby declare that the above statements or information are true and correct to the best of my knowledge and belief.

Signature: _____

Place: _____

Name: _____

Date: _____

Designation: _____

Form-5
[See rule 18 (1)]

FORM FOR ANNUAL REPORT TO BE SUBMITTED BY THE STATE POLLUTION CONTROL BOARD TO THE CENTRAL POLLUTION CONTROL BOARD

To,

The Chairman,
Central Pollution Control Board,
(Ministry of Environment And Forests)
Government Of India, 'Parivesh Bhawan', East Arjun Nagar,
Delhi- 110 0032

1.	Number of authorised manufacturer, refurbisher, collection centre, dismantler and recycler for management of e-waste in the State or Union territory under these rules	:	
2.	Categories of waste collected along with their quantities on a monthly average basis:	:	Please attach as Annexure-I
3.	A Summary Statement code-wise of e-waste collected	:	Please attach as Annexure-II
4.	Details of material recovered from recycling of e-waste	:	
5.	Quantity of CFL received at Treatment, Storage and Disposal Facility	:	
6.	The above report is for the period from to		

Place: _____

Date: _____

Chairman or the Member Secretary
State Pollution Control Board

Form-6
[See rule 19]

E-WASTE MANIFEST

1.	Sender's name and mailing address (including Phone No.)																					
2.	Sender's authorisation No, if applicable.																					
3.	Manifest Document No.																					
4.	Transporter's name and address (including Phone No.)																					
5.	Type of vehicle	(Truck or Tanker or Special Vehicle)																				
6.	Transporter/s registration No.																					
7.	Vehicle registration No.																					
8.	Receiver's name & address :																					
9.	Receiver's authorisation No, if applicable.																					
10.	Description of E-Waste (Item, Weight/ Numbers) :																					
11.	Name and stamp of Sender* (Manufacturer or Producer or Bulk Consumer or Collection Centre or Refurbisher or Dismantler):																					
	Signature: Month Day Year	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>																				
12.	Transporter acknowledgement of receipt of E-Wastes																					
	Name and stamp: Signature: Month Day																					
	Year	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>																				
13.	Receiver* (Collection Centre or Refurbisher or Dismantler or Recycler) certification of receipt of E-waste																					
	Name and stamp: Signature: Month Day																					
	Year	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>																				

* As applicable

Note:-

Copy number with colour code	Purpose
(1)	(2)
Copy 1 (Yellow)	To be retained by the sender after taking signature on it from the transporter and other three copies will be carried by transporter.
Copy 2 (Pink)	To be retained by the receiver after signature of the transporter.
Copy 3 (Orange)	To be retained by the transporter after taking signature of the receiver.
Copy 4 (Green)	To be returned by the receiver with his/her signature to the sender

FORM 7
[See rule 22]

**APPLICATION FOR FILING APPEAL
AGAINST THE ORDER PASSED BY CENTRAL POLLUTION CONTROL
BOARD/STATE POLLUTION CONTROL BOARD**

1. Name and address of the person making the appeal :
2. Number, date of order and address of the authority : (certified copy of the
to which passed the order, against which appeal is order be attached)
3. Ground on which the appeal is being made :
4. Relief sought for :
5. List of enclosures other than the order referred :
in point 2 against which the appeal is being filed.

Signature.....

Name and address.....

Place:

Date:

Bishwanath Sinha
Joint Secretary to Government of India
(F No. 12-6/2013-HSMD)

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List of Dismantlers (66)

	District	Sl.No	Name & Address of the Dimantlers	Present Status
i)	Bengaluru	1	M/s.Eco-E-waste Recyclers India Pvt Ltd,No.41/1, 42/2, 19 & 20, 2nd Cross, Mutachari Industrial Estate, Hanumanthappa Layout, Mysore Road, Bangalore-560039	Working
		2	M/s.Green Globe Enterprise, No. 108/7, 5th Cross, Singasandra Industrial Area, Hosur Road, Bommanahalli, Bangalore-68	Working
		3	M/sPharmateck Consultancy, Sy.No. 40/1, Mangammanapalya, Bommanahalli, Bangalore-560068	Working
		4	M/s.Tech Logic, Unit-2, Shed No.36, 2nd Main, Ranganathapura, Bangalore - 560 044	Working
		5	M/s.KH E-Waste Recyclers, No. 104, 1st Main Road, 4th Cross, Azeez Sait Industrial Area, Nayandahalli, Bangalore-39	Working
		6	M/s.E-Parisara Pvt Ltd., Unit-2, No.P-10 (a),3rd stage, Peenya Industrial area, Bangalore-560 058	Working
		7	M/s.BSMR Metals, No R.O 7, KSSIDC Industrial Estate, Veerasandra II Stage, Attibele Hobli, Bangalore Urban District	Working
		8	M/s.Newtek Recyclers, No 124,Byreveshwara Industrial Estate, Andhrahalli Main Road, Peenya 2nd stage, Bangalore 560 091	Working
		9	M/s.Mak Technology Industrial, shed No SP-5, Veerasandra KSSIDC Industrial Estate, Phase 0-II, 3rd cross, Huskur Min Road, Electronic City Post, Bengaluru	Working
		10	M/s.Amara metals enterprises, No V20/1, 4th main, 2nd stage, Peenya Industrial Area, Bangalore-560058	Working
		11	M/s.SA Ewaste Recyclers., B-4, KSSIDC Indl Estate, yellapura village, Doddaballapura taluk, Bangalore	Working
		12	M/s.Elxion Pvt Ltd. P.No.24, 23rd.A main Road, J.P Nagar 2nd Phase Indl Bangalore-560078	Working
		13	Benir E store Solution Private Limited Sy. No .135/1, Shed No.2&3, Maruthi industrial area, Hoodi village K.R puram, Bangalore-560048	Working
		14	Sri sai company # R-15, Katha No.320/322/29, Chikkanagamangala, Sarjapura Hobli, Anekal Taluk, Bangalore	Working
		15	Echakra Innovations Pvt Ltd SB/47, 1st Cross, Peenya Ind Estate-Stage-1, Bangalore	Working

16	E-Cycle Solutions, 41, 7th Cross, Bahubali Nagar, Jalahalli, Begaluru-560013	Working
17	Coral Communications And Networks Private Limited, Unit-2 Plot.No.31/B- 1, KIADB Industrial Area, Hoskote Taluk, Bangalore Rural District - 562114	Working
18	FR E - Waste Enterprises Shed No. 120, Katha No 120/B, 52-120/C, 5th Cross, Azeez Saig Industrial Area, Nayandahalli, Ward No 131, BBMP RR Nagar Zone, Bangalore - 560039	Working
19	Eco Bird Recycling Company Pvt. Ltd., No. 185, Azeez Sait Industrial Area, Nayandahalli, Mysore Road, Bangalore - 39.	Working
20	Swadesh Recyclers LIP, Sy. No. 216, KIADB Industrial Area, Koorandahalli Village, Malur Taluk & District	Working
21	Premier Comprint., No.33/3, Abbigere Pipe Line Road, Hanumanthaih Industrial Area, Chikkabanavara Post, Bangalore - 560090	Working
22	Sri Sai Company, Plot no. Q 13, Ground Floor, Industrial Estate, Veerasandra IInd Stage, Bangalore	Working
23	M/s. Digicomp Complete Solutions Ltd, or Regeneris (India) Pvt Ltd , No.86, Ground floor, 3rd cross, New Timber yard layout, Mysore Road, Bangalore - 560 026	Closed
24	M/s.XL Engineering and Fabricators, No. B-188, 5th Main, II Stage, Peenya Industrial area, Bangalore-58	Closed
25	M/s.Intro Tech Recyclers , No C-50/1, first floor, KSSIDC industrial estate, Kumbalgodu, Bangalore-560060	Closed
26	M/s.E-pragathi (A system of Integrated System soft) shed No. M, #405, 2nd Floor, 7th and 8th Cross, 1st Stage Peenya, Bangalore-560058	Closed
27	Rashi E-waste., No.52/170 & 171, 6th Cross, Aziz Sait Industrial Town, Nayandahalli Post, Bangalore-560039.	Closed
28	Sogo Synergy Private Limited, shed No. A-57, KSSIDC Industrial Estate, Bommasandra, Hosur road, Anekal Taluk, Bangalore urban District-560099	Closed
29	Khanija Recycling No.14/e/1, Attibele Industrial Area, Bangalore-56207	Closed
30	Khanija Recycling , No.C-32/2, KSSIDC industrial estate, Veerasandra, - Hosur Road, Attibele Hobli, Bangalore	Closed

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22

भारत सरकार
Government of India
इलेक्ट्रॉनिकी और सूचना प्रौद्योगिकी मंत्रालय
Ministry of Electronics & Information Technology
इलेक्ट्रॉनिक्स निकेतन, 6, सी जी ओ कॉम्प्लेक्स, नई दिल्ली-110003
Electronics Niketan, 6, C G O Complex, New Delhi-110003
Website: www.meity.gov.in

संख्या W-18/36/2020-IPHW
No.....

दिनांक 03.03.2022
Date.....

NOTIFICATION

Subject: Amendment of Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) Guidelines issued vide File No.W-18/30/2019-IPHW dated 01.06.2020

Reference:

1. SPECS Gazette Notification dated 01.04.2020
2. SPECS Guidelines issued vide File No. W-18/30/2019-IPHW dated 01.06.2020

In partial modification of SPECS Guidelines issued vide File No. W-18/30/2019-IPHW dated 01.06.2020, following amendment is issued:

Addition of **Annexure-1A** in the SPECS guidelines, to be eligible for incentive under SPECS, as under:

S.No.	Description of E-waste Recycling Facility	Minimum Investment Threshold Limit
1.	Recycling facility for extraction of precious metals from e-waste components, including PCBs (both populated and bare), Li-ion batteries, Spent magnets, Solar PV Panels, Catalytic converters and any other components from electronic waste (any one component or in combination)	INR 2 crore

2. This issues with the approval of competent authority.

Saurabh Gaur
(Saurabh Gaur)

Joint Secretary

Telephone: 011-2436071



Copy to:

1. All concerned Ministries / Departments of Government of India
2. All States / Union territories
3. Cabinet Secretariat
4. PMO
5. NITI Aayog
6. Comptroller and Auditor General of India
7. AS&FA, Ministry of Electronics and Information Technology
8. Electronics Industry Associations
9. Internal Circulation

31	IMAX Environmental, No.16, Jaiprabhu complex, Sri M vishveshwaraiah industrial park, anjanapura post, Avalahalli, Bengaluru-62	Closed
32	Ash Recyclers, No. 94, Thimmaiah Road, Bangalore - 01	Closed
33	Nobel Technology, No.46, 14th Cross, 4th Phase, Peenya Industrial Area, Bangalore - 596 058.	Closed
34	Ecovision Recycling, No.D-65, Veerasandra Industrial Area, Hosur Road, Bangalore - 34.	Closed
35	E-R3 Solutions Pvt. Ltd, No.C-430, 1st Cross, 1st Stage Peenya Industrial Area, Bangalore - 560 058.	Closed
36	Sai Shaakti Chemicals, No. 1/8, Kodipalya Road, CVR Main Road, Kengeri , Bangalore-560060	Closed
37	Cerebra Integrated Technologies Ltd, Plot No. 422/2, 11th cross, 4th phase, 2nd stage, Peenya industrial Area, Bangalore - 560 058.	Closed
38	Green Rich Solutions, No.1, 3 rd Main, 2 nd Stage industrial Suburb, Yeshwanthpur, Bangalore-22	Yet to commission
39	Ashok enterprises, No11, phase I, Bommasandra, indl area, Bangalore.	Yet to commission
40	Tamogna enterprises Pvt ltd. P.NO.71/1,304/2,304/7, seetharam indl estate, Bahubalinagar, MES raod, Bengaluru-reg	Yet to commission
41	Arrow Systems No.52/2, Bashettihali village, Kasaba Hobli, Doddaballapura Taluk, Bangalore-560102	Yet to commission
42	SLV Enterprises, Thegachaguppe Village Kumbalagodu Post, Kengeri Hobli, Bangalore	Yet to commission
43	MM Enterprises No.640/A/975/1/75, 1st Stage, end Block, 80 Feet Road, HBR Layout, Kadugondanahalli, Bengaluru Urban	Yet to commission
44	Derive Recycles Private Limited Plot No.18 (sub layout), Bommasandra IV Phase Industrial Area, Yarandahalli Village, Jigani Hobli, Anekal Taluk, Bengaluru Urban	Yet to commission
45	E Waste Social Private Limited Sy No. 77/20 & 95/2 Cheemasandra Village, Nimbekaipura Village, Bidarahalli Hobli, Bangalore East Taluk, Bangalore - 560049	Yet to commission
46	Vignesh Techno Services, Plot No. SP-168, KSSIDC Industrial Estate, Jigani 1st Stage, Anekal Taluk, Bangalore Urban District - 562 106	Yet to commission

		47	Vignesh Techno Services, Site No.02, Sy No.138/3, Machohalli Village(Sy No.138 of Machohalli Village, Pipeline road, Machohalli Industrial Area, Dasanapura hobli)bengaluru	Yet to commission
		48	E waste Nest Private Limited ., Plot No.A-15, Ground Floor, KSSIDC Industrial Estate, Narayana Rao Palya, Nelamangala Taluk, Bengaluru-562123	Yet to commission
		49	Parmeshwara Traders, No.3 &4, Bylalonahalli, Kachohalli Main Road, Dasanapura Hobli, Bengaluru-562123	Yet to commission
2)	Mysuru	50	M/s.AGK Enterprises- Unit I, No 33/A , Industrial "A "Layout, Bannimantap, Mysore-570015	Working
		51	M/s.Aptus Recycling Pvt Ltd., Sy no 241/4B, Magnur village, Kirgavalu Hobli, Malavalli taluk Mandya District-571430	Working
		52	M/s.Excel Recyling Pvt .No.212/2,Tippu Town, Rammanahalli village, mysuru Taluk&District.	Working
		53	Ameena Enterprises, Shed No.C-199, KSSIDC Industrial Estate Hebbal, Mysore - 570 017.	Working
		54	M/s.Macro Engineering Services, No.427-E2, Hebbal Industrial Area, Mysore-570018	Closed
		55	M/s.Shobith Industry - Unit II, Survey No. B-4/1, KSSIDC Industrial Area, Nanjangud - 571302, Mysore District	Closed
		56	Global E-waste Management Services, P-21, Hebbal Industrial area, Hebbal I Phase, Mysore	Closed
		57	MV Enterprises Unit-I, Plot No.67, Womens Entrepreneurs Park, Phase-I, thandya 2nd Phase, chikkaiahnachatra, Nanjungud Taluk, Mysuru	Yet to commission
		58	NM Recycle Plot No. 151(A), Belagola Industrial Area, Mysuru-570016	Yet to commission
		59	Excel Recycling Unit-II, No.110/A, Bannimantap Indl Area, A Layout, Mysuru-570015	Yet to commission
3)	Ramanagar	60	Nandi E-waste Zone ., located at No.59 G, Bidadi Industrial Area, Bidadi 2nd Phase, 2nd Sector, Shyanumangala Village, Bidadi Hobli, Ramanagara Taluk and District	Working
		61	Lube Tech Petro Chemicals, Plot No. 08-A, Bidadi Industrial Area, 2nd Phase, Sector-1, Bidadi Hobli, Ramanagara Taluk and District	Closed

4)	Dharwad	62	M/s.MKK E-Waste Enterprises, shed No 292, Belur Industrial Area, Belur, Dharwad District,	Closed
5)	Kolar	63	Hindustan Computers., No.V3 & V4, KIADB Industrial Area, Tamaka, Kolar.	Closed
6)	Bijapur	64	Just E-Care, Industrial Estate Station Back Road, Bijapur	Closed
7)	Belgavi	65	Big Click computers Pvt. Ltd., Plot No. 1042, Sy. No. 621, Kanabargi Industrial Area, Auto Nagar, Belagavi	Yet to commission
8)	Mandya	66	Three R Innovation and research India Private Limited., Plot No.13, 1st Cross, Tubinkere industrial Area, Mandya	Yet to commission

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List of E-waste Recyclers (52)

Sl. No.	District	Sl.No	Name & Address of the Recyclers	Working status
1)	Bengaluru	1	M/s.R. N Traders, Plot no 101, Kumbalgodu village, Kengeri Hobli, Bengaluru	Working
		2	M/s.HMG Eco care Recycling , C-22 3rd cross, Kumbalagodu, Bengaluru- 560074	Working
		3	M/s. Ash Recyclers, No.3, KSSIDC Ind Estate, Hoskote, Bengaluru District	Working
		4	M/s.India Best Way Recycling Shed No. 08 (Mane Industrial Estate), Sy. No. 155, Kumbalgodu Village, Kengeri Hobli, Bangalore South Taluk, Bangalore Urban Distinct - 560074	Working
		5	M/s.RPN Industries, Plot B2, KSSIDC Industrial area, Kumbalgodu, Mysore Road, Bangalore-74	Working
		6	M/s.Eco Trend recyclers #81A & 82A Kachohalli Industrial Estate, Dasanpura Hobli, Bengaluru	Working
		7	M/s.Extract, Plot No. 14/A, KIADB, Attibele Indl. Area, Anekal Taluk, Bangalore	Working
		8	M/s.Ikon Recyclers Plot No.5, ground & 2nd floor, 2nd Cross, 2nd Main road, Magadi Road, Bangalore-560079	Working
		9	M/s.Coral Waters, No.52, KIADB Industrial Area, Hoskote Taluk, Bangalore rural district	Working
		10	M/s.Gopalan reproprocessors India Pvt Ltd No.131, A Main Road, Industrial Suburb, Peenya II Stage, Bengaluru	Working
		11	M/s.Trackon E-waste Recyclers Pvt. Ltd, No.28, Gerupalya, 2nd Phase, Kumbalagodu Industrial Area, Bengaluru - 560 074.	Working
		12	M/s.E-Ward & Co., No.11, Mutthachari Industrial area, Nayandahalli, Mysore road, Bengaluru - 560 039.	Working
		13	M/s.Rashi E-Waste Solutions Pvt Ltd, SW-51, Shed No.26, Phase II, Apparel Park, Doddaballapura, Bengaluru Rural District	Working
		14	M/s.Coral Waters(Brand of coral communication and Network Pvt Ltd), No 8E, KIADB Industrial area, Hoskote, Bengaluru	Working

		15	M/s.Sonal Metacop, No.5, Sy No. 5/1, Kachohalli Industrial Estate, Kachohalli, Laxmipura Post, Bangalore- 562123	Working
		16	M/s.E R3 Solutions Pvt Ltd., located at plot No. 105, Road No.3, KIADB Bengaluru IT Park, Mahadeva Kodigehalli, Bengaluru-562149	Working
		17	M/s.E-Friendly waste recyclers., No. 17, 1st Cross, No.17,1st Cross, Aziz Sait Industrial Area, Nayandahalli Mysuru Road, Bengaluru	Working
		18	M/s.Terra Nova Eco Management Pvt Ltd (Formerly known as Sonal Metacop India Pvt Ltd., Sy No.19/1,19/8,19/5 and 19/9 plot no.59/263/1/19/5, NH-4 high way, malanagothihalli village, T.Begur, Nelamangala, Bengaluru	Working
		19	M/s. Seven, # 9/4, Kachohalli Industrial Estate, Kachohalli, Near Saibaba Temple, Laxmipura Post, Bengaluru-562123	Working
		20	M/s.Hi tech Eco Green Plot No.104/A, Sy No.7,8,9,10, Bharathipura village, Sompura Indl Area, Nelamangala Taluk, Bengaluru-562111	Working
		21	M/s.Triventent Technologies Pvt Ltd., (Zolopik)., #7A1, Kadugodi Industrial Area, Off Whitefeild Road, Bengaluru-560067	Working
		22	M/s.Earth Care E-waste Private Limited., Plot No.15,KIADB Industrial Area, 155, Kumbalgodu, KIADB Industrial Area, Kumbalgodu Village, Kengeri Hobli, Bengaluru South Taluk, Bengaluru	Working
		23	M/s.Royal Touch, No 3/2, 2nd cross, ezakiel Industrial estate, K. G Halli, Nagawara Main Road, Bangalore	Working
		24	M/s.Sa Ra Recycling., No C-12, KSSIDC Industrial Esatate, Kengeri Hobli, Bengaluru	Working
		25	M/s.Sai Recyclers, No. 20, KSSIDC Industrial Estate, Bhashettihalli, Versandara Post, Doddaballpura Town & Taluk, Bangalore Rural District.	Closed

		26	M/s.E-friendly waste recyclers., No.6, Ezickle Industrial Estate, ward No.6, K.G.Halli, Bengaluru-45	Closed
		27	M/s.Trishyrya Recycling Indi Pvt Ltd., No 315, 4th Phase, Peenya Industrial Area, Bengaluru	Closed
		28	M/s.Prakruthi Recycling Pvt Ltd., Sy No 22, Flat No 103, 5th block, 5th cross, SSI Area, Rajajinagar, Bangalore-560010	Closed
		29	M/s.Samarthanam Trust for the Disabled, No. 66, 6th main, 3rd Phase, Peenya Industrial Area, Bengaluru - 560 058.	Closed
		30	M/s.Ramky E-waste Recycling Facility, Karnataka Waste Managment Project, Dobaspet, Nelamangala	Yet to commission
		31	M/s.Esparsh, No.134/1, 2 nd B Main Road, 2 nd Stage, Peenya Industrial Area, Bengaluru-560 058	Yet to commission
		32	M/s.E-Forum, Survey No. 80/1, Chokanhalli, Jagamankote Main Road, Hoskote Taluk, BengaluruDistrict- 562114	Yet to commission
		33	M/s.Eco-Radix Recyclers Private Limited., # 97, B. S Industrial Area, Pipeline Near, Mookambika Temple Machohalli Bangalore-91	Yet to commission
		34	M/s.Vans Chemistry Pvt Ltd, Plot No 47 & 48 of Narsapura Industrial Area Ist phase, KIADB Narsapura Industrial Area, Narsapura Hobli, Kolar Taluk & district	Yet to commission
		35	M/s.Ashok Enterprises., Plot No. 204,3rd Phase Bommasandra Industrial Area, Attibele Hobli, Anekal Taluk, Bengaluru	Yet to commission
		36	M/s.Introtech Re-cyclers No.40/3, Rahim Sahib Layout, Hosahalli Gollara Playa, Yashavanthpur Hobli, Bangalore North Taluk, Bengaluru Urban District.	Yet to commission
		37	M/S.BSMR Metals., Plot No. 6, 2nd Main Road, @nd Cross, KSSIDC Industrial Area, Veerasandra 2nd Stage, Attibele Hobli, Bengaluru-560099	Yet to commission
2)	Ramanagara	38	M/s. K.G Nandini Enterprises, No.46/4, 46/5, Billakempanahalli village, Bidadi Hobli, Ramanagaram District.	Working

		39	M/s.Safa Traders., P.No.A-10, Ramanagara Industrial Estate, Ramanagara District-562112	Working
		40	M/s. Soriaan Recyclers Pvt Ltd., P.No.39a &B, 2nd Phase, 2nd Sector, Bosch Road, KIADB Ind area, Bidadi -562109	Working
3)	Mysuru	41	M/s.NP e-waste Private limited Plot No. 96, Koorgalli Industrial Area, Belavadi Post, Mysore -570018.	Working
		42	M/s.Aptus E-waste Recycling Private Limited.,Plot No.68/B, Sy No.188, Hootagalli Industrial Area, Mysuru-570018	Working
		43	M/s.Retone E-Waste Managemnet, Plot No 95 B & 96 A, Belagola Indl Area, Mysore-570017	Yet to commission
4)	Kolar	44	M/s.E-Plant Recycling Plot No. 242/A, 2nd Phase, Narasapura Industrial Area, Kolar Tq & District.	Working
5)	Mangaluru	45	M/s.Moogambigai Metal Refineries, Unit (3), Plot No 132, Sy No 88, Baikampady Industrial area, Mangalore	Working
		46	M/s.Moogambigai Metal Refineries, Unit (3), Plot No 174 Industrial Area, Baikampady Mangalore- 575011	Closed
6)	Tumkur	47	M/s.Greens Recology, Plot No. 415, KIADB, Vasanthanarapura Industrial Area, Tumakuru Taluk and District	Working
		48	M/s.HK Global Enterprises., Plot No.682 & 683, Vasanthanarasapura, KIADB Industrial Area, 2nd Phase, Tumkur	Yet to commission
		49	M/s.Terra Firma Biotechnologies Pvt Ltd, No 22, Srinivasapura village, Katenahalli, Kolalu Hobli, Kottagere Taluk, Tumkur District.	Closed
7)	Chikkaballpura	50	M/s.Afeefa Spectro Alloys, Sy.No.289/1, Nagaragere village, Gauribidnur Tq, Chikkaballapura Dist.	Closed
		51	M/s.One Stop Solutions., Flat No. 70, Suvery No. 30-P, 31-P & 27-P, ,2nd Phase, KIADB Industrial Area, Kudumalakunte, Gowribidanur, Chikkaballapura	Yet to commission
8)	Dharwad	52	M/s.MKK e-waste Recyclers., Plot No.292, Belur industrial area, dharwad-580011	Yet to commission

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List of E-waste Dismantlers and Recyclers (22)

	District	Sl.No	Name & Address of the Dismantler & Recycler	working status
1)	Bengaluru	1	M/s. Sheeltron Digital systems pvt ltd. No.27, maney estate, Sy.no.121, kumbalgodu, Bengaluru-560074	Working
		2	M/s. E2E Recycling Buisness Pvt Ltd No.550, Sy No.102(p) Beeragondanahalli Village, SIA 2nd stage, Nelamangala, Bangalore	Working
		3	E-Parisara Pvt Ltd, No 30- P3, KIADB Dobaspet Indl Area, Bangalore Rural District-562111.	Working
		4	4R Recycling Pvt Ltd, shed No A-5, Industrial Estate, Peenya 3rd Stage Industrial area, Nallakadirenahalli Village, Yeshwanthpur Hobli, Bangalore North Taluk, Bangalore.	Working
		5	Return lab Recyclers pvt ltd. P.no.68, Sw-51, Phase-2, Doddabalapura Apparel park, Bengaluru-561203	Working
		6	Greenscape Eco Management Pvt Ltd., Plot No R-12, Veerasandra Indl area, Hosur road, Anekal, Bangalore	Closed
		7	E-green Recycling, —Plot No. 86-B, Jigani 1 st Phase, Anekal Taluk, Bangalore	Closed
		8	TES-AMM Indian Pvt Ltd, No A-365, 6th cross, I stage, Peenya Industrial Estate, Bengaluru 560058	Closed
		9	Earth Sense Recycle Pvt Ltd , Industrial plot no Spl.14, Jigani 2nd stage, Jigani village and hobli, Bangalore-560105	Closed
		10	E-Parisaraa Pvt Ltd-Unit 2, A-09, III Stage, Peenya Industrial Estate, Bangalore- 560 058	Yet to commission
		11	Urbeno Pvt Ltd., Plot No.109, Hi-tech Defense & Aerospace Park (IT sector) Industrial area, Jala Hbli, Bengaluru North Taluk, Bengaluru Urban district	Yet to commission
		12	Attero Recycling Pvt. Ltd., Plot NO. 143, B5 and B6, Bommanahalli Indl. Area, Bengaluru	Yet to commission
2)	Ramanagara	13	M/s.SRI.vasavi Recyclers India pvt ltd. P.NO.57 & 58,KIADB Indl area, 1st Phase, harohalli, kanakapura Taluk, Ramanagara district	Working

		14	M/s. Eco globe E-waste Recyclers, Plot No. 87, 2 nd Phase, 2 nd Sector, Bidadi Industrial Area, Bidadi Hobli, Ramanagara Taluk and District	Working
		15	Farth Sense Recycle Pvt Ltd., Plot No.A-17, Harohalli Industrial Area, 1st Phase, Printech Park Cluster, Harohalli, Kanakapura Taluk, Ramanagara-562112	Working
3)	Tumkur	16	E-Pragathi Recycling Pvt. Ltd. Plot No. 564, Sy.No.55 & 52, Yelladadu Village, Vasanthanarsapura Industrial Area, 2nd Stage, Kara Hobli, Tumkur -572128	Working
		17	E Pragathi Recycling Plot No. 66 & 87, Shed C & D, Road No. 18, IInd Phase,, KIADB Industrial Area, Antharasanahalli, Tumkur 572106	Working
		18	Best E-waste Recyclers Pvt Ltd., Plot No.459, Vasantha Narasapura Indl Area, 2nd Phase, Tumkur-572138	Working
4)	Mysuru	19	E wardd Recycling Pvt Ltd.,Plot No. 95B and 96 A, Belagola Industrial Area, Hebbal Village, Kasaba, Mysore-570017	Working
5)	Kolar	20	FA Enterprises, No. B-08, KIADB Industrial Area, Tamaka, Kolar Dist.	Closed
		21	General Eco Transtech Private Limited, shed No. B-15, KSSIDC Industrial Area, Tamaka, Kolar	Closed
6)	Mangaluru	22	M/s. Moogambigai Metal Refineries, No 89 & 90 Industrial Area, Baikampady Mangalore-575011	Closed

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List of E-waste Refurbishers (15)

	District	Sl. No.	Name & Address of the Refurbisher	Working Status
1)	Bengaluru	1	M/s.Taj Computers Solutions Pvt Ltd No.154/1/3, Peenya -III Phase, Bengaluru-560058	Working
		2	M/s. 4R Recycling Private Limited Unit 2 #6, South western portion,3rd Stage, Peenya Industrial Estate, Bengaluru- 560058	Working
		3	M/s. Repair & Return Technology (India) Pvt. Ltd.,Plot.No.7, Road No.10, EPIP, Whitefield ,Bengaluru – 560066	Working
		4	M/s. Aforeserve.Com Limited, Plot No. 16A, Doddnekundi Industrial Area, Mahadevapura Post, K. R. Puram Hobli, Bengaluru East Taluk, Bengaluru - 560 048	Working
		5	Puthur InfortechPvt Ltd., No55, 1st floor ,5th cross, Banaswadi Main road, Bangalore-560 043	Working
		6	My Return solution Pvt Ltd., No.52, 1st Floor, J.C.Industrial Layout, Kanakapura Road, Bengaluru-560061	Working
		7	Saahas Waste Management Pvt Ltd., Plot No.46, 5th Cross, KSSIDC indl estate, 2nd phase, jigani anekal taluk, bengaluru-560076	Working
		8	Terra nova Eco Management Pvt Ltd (Sonal Metacop India Pvt Ltd), Plot No.10, Vaishnodevi Lush Green Industrial Estate, Gerupalya, Kumbalgodu Village, Kengeri Hobli, Bengaluru-560074	Working
		9	M/s ICT Service Management Solutions (India) Private Ltd., Plot No 30A, Sy No-37 & 39, 2nd Phase, Peenya Industrial Area, Bengaluru- 560058	Closed
		10	M/s.Arrow Systems, No. SM 3, 4th Phase, 3rd stage, Peenya Industrial Area, Bengaluru- 560 058.	Closed

		11	M/s. Ayushya Technologies and Services Private Limited Unit no.2, 2nd Floor, No.49/3, Srigandhada Kaval, Muthuraya ,Behind Reliance Petrol Bunk, Near Kottigepalya Circle, Bangalore Urban - 560091	Closed
		12	M/s. Sheeltron Digital Systems Pvt. Ltd., Site No. 7 & 8, Maney Industrial Estate, Sy No 121, Kumbalgodu Industrial Area, 1st Phase,Bengaluru-560 074	Yet to commission
		13	M/s Flextronics Technologies India Pvt. Ltd., No. 70 A, SVR Fortune, Electronics City, Hosur Road, Bangalore-560 100	Yet to commission
		14	M/s. Royal Touch Unit-II., Plot No.1, Ramakrishna Industrial Layout, Jakkur Post, Yelahanka Hobli, Bengaluru	Yet to commission
2)	Tumkur	15	M/s. E-Pragathi Recycling Plot No. 89/2, & 90, 2nd Phase, Antharasanahalli Industrial Area, Tumkur Taluk and District	Working

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List of Dismantlers, Recycling & Refurbisher (8)

	District	Sl. No.	Name & Address of the Dismantlers/ Recycling/ Refurbisher	Working Status
1)	Bengaluru	1	Tes-Amm, India Pvt Ltd. Sy.No.118 site.No.8.Mookambika Temple Road, Machohalli forest gate, Magadi Road, Bengaluru	Working
		2	Think Recycling Pvt Ltd Plot No b-77 KSSIDC Industrial area, Bommasandra, Bengaluru- 560099	Working
		3	Communications Test Design India Private Limited" (M/S. Regenerisis India Pvt Ltd) Shed No 85/1 of vajahalli Village and Sy No 16 and 27 raguvanahalli village, Kanakapura Main road, Bangalore-560062	Closed
		4	INDUS e- Recycling PLOT NO: No: 19/5, 19/8, 19/11, Malonagathihalli Kasaba Hobli, Nelmangala Taluk, Bangalore Rural District- 562123	Yet to commission
		5	Krishna Recycling Plot. No. 14/E/1, Attibele Industrial Area, Anekal Taluk, Sarjapura Hobli, Bengaluru - 562107	Yet to commission
		6	Unizen Infra (P) Limitd, No. 151/10, Rustumji Vilas, Whitefield Main Road, Whitefield, Bengaluru	Yet to commission
2)	Chikkaballapura	7	Prakruthi Recycling Private Limited Located at Plot No. B-3 & B-4, Kudumalakunte, Kasba Hobli,, Gowribidanur taluk, chikkaballapura	Working
3)	Bidar	8	Hi Tech Metal Recycling India Pvt Ltd., Plot No.VI-P, Sy No.21, Kolhar Indl Area, Phase-II, Backchowdi Village, Bidar Taluk-585401	Yet to commission

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List of Dismantlers & Refurbisher (13)

	District	Sl. No.	Name & Address of the Dismantler and Refurbisher	Working Status
1)	Bengaluru	1	M/s. Ingram Micro India Private Limited., Plot No. 1-4, Sy No 5/2, 15th KM stone, NH-7, Singasandra post, Bertena agrahara, Hosur road, Bengaluru	Working
		2	M/s. Trishyiraya Recycling India Pvt Ltd, SW51, Apparel park, indl area, Bashettihalli & part of Archalli, Shed no.10, Doddballapura, Bengaluru-561203	Working
		3	JSA Web Solutions, No.3, DITPL, KIADB Indl Area, Apparel Park, Ind phase, Doddaballapura, Bangalore Rural District	Working
		4	M/s. Sriram Eco Raksha Computer Services Pvt Ltd., No. B-29, KSSIDC Indl. Estate, Bommasandra, Hosur Road, Anekal Taluk, Bangalore - 560 099.	Working
		5	M/s. Envirotech IT Solutions No.136, 1st Floor, Shiva Farm, Magadi Main Road, Vrushabhavathinagar, Bengaluru - 560079	Working
		6	M/s. Green Enabled IT Solutions Private Ltd., Sy. No- 224/59/9 of Kengal Kempohalli Village, Sompura Hobli, Nelamangala Tq, Bangalore Rural District	Working
		7	M/s. Vans chemistry, Plot No. 94/5, Shed No.13R14-SRR Layout, Kannalli village, Bangalore -5600941	Working
		8	Green Enabled IT solutions Pvt Ltd., No. 2/1, 27 th cross, behind Krishna grand hotel, Banashankari 2 nd stage, Bengaluru	Working
		9	M/s. Ramky Arm Recycling Private limited., Sy No.28.Plot No.6,KIADB Industrial area, Lakshmipura, Nelamangala Taluk, Bengaluru	Working
		10	M/s. Ace Recyclers Plot No. C29, KSSIDC Industrial Estate, Hoskote Taluk, Bangalore Rural District - 562114	Closed
		11	M/s. GreenScape Eco Management Pvt Ltd Plot No. Q-13(New no.353/Q130, KSSIDC, Veersandra Indl area II stage Anekal, Bangalore	Closed
		12	M/s. Vijay Techsol Pvt. Ltd. No. 18, KIADB Industrial area, Bashattihalli, Doddaballapur, Bengaluru Rural	Yet to commission
2)	Ramangara	13	M/s. MTC Exigo Recycling Private Limited., Plot No. 63-P-14, 63-P-15 & 63-P-16, Bidadi Industrial Area, KIADB, Phase-2, Bidadi Hobli, Ramanagera	Working

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List of E-waste Recycling & Refurbishers (22)

	District	SlNo	Name & Address of the Recyclers and Refurbisher	Working Status
1)	Bengaluru	1	M/s.Global Tech RecyclersNo-8/5, 2nd Building, 1st Cross, , Kachohalli Village & Kachohalli Industrial Estate, Lakshmipura Post, Dasanapura Hobli, Bengaluru -562162	Working
		2	M/s. GRKMS Private Limited, 1st Stage, Sompura, Bharathipura Dabaspeta, Bengaluru-562111	Working
		3	M/s Communication Test Design India Private Limited Plot No 48, Near Balaji Temple, Peenya II Phase, Bengaluru-560058,	Working
		4	E-Scrap Recyclers, No. 106, Adrahalli main road, Byreshwara industrialEstate, Peenya 2nd stage, Bengaluru-560091	Working
		5	E Box Recyclers., B-3, Shed No.3, KSSIDC Industrial Area, Veerasandra 2nd stage, Anekal Sarjapura Hobli, Bengaluru	Working
		6	M/s. Concavity Solutions, No. 51/1 (Sy. No. 48, Karivobahanahalli as per Dishaank app) Andrahalli Main Road, Peenya II Stage, Bengaluru- 560091	Working
		7	M/s. JSA Websolutions Plot No. 93 A-4, Phase II, Jigani Industrial Area, Jigani Hobli, Anekal Taluk, Bengaluru	Working
		8	E-Hasiru, No.168/B, 1st floor, 7th main road, 3rd phase, Peenya industrial area, Bengaluru	Working
		9	Shri Raghavendra Enterprises .,P No.16, 1st Stage, Sompura Indl Area, Sy No.50 & 51, Pemmanahalli Village, Sompura Hobli, Nelamangala Taluk, Bengaluru	Working
		10	E-Hasiru, No.168/B, 1st floor, 7th main road, 3rd phase, Peenya industrial area, Bengaluru	Working
		11	Ishvarya Traders., Plt No.3D1, Bommasandra 1st and 2nd Phase, Industrial area, Hosur Road, Attibele Hobli, Anekal Taluk, Bengaluru	Working
		12	M/s. Sogo Synergy Pvt Ltd Plot SW 17B, Apperal park Phase-2, Doddaballapura Industrial area, Bengaluru Rural-561203	Working
		13	Carbios Eco waste Management Pvt Ltd., P.No.30, P-4-1 of Dabaspeta 1st Phase, Yedahalli village, Sompura Hobli, Nelamangala Taluk, Bengaluru-562123	Yet to commission

		14	AJ Enterprises., Plot No.68/1 and 68/2, Gottigere Village, Bilwaradahalli, Bannerghatha Road, Bengaluru	Yet to commission
2)	Tumkur	15	E2E Recycling Business Private Limited., No.281, Vasanthanarasapura KIADB Indl Area, II Phase, Tumkuru	Working
3)	Ramanagara	16	Elxion Pvt Ltd., survey No.210/7, Gabaddi Village, Harohalli Hobli, Kanakapura Taluk- Ramangara 562112	Working
		17	M/s. Recycler India MGT LLP , Plot No.679 to 689, KIADB industrial area , Harohalli 3rd phase Kanakapura Taluk, Ramanagara District	Closed
4)	Kolar	18	ProPlanet Recyclers LLP., Plot No.285-E, Sy No.25 (P), Yandrakayipura Village, Narasapura Hobli, Kolar Taluk & District	Working
		19	Cerebra Integrated Technologies Ltd., Plot NO. 41 to 46, Appasandra Village, KIADB Inld. Area, Narasapura Hobli, Kolar Taluk and District	Working
5)	Chikkaballapura	20	Fairoz Metal Mart., Plot No.190, Masthenahalli, 1st Phase indl area, Masthenahalli, 1st phase, industrial area, masthenahalli kaiwara(H) Chinthamani (T) Chikkaballapura	Yet to commission
		21	M/s. Shri Lakshmi Venkateshwara Enterprises., Plot No.216, Masthenahalli, 1st Phase Industrial Area, Masthenahalli, Phase-1, Chinathamani, Chikkaballapura	Yet to commission
6)	Bidar	22	Hi Tech Metal Recycling India Pvt Ltd., Plot No.V1-P, Sy No.21, Kolhar Indl Area, Phase-II, Backchowdi Village, Bidar -585401	Yet to commission

MEMBER SECRETARY
KSPCB (Bengaluru)

As per E-waste (Management) Rules, 2022

SCHEDULE - I

Categories of electrical and electronic equipment including their components, consumables, parts and spares covered under the rules

SL. No.	Categories of electrical and electronic equipment	Electrical and electronic equipment code
i.	Information Technology and Telecommunication Equipment (ITEW):	
	Centralised data processing: Mainframes, Minicomputers	ITEW1
	Personal Computing: Personal Computers (Central Processing Unit with input and output devices)	ITEW2
	Personal Computing: Laptop Computers(Central Processing Unit with input and output devices)	ITEW3
	Personal Computing: Notebook Computers	ITEW4
	Personal Computing: Notepad Computers	ITEW5
	Printers including cartridges	ITEW6
	Copying equipment	ITEW7
	Electrical and electronic typewriters	ITEW8
	User terminals and systems	ITEW9
	Facsimile	ITEW10
	Telex	ITEW11
	Telephones	ITEW12
	Pay telephones	ITEW12
	Cordless telephones	ITEW14
	Cellular telephones	ITEW15
	Answering systems	ITEW16
	Products or equipment of transmitting sound, images or other information by telecommunications	ITEW17
	BTS (all components excluding structure of tower)	ITEW18
	Tablets, I-PAD	ITEW19
	Phablets	ITEW20
	Scanners	ITEW21
	Routers	ITEW22
	GPS	ITEW23
	UPS	ITEW24
	Inverter	ITEW25
	Modems	ITEW26
Electronic data storage devices	ITEW27	
ii.	Consumer Electrical and Electronics (CEEW):	
	Television sets (including sets based on (Liquid Crystal Display and Light Emitting Diode technology)	CEEW1
	Refrigerator	CEEW2

	Washing Machine	CEEW3
	Air-conditioners excluding centralised air conditioning plants	CEEW4
	Fluorescent and other Mercury containing lamps	CEEW5
	Screen, Electronic Photo frames, Electronic Display Panel, Monitors	CEEW6
	Radio sets	CEEW7
	Set top Boxes	CEEW8
	Video Cameras	CEEW9
	Video Recorders	CEEW1
	Hi-Fi Recorders	CEEW11
	Audio Amplifiers	CEEW12
	Other products or equipment for the purpose of recording or reproducing sound or images including signals and other technologies for the distribution of sound and image by telecommunications	CEEW13
	Solar panels/cells, solar Photovoltaic panels/cells/modules.	CEEW14
	Luminaires for fluorescent lamps with the exception of luminaires in households	CEEW15
	High intensity discharge lamps, including pressure sodium lamps and metal halide lamps	CEEW16
	Low pressure sodium lamps	CEEW17
	Other lighting or equipment for the purpose of spreading or controlling light excluding filament bulbs	CEEW18
	Digital camera	CEEW19
iii)	Large and Small Electrical and Electronic Equipment (LSEEW)	
	Large cooling appliances	LSEEW1
	Freezers	LSEEW2
	Other large appliances used for refrigeration, conservation and storage of food	LSEEW3
	Clothes dryers	LSEEW4
	Dish Washing Machines	LSEEW5
	Electric cookers	LSEEW6
	Electric stoves	LSEEW7
	Electric hot plates	LSEEW8
	Microwaves, Microwave Oven	LSEEW9
	Other large appliances used for cooking and other processing of food	LSEEW10
	Electric heating appliances	LSEEW11
	Electric radiators	LSEEW12
	Other large appliances for heating rooms, beds, seating furniture	LSEEW13
	Electric fans	LSEEW14
	Other fanning, exhaust ventilation and conditioning equipment	LSEEW15
	Vacuum cleaners	LSEEW16
	Carpet sweepers	LSEEW17
	Other appliances for cleaning	LSEEW18

	Appliances used for sewing, knitting, weaving and other processing for textiles	LSEEW19
	Iron and other appliances for ironing, mangling and other care of clothing	LSEEW20
	Grinders, coffee machines and equipment for opening or sealing containers or packages	LSEEW21
	Smoke detector	LSEEW22
	Heating Regulators	LSEEW23
	Thermostats	LSEEW24
	Automatic dispensers for hot drinks	LSEEW25
	Automatic dispensers for hot or cold bottles or cans	LSEEW26
	Automatic dispensers for solid product	LSEEW27
	Automatic dispensers for money	LSEEW28
	All appliances which deliver automatically all kinds of products	LSEEW29
	Indoor air purifier	LSEEW30
	Hair dryer	LSEEW31
	Electric shave	LSEEW32
	Electric kettle	LSEEW33
	Electronic display panels/board/visual display unit	LSEEW34
iv)	Electrical and Electronic Tools (With the exception of large- Scale Stationary Industrial Tools) - EETW	
	Drills	EETW1
	Saws	EETW2
	Sewing Machines	EETW3
	Equipment for turning, milling, sanding, grinding, sawing, cutting, shearing, drilling, making holes, punching, folding, bending or similar processing of wood, metal and other materials	EETW4
	Tools for riveting, nailing or screwing or removing rivets, nails, screws or similar uses	EETW5
	Tools for welding, soldering, or similar use	EETW6
	Equipment for spraying, spreading, dispersing or other treatment of liquid or gaseous substance by other means	EETW7
	Tools for mowing or other gardening activities	EETW8
V	Toys, Leisure and Sports Equipment (TLSEW)	
	Electrical trains or car racing sets	TLSEW1
	Hand-held video games consoles	TLSEW2
	Video games	TLSEW3
	Computers for biking, diving, running, rowing, etc.	TLSEW4
	Sports equipment with electric or electronic components	TLSEW5

	Coin slot machines	TLSEW6
VI	Medical Devices (With the Exception of All Implanted and Infected Products)-MDW	
	Radiotherapy equipment and accessories	MDW1
	Cardiology equipment and accessories	MDW2
	Dialysis equipment and accessories	MDW3
	Pulmonary ventilators and accessories	MDW4
	Nuclear Medicine Equipment and accessories	MDW5
	Laboratory equipment for in vitro diagnosis and accessories	MDW6
	Analysers and accessories	MDW7
	Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET) Scanner, Computed Tomography (CT) Scanner, & Ultrasound Equipment along with accessories	MDW8
	Fertilization tests equipment and accessories	MDW9
Other electric appliances/equipment/kits used for preventing, screening, detecting, monitoring, evaluating, reviewing, examining, investigating, probing, treating illness sickness, disease, disorder, affliction, infection, injury, trauma, abuse or disability including the Mobiles, Tablets or any other device with the features having the potential of sex selection and their accessories	MDW10	
Vii)	Laboratory Instruments (LIW)	
	Gas analyser	LIW1
	Equipment having electrical and electronic components	LIW2