



Current Situation and Trend of WEEE Recycling Industry in China

Introduction of the White Paper 2011

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I White Paper 2011

II Enterprise catalogue 2011



中国废弃电器电子产品
回收处理及综合利用行业现状与展望

WHITE PAPER on Current Situation
and Trend of
WEEE RECYCLING INDUSTRY in CHINA
行业研究白皮书 2011

中国家用电器研究院
2012年5月

Section 1: Management

Section 2: Volume Estimation

Section 3: Industry Investigation

Section 4: Technology Study

Section 5: Expectation



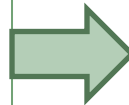
Section 1 : Management

1.Regulations and policies of WEEE recycling management in developed countries and area

2.WEEE recycling management in China

- 1.1 International covenant
- 1.2 EU
- 1.3 US
- 1.4 Canada
- 1.5 Japan
- 1.6 Korea
- 1.7 India
- 1.8 Australia
- 1.9 Taiwan of China
- 1.10 Hong Kong of China

- 2.1 NPC's legislative
- 2.2 Regulations and policies
- 2.3 National Development and Reform Commission
- 2.4 Ministry of Industry and Information Technology
- 2.5 Ministry of Environmental Protection
- 2.6 Ministry of Finance
- 2.7 Ministry of Commerce
- 2.8 Standard system

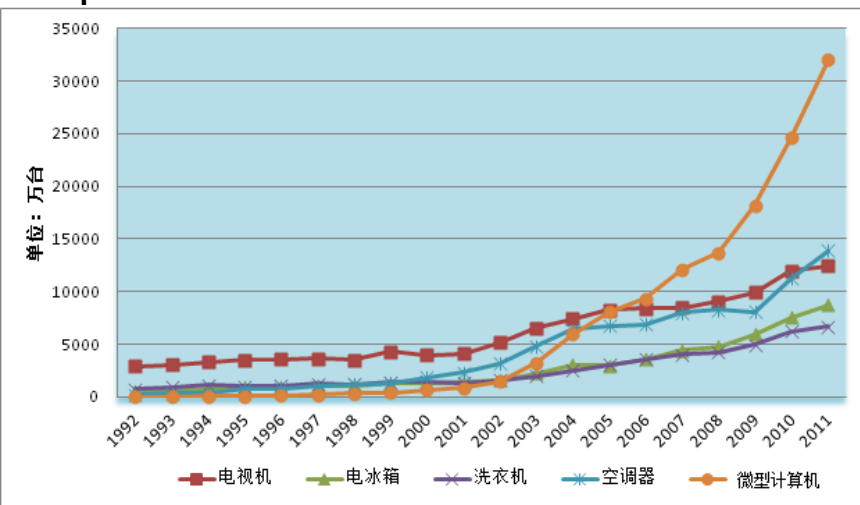


- Guideline for Industry Restructuring (2011)
- Catalogue for Encouraged Import Technologies (2011)
- Guideline for Priority Developing High-tech Industry (2011)
- Catalogue for the Guidance of Foreign Investment Industries (2011)



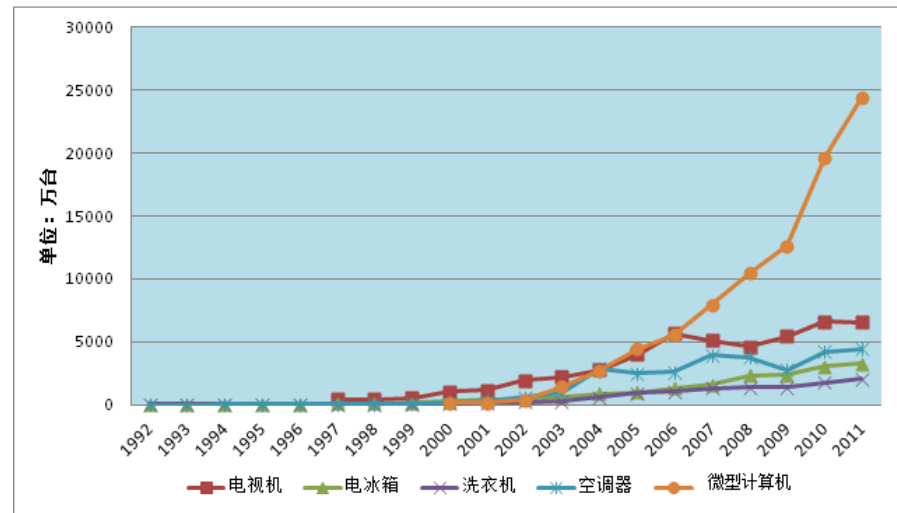
Section 2: Volume Estimation

3. Volume of production, import and export of major electric and electronic products in China in 2011

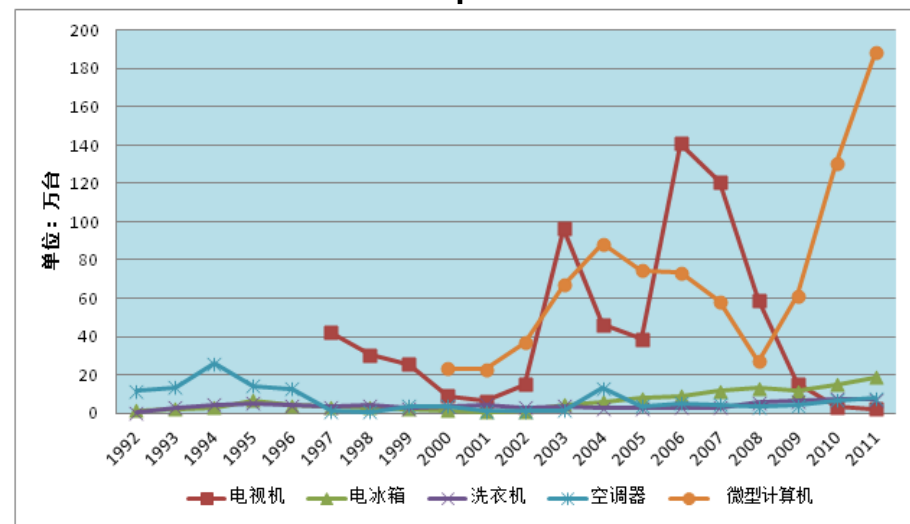


Production

Import



Export

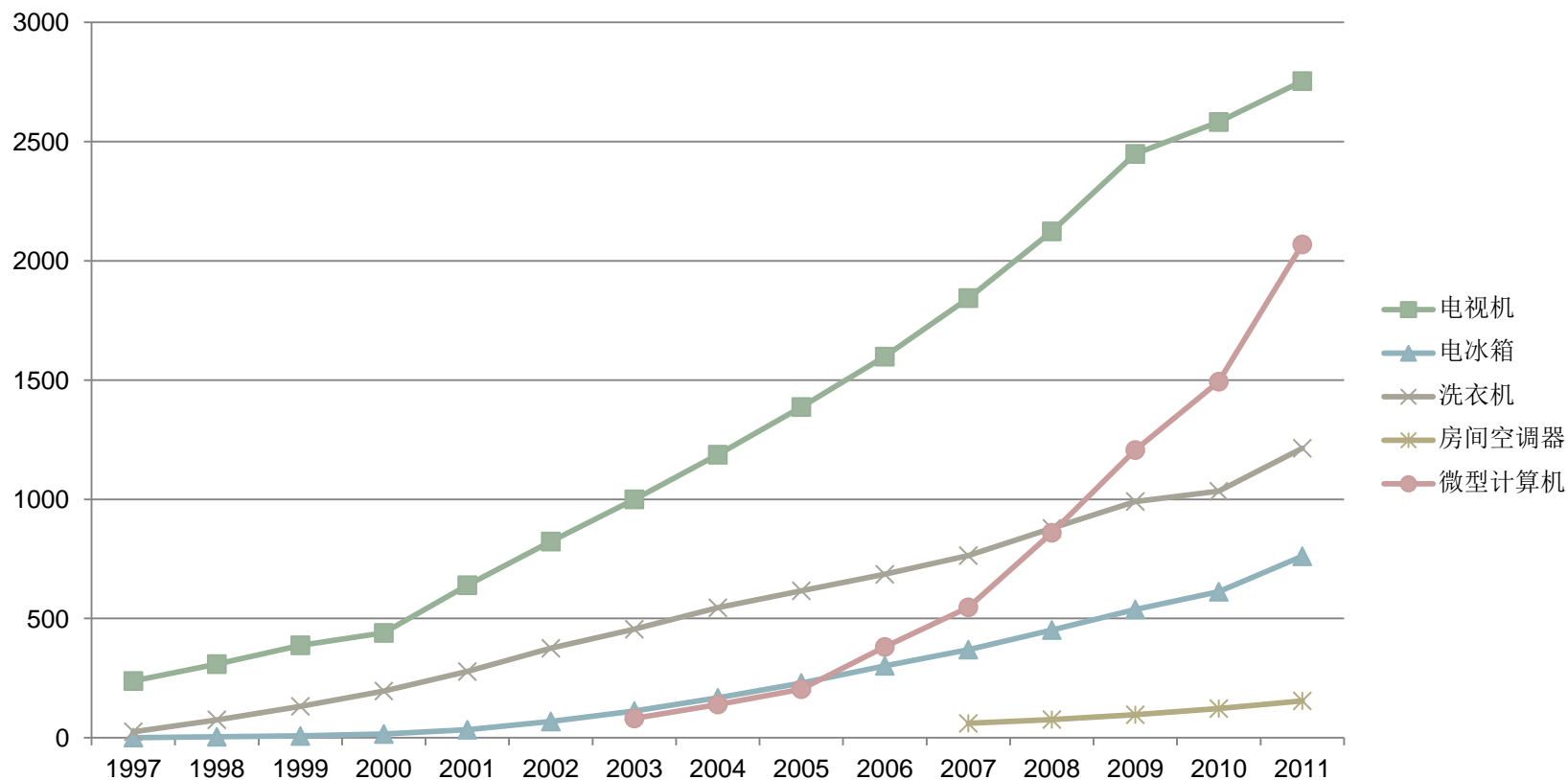




4. Estimation on discarded volume of major electric and electronic products in China

Estimation on social ownership (ten thousands sets)

年份	TVs	Refrigerators	Washing Machines	Air conditioners	PCs
2009	55823.33	27766.45	31599.67	31017.60	19066.35
2010	58039.70	31269.85	34016.75	35980.79	22905.65



Estimation result on volume of WEEE in China (ten thousands sets)



Estimation result on volume of WEEE in China in 2011 :

TVs 27.5367 million,

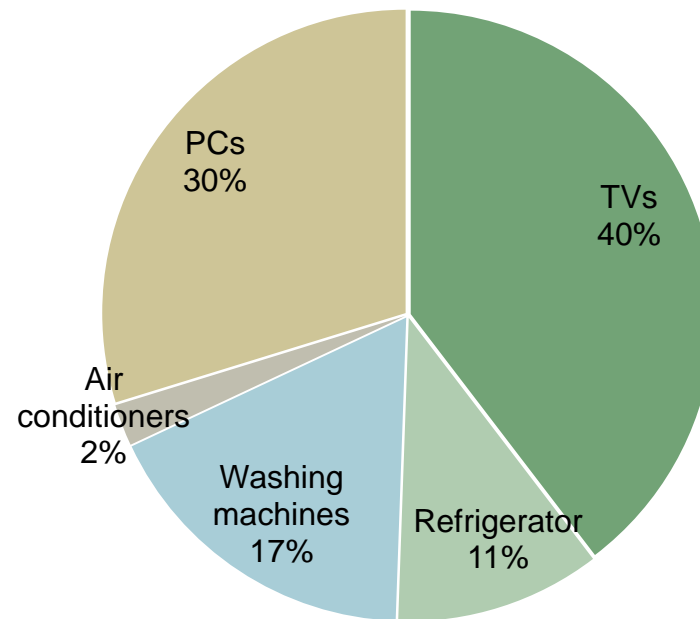
Refrigerators 7.611 million,

Washing machines 12.1391 million,

Air conditioners 1.5458 million,

PCs 20.6876 million,

Totally 69.5202 million.



Proportion of the estimation result on volume of WEEE in China in 2011



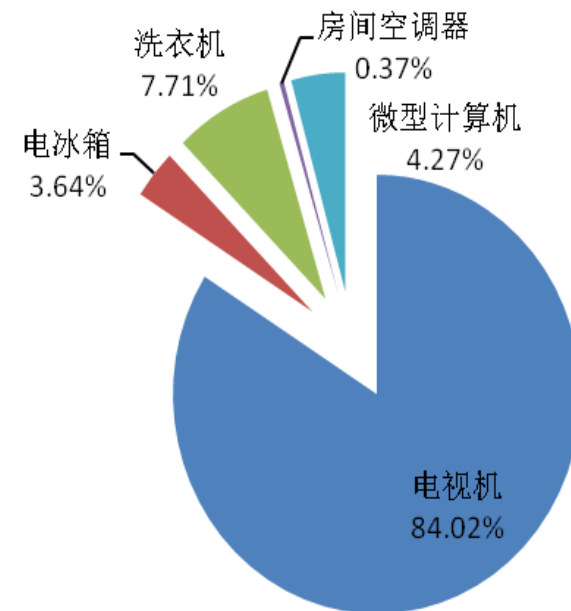
Section 3: Industry Investigation

5. Introduction of WEEE recycling industry in developed countries and area
6. Investigation on WEEE recycling industry in China
7. Comparison and analysis on material composition and collection price of WEEE
8. Study on WEEE collection enterprises in China
9. Study on enterprises of treatment and comprehensive utilization of WEEE in
China
10. Introduction on typical recycling enterprises of WEEE in China



In 2011, contribute to the National Trade-in Policy, there was a rapid development of the WEEE recycling industry. The individual collectors had been replaced by large-scaled, well-organized recycling enterprises with transporting tools and information systems. Dating to December 2011, there were 105 processing enterprises authorized by the National Household Appliance Trade-in Policy.

According to the data from the Ministry of Commerce, there were 61.292 million old appliances collected during the Trade-in Policy in 2011. The collection rate was 88%. Among them, there were 51.497 million TVs, 2.228 million refrigerators, 4.727 million washing machines, 224 thousands air conditioners and 2.615 million PCs.

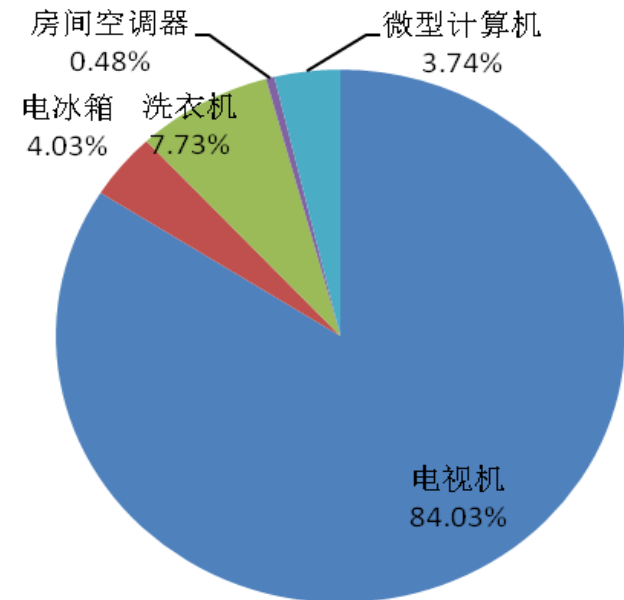


The amount of old appliances collected by the Trade-in Policy in 2011



Dating to December 2011, there were 105 processing enterprises authorized by the National Household Appliance Trade-in Policy, 84 enterprises listed in the WEEE dismantling and disposal enterprises dictionary, and 53 enterprises received the certification of WEEE processing (by May 20, 2012). Without the double counting, there were 140 WEEE recycler and processors in China.

According to the data from the Minister of Commerce, there were 56.331 million WEEE (which took 91.9% of the WEEE collected) dismantled and treated by the Trade-in Policy in 2011. Among them, there were 47.334 million TVs, 2.268 million refrigerators, 4.353 million washing machines, 271 thousands air conditioners and 2.104 million PCs.



The percentage of dismantled WEEE by the Trade-in Policy in 2011



Collection Prices during the Trade-in Policy (RMB)

Names Places	TVs	Refrigerators	Washing machines	Air conditioners	PCs
Beijing	3-35	3-40	3-45	60-240	15-30
Shanghai	5-20	20-30	20-30	50-200	10-30
Jiangsu	20-100	50-80	80-100	60-500	20-100
Zhejiang	10-100	50-60	40-80	60-550	20-50
Fujian	3-30	5-40	5-30	60-700	10-30
Anhui	5-35	35-45	5-30	50-350	15-40
Shandong	15-20	40	20-40	30-120	20-30

- ✚ Higher value of materials, higher collection prices
- ✚ More models difference, larger prices span
- ✚ Diverse in different places



Enterprises' experiences

Shenzhen GEM High-Tech Co.,Ltd

Wistron Advanced Materials (Kunshan) Co., Ltd.

Qingdao New World Group

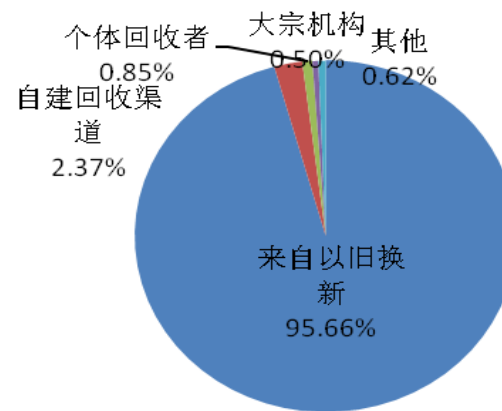


Section 4: Technology Study

11. Current situation of technologies in developed countries and area
12. List of recycling technologies by encouraged in China
13. Current situation of WEEE recycling technology in China
14. Current situation of technology application for WEEE recycling enterprises in China
15. Technology needs and trend of industry



From the end of 2011 to early 2012, CHEARI conducted a survey for 105 designated dismantling companies, through site visits, questionnaires and telephone researches. The survey mainly involved in the dismantling business on the recovery process and technology of the first batch of catalog products, including the annual handling capacity of the planning, the actual handling capacity in 2011, the recovery channels and the dismantling process. There were 26 questionnaires collected, which the return rate is 25%.



Five ways of collection



Technology needs:

- ✚ Efficient, flexible dismantling process design
- ✚ New dismantling technology for WEEE
- ✚ Comprehensive Utilization Technology of leaded glass in CRT
- ✚ Refrigerator polyurethane comprehensive utilization technology
- ✚ Intelligent classification technology of mixed plastics
- ✚ Efficient treatment for small components

Develop Trend:

- ✚ Improve the reliability of the technology
- ✚ Improve the efficiency of crushing and classification
- ✚ Comprehensive and professional
- ✚ Development between industries



Section 5: Expectation

16. problems of WEEE recycling industry in China

Recycling section

- **The management of WEEE recycling need to be improved**
- **Recyclers dismantled themselves commonly**
- **Lack of encouraging mechanisms to recycling companies**

Treatment section

- **The management system need to be improved**
- **Financial pressure**
- **Uneven levels of technologies, low comprehensive utilization rate of resources**
- **The problem of materials**
- **Treatment of hazard components**
- **Lack of information management system and information publication system**
- **Downstream channel is not smooth or out of control**



17. Suggestions on development of WEEE recycling industry in China

For
government

- Set up funding system
- Improve the management of comprehensive utilization rate of resources
- Establish WEEE recycling management system
- Establish the industry information management system
- Establish the system of WEEE treatment and greenhouse gas emission reduction accounting mechanisms
- Establish the professional training system
- Strengthen the management of recycling chain
- Strengthen the encourage policies for recycled products
- Strengthen the education

For
enterprises

- Improve the researches and promotion of new technologies
- Establish and spread collection channels
- Expansion of business areas
- Increase profits through management optimization
- Actively participate in the formulation of policies and standards

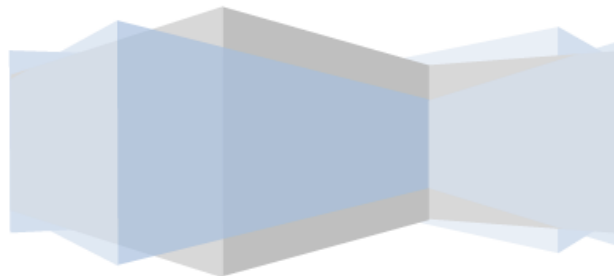


行业风云人物



企业风采

废弃电气电子产品处理企业名录



北京市

公司名称	北京市危险废物处置中心		法人代表	刘正时
资质	家电以旧换新指定拆解企业			
电话	010-80229462	传真	010-80229401	
地址	北京市朝阳区小黄庄北街2号外贸安贞 大楼C座402室	邮政编码	100013	
电子邮件		网址	www.bbmngwxfw.com	
拆解处理范围	拆解：废弃的电子电器产品、电子电气设备（包括电脑、手机、电视机、洗衣机、打印机、复印机、传真机、电话机、服务器、路由器、影音器件）			

公司名称	华新绿源环保产业发展有限公司★	法人代表	张军	
资质	家电以旧换新指定拆解企业，环保部电子废物拆解处置名录企业，环保部废弃电器电子产品处理资质企业			
电话	010-80829766	传真	010-80829766	
地址	北京市通州区中关村科技园通州园金桥科技产业基地景盛南四街19号	邮政编码	101102	
电子邮件	service@hxepd.com	网址	www.hxepd.com	
拆解处理范围	拆解：废弃的电子电器产品、电子电气设备（包括手机、打印机、复印机、传真机、电话机、服务器、路由器、影音器件等）			




This enterprise catalogue, introduced a total of 8 Important Persons of the Year, 4 outstanding enterprises, more than 140 processing enterprises. Among them there were 105 Trade-in Policy qualified dismantling enterprises, 84 electronic waste dismantling the disposal enterprises listed by the Ministry of Environmental Protection, and 53 WEEE recycling enterprises certified by the Ministry of Environmental Protection.





This enterprises catalogue attempted to evaluate these recycling companies by stars. The enterprise star assessment focused on the assessment of the enterprise information management and comprehensive utilization of resources. The well-done companies in information management, were assessed to the highest level of two stars. In the future, we will improve the corporate assessment index system, to make it more scientific and reasonable. We also hope that more enterprises could participate in the business researches in the following years.

公司名称	华新绿源环保产业发展有限公司 	法人代表	张军
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Electrical Appliance Recycling Technology Center

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► Introduction

Electrical Appliance Recycling technology Center is one of the most important R&D departments in CHEARI. We have started research on WEEE recycling issues commissioned by NDRC, MEP, MIIT, MOST and etc., including national and international policy, regulations, technologies and standards since 1998, undertaking many national research projects, providing technology support for governments on WEEE regulations and relevant policies in China. At the same time, Recycling Center devotes to research & development and promotion of WEEE recycling technology and equipment which is suitable for China. >>more



News Center



Policy Investigation



Recovery & treatment

China is a big country for E&E product production, consumption, and discard as

Technology

- [Disposal facility for CRT TV sets and CRTs](#)

Forum & Training



Thank you

