



SGP The GEF
Small Grants
Programme



联合国开发计划署/全球环境基金小额赠款计划 O2O模式整合电器电子废弃物 非正规回收行业项目

UNDP/GEF/SGP project
Project on Integrating Informal Sector of Electrical and Electronic
Waste Recycling through O2O Model



全球环境基金小额赠款计划
联合国开发计划署
中国有色金属工业协会
深圳市爱博绿环保科技有限公司

Global Environment Facility Small Grants Programme
United Nations Development Programme
China Nonferrous Metals Industry Association
Shenzhen Iboolv Environmental Technology Co.Ltd

1 项目背景概述

中国是电器电子产品生产、消费和出口大国，2015 年电视机、电冰箱、洗衣机、房间空调器、微型计算机产量约 8 亿台，相当于 2000 年的 9 倍。预计到 2016 年底，我国“四机一脑”的报废量将（第一次）达到 1.1 亿台，加上二手市场报废的数量，预计总报废量将超过 1.6 亿台。

但是由于中国回收体系建设的完善，大量的报废电器电子产品进入了非正规渠道进行处理，由于环保设备的缺失，在拆解和处理过程中产生了严重的持久性有机污染物和重金属污染。与此同时，正规的处理企业大多面临着原料紧缺、产能闲置的困境。

开展 O2O 模式整合电器电子废弃物非正规回收行业，对于保护环境、节约资源、规范废弃电器电子产品回收利用具有积极意义，并可由区域性向全国性推广。目前深圳市爱博环保科技有限公司已经在规范回收方式等方面进行了积极的探索。



1 Project Background Overview

China is a major producer, consumer and exporter of electrical and electronic products. In 2015, the output of TV sets, refrigerators, washing machines, room air conditioners and microcomputers was about 800 million units, equivalent to 9 times that of 2000. It is estimated that by the end of 2016, 110 million units of those five kinds of household appliances in China will come to the end of their service (for the first time). Together with the scrapped second-hand ones, the total number is expected to exceed 160 million units.

Under the incomplete recycling system in China, a large number of scrap electrical and electric products are improperly disposed without environmental protection devices, which causes serious persistent organic pollutants and heavy metal pollution during dismantling and treatment process. Meanwhile, the disposal enterprises in compliance with rules are mostly faced with obstacles like shortage of raw materials or idle capacity.

Integrating the informal recycling sector of electrical and electronic waste through the O2O model has positive significance for protecting the environment, conserving resources and regulating the recycling of waste electrical and electronic products, and can be promoted regionally to the whole country. At present, Shenzhen Iboolv Environmental Technology Co.Ltd is active exploring with regard to standard recycling methods.



2 项目区域概况

广东省深圳市，是中国南部海滨城市，毗邻香港。地处广东省南部，珠江口东岸，辽阔海域连接南海及太平洋。地理坐标为北回归线以南，东经 113° 46′ —114° 37′，北纬 22° 24′ —22° 52′。截至 2017 年末，深圳常住人口 1252.83 万人，实际管理人口超过 2000 万，城市化率 100%。

深圳作为全国改革开放的窗口，经济发展迅速，独具创新精神和创业氛围，是全国高新技术产业发展基地；地域邻近中国香港、台湾及海外，电子企业和电子批发市场众多，是国内电子产品流动的主要枢纽，电器电子产品批发零售业务闻名全国，电器电子产品产业链的各个环节交易繁荣发展。

在联合国开发计划署 / 全球环境基金小额赠款计划 (UNDP/GEF/SGP) 的支持下，中国有色金属工业协会再生金属分会联合深圳市爱博绿环保科技有限公司于 2016 年 10 月开始实施《O2O 模式整合电器电子废弃物非正规回收行业项目》。

2 Project Site Overview

Shenzhen, located at southern part of Guangdong Province, is a coastal city in southern China. The city is seated at the east bank of Pearl River Estuary, neighboring Hong Kong. Its vast expanse of sea area connects the South China Sea and Pacific Ocean. Shenzhen is located at 113° 46′ — 114° 37′ E and 22° 24′ —22° 52′ N (south of the Tropic of Cancer). By the end of 2017, the permanent population of Shenzhen was 12.53 million, the actual administrative population exceeded 20 million, and its urbanization rate was 100%.

As a window of reform and opening up, Shenzhen has developed rapidly, with innovative spirit and entrepreneurial atmosphere. It is a national high-tech industrial development base. Being close to Hong Kong, Taiwan and overseas countries, Shenzhen owns many electronic enterprises and electronic wholesale markets. The city, hub of domestic electronic products transportation, is well-known for its wholesale and retail business of electrical and electronic products throughout the country, leading to a comprehensive prosperity of all aspects of electrical and electronic products industry chain.

With the support of the UNDP/GEF/SGP, China Nonferrous Metals Industry Association Recycling Metals Branch (CMRA) and Shenzhen IboolvEnvironmental Technology Co.Ltd started implementing “Project on Integrating Informal Sector of Electrical and Electronic Waste Recycling through O2O Model” in Shenzhen in October 2016.



项目基地区域位置图
Project locations map

3 项目目标

本项目的总体目标是构建全国性的废弃电器电子产品第三方交易平台，分别为个体回收商和拆解企业提供合理透明的服务内容；项目实施后将逐步形成废弃电器电子产品规范合理的回收交易平台；总结项目成果和经验，最终形成一个政策建议报告并提交到政府相关部门。

3 Project Goal

The overall goal of the project is to build a nationwide third-party trading platform for waste electrical and electronic products, which will provide matched and reasonable service for individual recyclers and dismantling enterprises. After implementing the project, it will gradually establish a standard recycling trade platform for waste electrical and electronic products; summarizing achievements and experiences of the project, a policy proposal report was eventually formed and submitted to relevant government departments.

4 项目活动

Project Activities

4.1 项目启动仪式

2017年1月6日，项目启动仪式暨首次回收合伙人模式发布会在深圳福田召开。本次会议由中国有色金属工业协会再生金属分会主办，深圳市爱博绿环保科技有限公司、博绿网承办。全国回收、拆解企业代表和媒体朋友们近百余人参会。此次会议围绕如何正规回收，如何对接正规拆解企业，增强自身优势，加强运营能力而开展。协会代表、专家学者、相关企业代表等相继分享行业发展感言，为项目实施献言献策。

4.1 Project Launching Ceremony

On January 6th, 2017, the launching ceremony and the first session of recycling cooperators conference were held in Futian, Shenzhen. The conference was hosted by CRMA and organized by shenzhenIboolvEnvironmental Technology Co.Ltd. Nearly 100 media and recycling and dismantling enterprises representatives from the whole country attended the conference. The conference focused on how to properly recycle, how to link dismantling enterprises, strengthen their advantages and operational capabilities. Representatives of CMRA, experts and scholars, and representatives of relevant enterprises shared their opinions on development of the industry and provided suggestions for implementation of the project.



项目启动仪式现场
Project launching ceremony

4.2 媒体传播

利用微信、微博、腾讯、新浪、搜狐等媒体进行宣传，让尽可能多的社区回收废弃电器电子产品的小商小贩、一级二级回收商、废弃电器电子产品拆解企业均能了解此项目，认识到正规回收处理废弃电器电子产品的必要性和重要性。

4.2 Media Outreach

Using of WeChat, Weibo, Tencent, Sina, Sohu and other media to promote the project, more and more individual recyclers, primary and secondary recyclers, waste electrical and electronic products dismantling companies will have access to the project and realize the necessity and importance of properly recycling of waste electrical and electronic products.



媒体宣传
Media Outreach

4.3 公益环保宣传进课堂活动

2016年12月22号，受西乡小学校长邀请，由深圳市爱博绿环保科技有限公司与智废宝联合组织开展活动，通过课堂讲解回收知识、展示废物再制造模型、参观DIY作品，引发学生兴趣，提高师生的环保意识，建立废旧资源再利用的价值观念，并通过学生带动家长，从而带动社区及全体公民参与环境保护活动。

4.3 Environmental Protection Courses into Primary School

On December 22nd, 2016, invited by the schoolmaster of Xixiang Primary School, Shenzhen Iboolv Environmental Technology Co.Ltd and Zhifeibao organized an lecture in the school, which explained recycling procedures and waste re-manufacturing models, and displayed DIY works made by students. The activities stimulated students' interests towards the industry, raised teachers and students' awareness of environmental protection and the value of waste recycling. Environmental protection awareness thus can be spread by students into each family and community.



公益进学校宣传

Environmental protection lectures



课堂讲解回收知识

Recycling courses



废品DIY产品展示

DIY display

4.4 公益回收兑换进工厂活动

2017年3月，深圳市爱博绿环保科技有限公司与深圳工厂联合举行了现场回收兑换公益活动。通过展板、彩页宣传，展示了废弃电器电子产品的危害、再利用等多层宣传资料，引导居民增强回收意识；现场更是通过“废品换赠”、“变废为宝”等方式回收废旧电池、废旧手机、废旧家电等废旧产品，以提高工人参与度。

4.4 Recycling Events in Factories

In March 2017, Shenzhen Iboolv Environmental Technology Co.Ltd and factories in Shenzhen jointly launched a series of recycling and public welfare activities. Using display boards and brochures to show the hazards of waste electrical and electronic products, recycling process and other materials, we tried our best to enhance the recycling awareness of factory workers and residents; we also recycled used batteries, mobile phones and household appliances through events like “Gifts for Recycling” and “Turning Waste into Treasure”, which let more and more factory workers and residents participate in our undertaking.



居民积极参与，多种方式回收废旧品

Turning Waste into Treasure



公益回收兑换进工厂活动宣传
Gifts for Recycling

4.5 世界环境日活动

2017年6月5日，博绿网组织了一场“将垃圾分类进行到底”的手机拆解物分类示范主题环保宣传活动。现场除了宣传垃圾具体分类环保知识外，还进行简单的手机拆解物分类科普以及各零部件继续发挥余热情况讲解，并将细分的手机拆解物一一展示，向居民宣传垃圾分类，号召从身边的小事做起，用群众的力量实现从源头做好垃圾分类。

4.5 World Environment Day Activity

On June 5th, 2017, an event hosted by Boolv on the theme of mobile phone dismantling and sorting, “Stick It Out! Garbage Classification!” was carried out. Our staff lectured on garbage classification and environmental protection, mobile phone dismantling and recycling of different parts, and displayed mobile phone dismantling process. We appealed to people to start with daily necessities and do garbage classification, so the power of ordinary people can help us promote garbage classification from the source.



环保活动现场
Stick It Out! Garbage Classification!

4.6 全国巡讲回收交流会

O2O 模式整合电器电子废弃物非正规回收行业回收服务培训会分别在深圳、沈阳、宁波、成都、武汉、郑州举办。现场聚集了全国各地的回收商、回收企业、拆解企业等代表，相互分享正规回收的创新模式，积极探索正规回收的必要性。本次会议重在推进正规回收的统一规范，包括：统一服装、统一工牌、统一服务流程、统一回收管理、统一信息管理。

2018年1月23日，收收年度总结表彰大会在沈阳举行。跨行业协作是收收上线以来取得的重要成果，此次表彰会也是从信息源入手进行整合分散个体回收者的首次实践成果，通过表彰进行宣传，起到示范性带动效果。

4.6 Recycling National Tour Meeting

Integrating informal sector of Electrical and Electronic Waste Recycling Industry and Recycling Service through O2O Model Training Sessions were held in Shenzhen, Shenyang, Ningbo, Chengdu, Wuhan, Zhengzhou. The sessions gathered together representatives such as recyclers, recycling companies and dismantling companies across the country, sharing innovative models of recycling and discussing the necessity for recycling. This sessions focus on promoting same standards for recycling, including: uniforms, work cards, service processes, recycling management and information management.

On January 23, 2018, Shoushou Annual Summary and Awards Conference was held in Shenyang. Cross-industry collaboration is an important achievement of Shoushou since its going online. The conference is also the first practice achievement of integrating and scattered individual recyclers based on information source. The conference promotes its gains and plays an exemplary role.



交流会现场
The Conference

4.7 废弃电器电子产品绿色拆解利用交流会

2017年8月8日，O2O模式整合电器电子废弃物非正规回收行业项目环保技术交流会在霍林郭勒市举行。与会代表对废弃电器电子产品规范拆解及回收利用工艺技术进行了讨论，并对本项目后期顺利实施提出了针对性建议。

2017年8月31日，全国流动回收整合与正规化培训交流会在深圳举行。本次会议探讨如何整合全国流动回收散户从游击队变为正规军，成为生产企业回收货源的服务商，把握货源与机会找出生产责任制下回收突破口和发展与变革的新时代回收之路，让回收事业持续发展。



交流会现场
The Conference

4.7 Waste Electrical and Electronic Products Dismantling and Utilization Conference

On August 8th, 2017, Environmental Technology Exchange Conference on integrating informal sector of Electrical and Electronic Waste Recycling through O2O Model was held in Hologingol. Participants discussed the dismantling and recycling process technology of waste electrical and electronic products, and put forward targeted suggestions for implementation of the project.

On August 31st, 2017, the National Mobile Recycling and Formalization Training Seminar was held in Shenzhen. The seminar focused on how to gather together mobile recycling retailers and negotiate with them, trying to convince them to become the providers of recycling enterprises. This will help control the source of E-waste and find the breakthrough of E-waste recycling under the production responsibility system, opening a new era of E-waste recycling. Our industry will surely continue to grow.



环保利用交流会现场
The seminar

4.8 赠送期权

博绿通过首创合伙人的模式对在一定期限内达到稳定交易量的个体回收商，赠送总量不高于 20% 的期权，目前达成合伙人协议的有 20 余人。

4.8 Options as Bonus

As business partners, individual recyclers who have achieved stable trading volume within a certain period of time will be given an option of no more than 20%. At present, there are more than 20 people who reached a partnership agreement with the company.

4.9 平台担保

博绿通过与芝麻信用、交易大数据的联合，通过交易累计信用结算，信用高结算快，缓解回收商资金压力。

4.9 Third Party Guarantee

Boolv cooperated with Zhima Credit and other similar credibility platforms or companies. With the help of cumulative credit calculation of transactions, higher credit level will have the faster process, which alleviates the pressure on recyclers.



5 项目总结

本项目实施为线上部分和线下部分相结合。线上平台建设，引导回收商运营互联网+回收的创新模式进行货物的归集和交易，拓展回收前端的渠道及建立与后端拆解企业的联系，线下通过物流建设、会议培训、拆解技术交流等方式保障回收货物的环保、安全拆解再利用。

实施期间，共举办项目实施启动会、大众媒体宣传、公益环保宣传、公益回收进工厂、世界环境日宣传、回收服务培训会、废弃电器电子产品绿色拆解利用交流会、废弃电器电子产品环保利用交流会、期权“赠送”活动、平台担保等活动。

活动期间共有约 1200 人次参与，共发放宣传册约 1970 份。此外，根据点击量及关注人数估算，全国 120 万人次的小商小贩、330 个一二级个体回收商和 25 家以上的正规拆解企业已知晓此项目。

截止到目前为止，博绿网平台促成交易已超过 1600 万台废弃电器电子产品。范围覆盖河南、辽宁、重庆、广东、广西、四川、湖北、天津等省。通过微信小程序及公众号下单已达几万人次，APP 下载人数目前已超过上千人次，项目推广范围逐渐从区域性到全国范围内转变。

5 Project Summary

The project is carried out both online and offline. The online platform is providing a creative mode that combines the Internet plus recycling to do products collection and trading, creating more channels to collect E-waste from individual recyclers and linking them with dismantling enterprises. The offline part includes logistic training, lectures and training, dismantling techniques exchange and other ways to ensure safe dismantling and reuse of recycled products and environmental protection.

During the project, CMRA held a series of activity such as Project Launching Ceremony, media promotion, environmental protection events, recycling events in factories, World Environment Day promotion, Recycling Service Training, Waste Electrical and Electronic Products Dismantling and Utilization Conference, Waste Electrical and Electronic Products Environmental Protection Exchange Conference, options as bonus event, and third-party guarantee, etc.

About 1200 participants took part in project activities, and about 1970 brochures were distributed. In addition, according to the number of clicks and the number of followers, there were 1.2 million clicks are from small traders, 330 junior individual recyclers and more than 25 dismantling companies are aware of this project.

So far, the project has facilitated the deal of more than 16 million scrap electrical and electric products, covering Henan, Liaoning, Chongqing, Guangdong, Guangxi, Sichuan, Hubei, Tianjin and other provinces. Tens of thousands of people have placed orders through the WeChat applet and the public account. The number of APP downloads has now exceeded 1,000, and the project has gradually expanded from regional to national.

项目合作方: Project Partners:

全球环境基金小额赠款计划

The Global Environment Facility (GEF) Small Grants Programme (SGP)

小额赠款计划成立于 1992 年，是全球环境基金的共同项目，由联合国开发计划署负责实施。小额赠款计划在全球 125 个国家，向当地民间组织，特别是原住民、妇女、青年实施的可持续发展项目提供资金，以促进基于社区的创新、能力建设和赋能。小额赠款计划在全球已经支持了 20000 多个社区项目，工作领域包括保护生物多样性、减缓和适应气候变化、防止土地退化、保护国际水域、以及减少化学品的影响，同时发展可持续的生计。

The Small Grants Programme (SGP) is a corporate programme of the Global Environment Facility (GEF) implemented by the United Nations Development programme (UNDP) since 1992. SGP grant-making in over 125 countries promotes community-based innovation, capacity development, and empowerment through sustainable development projects of local civil society organizations with special consideration for indigenous peoples, women, and youth. SGP has supported over 20,000 community-based projects in biodiversity conservation, climate change mitigation and adaptation, prevention of land degradation, protection of international waters, and reduction of the impact of chemicals, while generation sustainable livelihoods.

联合国开发计划署

United Nations Development Programme

联合国开发计划署同社会各阶层的人们建立伙伴关系，帮助各国克服危机，推动和维持能够改善每个人生活品质的发展类型。在全球 170 多个国家和地区，我们提供全球视点和深入本土的见解，帮助建立民强国盛的国家。

三十多年来，作为联合国从事发展的全球网络，联合国开发计划署充分利用全球发展经验，支持中国制定应对发展挑战的解决之道，并为中国开展南南合作和参与全球发展提供协助。联合国开发计划署目前在中国的重点工作领域为：减少贫困、善治、危机预防与恢复及能源与环境。

UNDP partner with people at all levels of society to help build nations that can withstand crisis, and drive and sustain the kind of growth that improves the quality of life for everyone. On the ground in more than 170 countries and territories, we offer global perspective and local insight to help empower lives and build resilient nations.

UNDP has drawn on world-wide experience for over three decades to assist China both in developing solutions to its own ongoing development challenges, and in its south-south cooperation and engagement in global development. Domestically, our work focuses on Good Governance, Energy & Environment, Poverty Reduction and Disaster Management.

中国有色金属工业协会

China Nonferrous Metals Industry Association

中国有色金属工业协会于 2002 年 5 月设立中国有色金属工业协会再生金属分会。自成立以来，再生金属分会致力于推动有色金属再生资源行业的规范发展，有色金属废料的规范回收、资源化利用。

China Nonferrous Metals Industry Association established the China Nonferrous Metals Industry Association Recycling Metals Branch (CMRA) in May 2002. Since its establishment, CMRA has been committed to promoting the normative development of the nonferrous metals recycling industry, the recycling and resource utilization of nonferrous metals scrap in accordance with rules and regulations.

深圳市爱博绿环保科技有限公司

Shenzhen Iboolv Environmental Technology Co.Ltd

深圳市爱博绿环保科技有限公司致力于废旧电子垃圾的回收再利用，利用互联网+的技术方式，为用户提供 OMO 回收服务，让回收更简单，为回收带来美好改变。

Shenzhen Iboolv Environmental Technology Co.Ltd is committed to the recycling and reuse of electronic waste, with the method of "technology + Internet" to provide OMO recycling services for users, making recycling easier and bringing about changes for recycling.

