



## 【中/英】你從沒想過的家電廢棄回收再生之旅



廢冰箱妥善回收後，可使用內部的隔熱泡棉製成燃料棒，賦予回收家電新的生命。（圖／環保署回收基金會）

After waste refrigerators are properly recycled, we can produce fuel rods by using their internal insulation foam, which can give them new life.

### 【EN】The recycling process of waste electric household appliances that you have never anticipated

「那些舊家電該怎麼辦呢？」當多數人面對電視、洗衣機、電冰箱等電器商品時，雖然使用時間已經超過5年、10年，早就該換了，但沒有處理過舊家電的經驗，還真的不知道這些廢棄大型家電是應該要自己處理，還是找環保局來清理，或是找家電銷售業者來回收呢？

"What can we do with those old household appliances?" When dealing with televisions, washing machines, refrigerators and other electrical products, even though they have been used for more than five years or even ten years and are supposed to change, without the experience of disposing old home appliances, most people are so confused that they don't know if they should dispose these discarded large-sized appliances by themselves or call the local environmental departments to clean them up or to call home appliance sellers to recycle them.

過去一般民眾不清楚，而廠商也不一定交代說明後續處理事宜，「但其實一般民眾在購買新機（四機：電視機、洗衣機、電冰箱及冷、暖氣機）時，同品項、數量、時間及同送達地址的舊機可交由販賣業者免費搬、載運回收。」以營運廢家電回收處理業者的綠電再生總經理隋學光更進一步表示，回收時

民眾也應善盡義務，別將垃圾放在回收物裡面，造成後續清運困難。

In the past, the general public was not clear, and manufacturers could not explain the follow-up processing matters, either. "But actually, after purchasing new appliances (four waste appliances: televisions, washing machines, refrigerators and air conditioners), the general public can surrender the old appliances to the home appliance sellers to transport them free of charge and to recycle as long as the same number and kind of newly bought appliances are transported at the time and to the same delivery address." Sui Syue-Guang, general manager of E&E Recycling, a corporation engaged in recycling and disposing waste household electric appliances, further mentioned that the public should also do their duty of recycling properly by not putting garbage in the items for recycling, which will increase the difficulty for the follow-up clearance.

而回收大型家電，對環境最大的好處在哪裡？隋學光點出，一般人可能不清楚，但在他眼裡人們所稱之為的「垃圾」，其實有好大一部分是「放錯位置的資源物」，只要經由不同階段擁有者的努力，將裡頭的可用資源，系統性的拆解出來，就可以將之重新擺放回對的位置，讓它可以再被利用。

What is the greatest benefit for the environment when recycling large-scale appliances? General manager Sui pointed out that most people may be not clear on this, but from his view, the so-called "garbage" by most people are in fact "misplaced resources". As long as the owners put in effort in different stages, the available resources can be systematically extracted and then rearranged back to the right position to be reused.

電冰箱的隔熱泡綿（PUR）搖身一變成為燃料棒

The thermal insulation foam (PUR) of refrigerators can be turned into fuel rods.



圖說：將電冰箱回收後，裡頭的隔熱泡綿經分選純化等處理後即可化身為燃料棒，有效降低焚化廠負擔。（圖／環保聯盟回收其簽名）

After refrigerators are recycled, the inner thermal insulation foam can be turned into fuel rods after being selected, purified and undergoing other treatments, which can effectively reduce the burden of the incinerators.

回收廢家電器強調整機回收，如廢電視機回收，須包含映像管及機殼；廢洗衣機回收須包含馬達及機殼；廢電冰箱回收須包含壓縮機、馬達及機殼（含門）；廢冷、暖氣機回收，須包含壓縮機、馬達、冷凝管及機殼。

The appliances should be recycled completely, such as a waste television with its image tubes and enclosure, a waste washing machine with its motor and enclosure, a waste refrigerator with its compressor, motor and enclosure (including doors) and a waste air conditioner with its compressor, motor, condensing tubes and enclosure.

會這麼強調整機回收的原因為這些零件隨意棄放，容易造成環境污染，但如果可以將之正確回收，引導至再製再利用的流程裡，就可以讓垃圾變黃金，這也是隋學光強調的「將垃圾放對位置，就可以變成有價值的資源物」的原理了。

It cannot be emphasized more that these appliances should be recycled completely because if their parts are discarded at will, it may easily cause environmental pollution. Nevertheless, if they can be correctly recycled by being guided to the process of being reproduced and reused, they can become something of value, which is also the idea that "as long as we put garbage in the right place, they can become a valuable resource," Sui Syue-Guang emphasized.

隋學光舉例，冰箱體積大，可以拆解出許多資源物，例如冰箱裡頭的隔熱泡棉(PUR)，體積大又難拆解，更不可能自然分解在自然之中，但需要高熱質才能焚化的PUR，經過處理後，就變成轉能設施的最愛，可以製成燃料棒供給焚化爐和水泥窯作為使用，這就是回收再利用的最好例證。

Mr. Sui took another example that a refrigerator is so large that from which many resources can be extracted, such as the thermal insulation foam (PUR), which has occupied a great space and is difficult to be disassembled nor to be decomposed naturally in nature, but after we incinerate the PUR with high heat, after treatment it can become the favorite of energy transfer facilities by being made into fuel rods for incinerators and cement kilns, which serves as the best example of recycling.

此外，在手機、電腦、電視等電子產品更新速度日新月異的情況下，廢棄電子產品的處理更成為環保界中的大議題，面板的平均壽命為5到10年，如不適當處理勢必會造成環境污染，比方「液晶」密度與水相似，若未妥善回收，便有可能隨著地下水流，進入生態循環中，造成危害。

In addition, mobile phones, computers, televisions, and other electric products are getting updated at a rapid pace, waste electric product treatment has also become a major issue with regard to environmental protection. The average life of the panel is 5 to 10 years, and if not properly treated, it will definitely pollute our environment. For example, the density of "LCD" and of water are similar, if not properly recycled, it may be harmful when it flows with groundwater and into the ecological cycle.

但其實液晶螢幕是可以經過分類、萃取、純化、調質及原料化後，最後又再萃取出液晶，重複供給面板廠利用再製，這樣解決了環境問題，更可以降低面板生產成本，成為面板廠最喜歡採購的原料之一。

Moreover, the LCD screen can be sorted, extracted, purified, refined and turned into raw materials, and finally, the liquid crystal will be extracted and supplied to the panel factories again for reproduction, which cannot only solve environmental problems, but also reduce the cost of panel production for it can become one of the raw materials that the panel factories procure the most.

簡而言之，正確回收廢家電有益無害，民眾可以找過去購買商品時的經銷商、上網搜尋專營廢棄物回收

的機構、在回收事前聯絡清潔隊、自行送交回收機構或等待「資源回收日」時交給清潔隊處理。

Briefly speaking, the correct recycling of waste appliances is beneficial and harmless, so the public can go to the appliance sellers with whom they have purchased products before, or search for such corporations specializing in waste disposal and recycling, or contact the cleaning team before recycling, or send these appliances to the recycling stations by themselves or hand them over to the cleaning team on the "Resource Recycling Day".

畢竟地球資源有限，該如何降低為了營造更方便舒適的生活，所帶來的環境危害，將資源利用極大化，促使資源進入循環體系再利用，應該是地球村人民共同秉持的信念與課題。

Since we have only limited resources on earth, the question people around the world should ask is how can we reduce the environmental hazards when trying to create a more convenient and comfortable life and use the maximum of all resources by recycling and reusing them.

“ 延伸閱讀影音：[廢家電回收再製 創新技術締造新價值!](#)

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