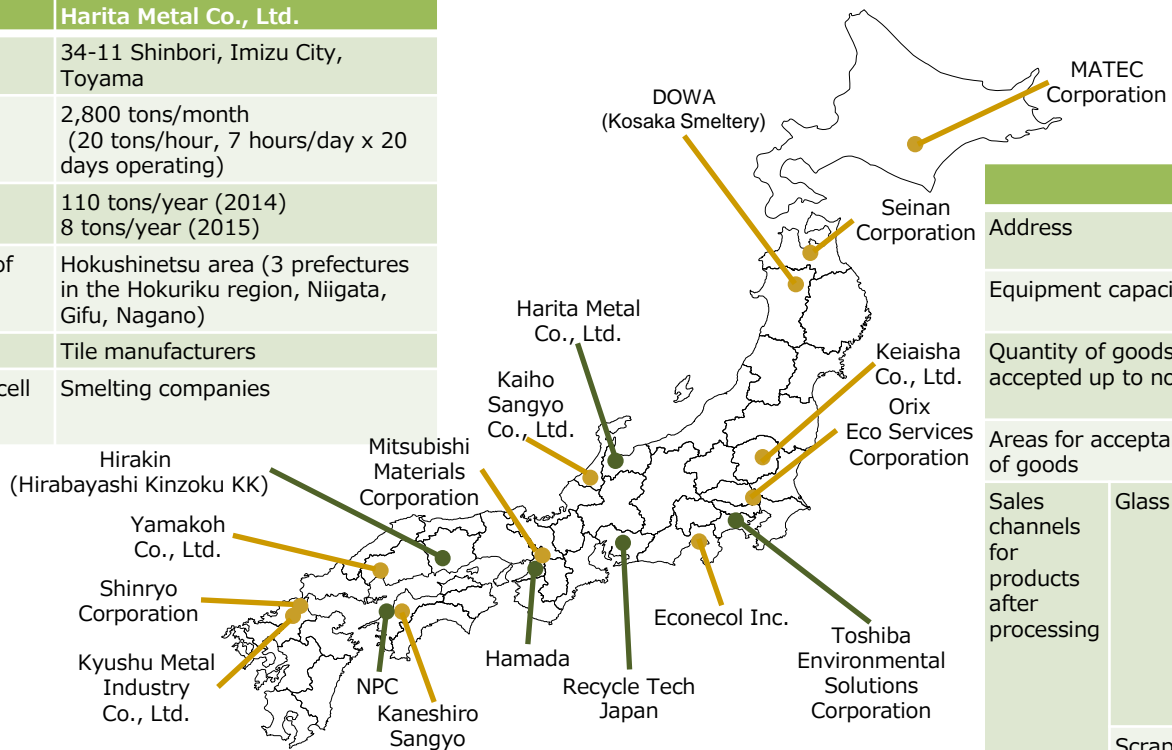


# Facilities capable of recycling photovoltaic cell modules (GRCJ GReAT6)

○ The facilities that are currently able to recycle photovoltaic cell modules as determined by the Glass Recycling Committee of Japan (GRCJ) are as follows.

		Harita Metal Co., Ltd.
Address		34-11 Shinbori, Imizu City, Toyama
Equipment capacity		2,800 tons/month (20 tons/hour, 7 hours/day x 20 days operating)
Quantity of goods accepted up to now		110 tons/year (2014) 8 tons/year (2015)
Areas for acceptance of goods		Hokushinetsu area (3 prefectures in the Hokuriku region, Niigata, Gifu, Nagano)
Sales channels for products after processing	Glass	Tile manufacturers
	Scrap cell sheets	Smelting companies



- Already accepting goods for recycling
- Has the capability to accept goods for recycling

		Toshiba Environmental Solutions Co.
Address		20-1 Kansei-cho, Tsurumi-ku, Yokohama City, Kanagawa
Equipment capacity		Crushing capacity 44 tons/month/machine
Quantity of goods accepted up to now		180 tons/year (10,000 sheets/year) Note: crystalline system 250W class Average for 2013 - 2015
Areas for acceptance of goods		Head office: Kanto region Affiliates: Nationwide
Sales channels for products after processing	Glass	(1) Damaged goods as well as modules with high resource value (with large quantities of Ag) → Crushed and provided to smelting companies as resources (2) Undamaged modules → Separated and recycled as sheet glass (currently in development)
	Scrap cell sheets	Separated and then recovered as battery powder (in a powdered state) and provided to smelting companies as a resource

		Hamada Co., Ltd. / NPC Inc.	
Address		2889 Nishihabu-machi, Matsuyama-shi, Ehime	7-5 Keihinjima 2-chome, Ota-ku, Tokyo
Equipment capacity		86.4 tons/month (4.32 tons/day x 20 days)	86.4 tons/month (4.32 tons/day x 20 days)
Quantity of goods accepted up to now		10 tons/year	—
Areas for acceptance of goods		Nationwide but primarily the Kinki region	Nationwide but primarily the Kanto region
Sales channels for products after processing	Glass	Glass manufacturers (anticipated)	Glass manufacturers (anticipated)
	Scrap cell sheets	Smelting companies	Smelting companies
Notes		Research institution owned by NEDO (modules are provided as research materials)	Used in prototypes Acquisition of intermediate processing permit expected in April 2017 or thereafter

		Recycle Tech Japan Co., Ltd.
Address		204 Jinguji 1-chome, Minato-ku, Nagoya City
Equipment capacity		642.6 tons/month
Quantity of goods accepted up to now (tons/year)		2014 Approx. 54 tons/year Approx. 2,700 sheets 2015 Approx. 36 tons/year Approx. 1,800 sheets
Areas for acceptance of goods		Nationwide
Sales channels for products after processing	Glass	Cullet trading companies (for use as raw material for glass wool)
	Scrap cell sheets	Rare metal recycling companies

# Glass recycle of PV panel

## 太陽光パネルのガラスリサイクル

### 全国リサイクルシステムの構築に向けた検討

#### ● リサイクルシステムの体制イメージ

【条件】  
 ガラスカレット: 有価物  
 セルシート: 有価物

使用済太陽電池モジュール  
 リサイクル技術

圧縮破砕  
 (ガラスのみ破砕が可能)  
 ・ リサイクルテック・ジャパン(株)



シュレッダー破砕+ジグ選別  
 (破砕後にセルの異物を除去)  
 ・ ハリタ金属(株)



せん断加工  
 ・ (株)東芝環境ソリューション

ホットナイフ分離法  
 (ガラスと金属のリサイクル技術)  
 ・ (株)NPC、(株)浜田 (NEDO)



使用済  
 太陽電池モジュール  
 (リユース不適品)



有価物

ガラスカレット



有価物

セルシートくず



製品化

セラミック製品  
 (タイル等)

- (東海地方)
- ・ 丸美陶料(株)
  - ・ 立風製陶(株)
  - ・ クリスタルクレイ(株)



防音パネル

- ・ (株)ライテック

有用金属の回収

乾式精錬

有用金属

- (精錬各所)
- ・ 三井金属鉱業(株)

- ・ 銀

対応可能な施設を、全国にてリストアップ