

Swiss PV Circle

Work package 4 - Module tracking

Documentation "Requirements for manufacturer-specific collection of photovoltaic modules by the recycling system"

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Contents

1. Initial situation	2
2. Prerequisites	2
3. System customisations	2
4. Terms and conditions	3
4.1 Structure of the solution	3
4.2 Operational business	3
4.3 Quality	3

1. Initial situation

SENS operates a take-back and recycling system for PV modules and associated electrical and electronic devices (cables, inverters, optimisers, etc.) for the PV industry. With the expansion of renewable energies, the quantities of PV modules that are disposed of in the SENS system will also increase in the medium term (natural hazards, dismantling or replacement of systems, warranty cases, etc.).

The PV industry is committed to sustainability and individual manufacturers are endeavouring to use raw materials from recycling for the production of new PV modules with the latest technologies. To this end, it may be necessary for certain PV modules to be collected and recycled separately from the rest ("separate take-back channel").

SENS supports the industry's sustainability efforts. It offers manufacturers and importers (hereinafter "manufacturers") the opportunity to set up such a separate take-back channel and operates it as part of the take-back and recycling system for PV modules. In this way, PV modules from a manufacturer or a specific product family can be recycled more effectively and an additional contribution to sustainability can be made.

This document describes the requirements, the necessary technical system adjustments and the conditions under which SENS can set up and operate a separate redemption channel.

2. Prerequisites

- The manufacturer who wants to set up a separate take-back channel is part of the SENS photovoltaic industry solution and pays the necessary advance recycling fees (ARF).
- The manufacturer has determined which modules (brand, products) are to be managed in the separate take-back channel (hereinafter "target modules")
- The manufacturer defines the quality requirements for processing the separate take-back channel, including quality requirements for the recyclable fractions.
- The manufacturer identifies a PV recycler who is to process the PV modules in the separate take-back channel ("target recycler"). If required, SENS provides support in identifying the target recycler.
- The manufacturer and SENS have concluded a corresponding supplementary agreement on the operation of a separate take-back channel.
- The target recycler has concluded the SENS contract as a recycling partner for PV modules.
- The target recycler has passed the acceptance audits and is a recycling facility certified by an independent inspection body (TK SENS) in accordance with the SN EN 50625 series and the requirements of SENS. If no certification is available, the separate take-back channel can be operated on a pilot basis for a limited period of time.

3. System customisations

Technical system preparations (SENS-Online):

- The system must provide the necessary data fields for pick-up orders with the required precision (e.g. manufacturer and model as a drop-down menu, no free text).
- System must recognise collection orders from target modules and assign them to the target recycler or restrict the selection of recipients.

- Order must be regularly passed on to selected target recycler who carries out the logistics and recycling.

4. Terms and conditions

4.1 Structure of the solution

SENS carries

- the project management effort involved in setting up a separate take-back channel.
- expenses that it can carry out within the scope of its existing activities.

The manufacturer carries

- all other additional expenses.

4.2 Operational business

- SENS compensates the target recycler who receives the separately managed PV modules at the standard rates that apply to all PV recycling partners recognised by SENS.
- The manufacturer shall bear any additional costs. If there is no other contractual agreement between the recycler and the manufacturer, SENS acts as a clearing centre. It invoices these additional costs to the manufacturer and compensates the recycler according to the verified material flows in SENS Online and the material accounting.

4.3 Quality

SENS guarantees that all collection orders that have been recorded correctly are assigned to the defined target recycler. A minimum quantity of one full pallet (approx. 20 modules) applies to the collection order.

SENS does not accept any responsibility for:

- Foreign materials in the separate take-back channel: The sender is responsible for registering target modules in collections in the separate take-back channel.
- Collection of target modules in the mixed take-back channel: The sender is responsible for correctly recording relevant quantities of target modules as a separate collection order.

Re-sorting of target modules that were incorrectly disposed of in the mixed take-back channel is excluded.