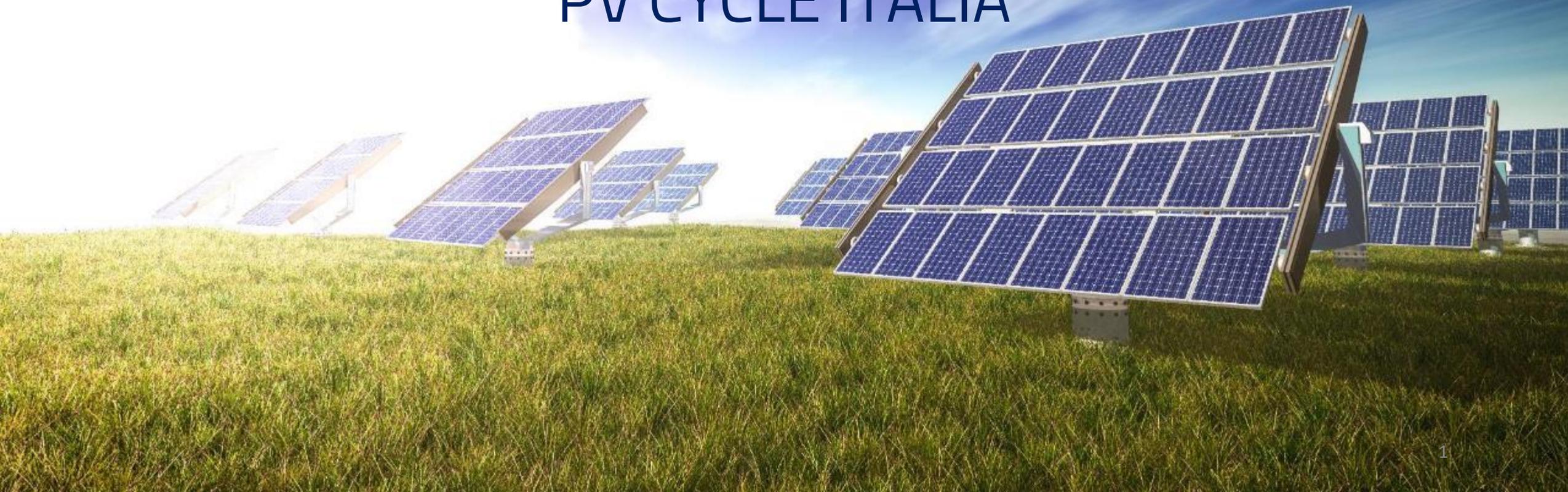




ANNUAL REPORT 2022

PV CYCLE ITALIA



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INTRODUCTION

The PV panel industry is a key asset for our country's energy transition that not only promises to make a tangible impact in terms of avoided emissions and climate change mitigation, but can also create new quality jobs, stimulate technological innovation and foster energy independence.

PV CYCLE ITALIA serves the photovoltaic world and more. In 12 years, it has collected a total of **22,052** tons, of which **7,112** tons in **2022** only, corresponding to over **1.1** million panels sent for treatment for material recovery.

This evolution allows us to meet all market needs and to respond with 100% compliance solutions to the difficult Italian regulatory environment.

I would like to thank the members and customers of **PV CYCLE ITALIA** for their trust and support, but nothing would be possible without the dedication of my team and the support of our international structure.

People make the difference, the challenges ahead are many, and I am proud to be part of this team to tackle them together.

Rosa Narcisi

Country Manager of PV CYCLE ITALIA



LIFE CYCLE ASSESSMENT

Life Cycle Analysis of production processes, known internationally as **LCA** (*Life Cycle Assessment*), is an analysis methodology that can provide a quantification of environmental impact.

The LCA analysis is conducted according to the method that assumes that the second raw material put on the market for new production represents an environmental benefit, as it replaces an equivalent amount of virgin material, which would also have to be extracted *ex novo*.

The objective of the analysis is to measure the environmental benefit that the recycling of the constituent materials of PV CYCLE ITALIA's waste enabled*.

IMPACT INDICATOR:

Kg CO₂ – **Global Warming Potential** (GWP): describes the potential contribution of a greenhouse gas to global warming, in terms of the greenhouse effect, over a 100-year time interval, and is expressed in kg CO₂ equivalent.

*LCA analysis, conducted by Interzero Italy Srl, with screening based on primary and secondary data according to the relevant ISO standards, with SimaPro software and Ecolinvent and WEEE LCI databases.



TREATMENT AND RECOVERY HOUSEHOLD CYCLE

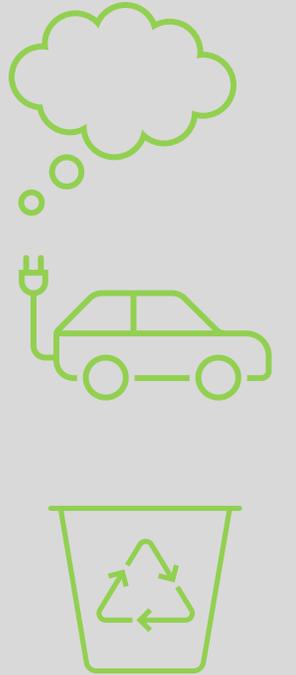


HOUSEHOLD WEEE GROUP R1 – Refrigeration appliances

PV CYCLE ITALIA managed **486** tons of Household WEEE Group R1.

The total impact avoided thanks to the treatment efficiencies of the plants amounts to -
519.356,53 kg di CO₂eq.

This value corresponds to the life cycle emissions of **73 EURO4 gasoline cars**.



HOUSEHOLD WEEE GROUP R2 – Large household appliances

PV CYCLE ITALIA managed **880** tons of Household WEEE Group R2.

The total impact avoided thanks to the treatment efficiencies of the plants amounts to - **723.229,58** kg CO₂eq.

This value corresponds to the life cycle emissions of **101 EURO4 gasoline cars**.



HOUSEHOLD WEEE GROUP R3 – TVs

PV CYCLE ITALIA managed **34** tons of Household WEEE Group R3.

The total impact avoided thanks to the treatment efficiencies of the plants amounts to -
9.197 kg CO₂eq.

This value corresponds to the life cycle emissions of **1 EURO4 gasoline car**.



HOUSEHOLD WEEE GROUP R4 – Various electronic products

PV CYCLE ITALIA managed **4.500** tons of Household WEEE Group R4.

The total impact avoided thanks to the treatment efficiencies of the plants amounts to -
2.551.832 kg CO₂eq.

This value corresponds to the life cycle emissions of **358 EURO4 gasoline cars**.

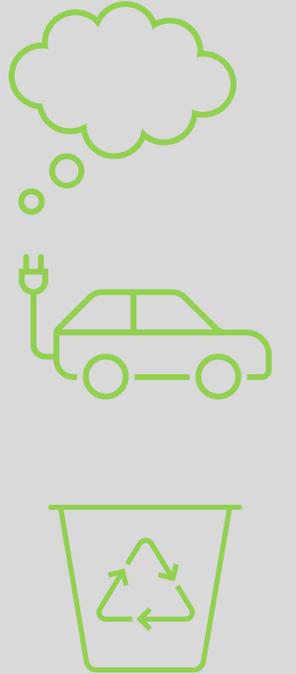


RAGGRUPPAMENTO HOUSEHOLD WEEE GROUP R5 – Light sources

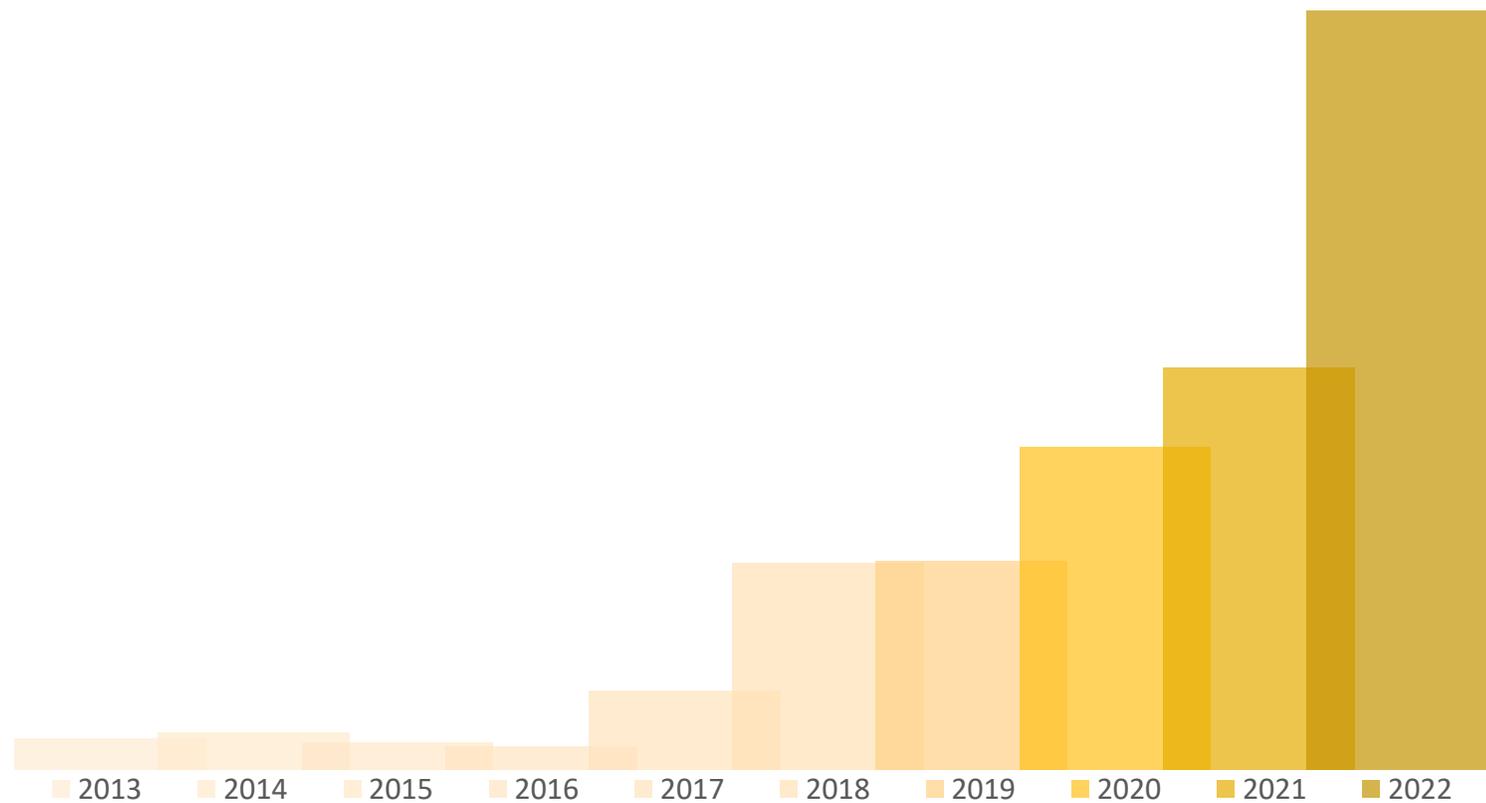
PV CYCLE ITALIA managed **3,4** tons of Household WEEE Group R5.

The total impact avoided thanks to the treatment efficiencies of the plants amounts to -
836 kg CO₂eq.

This value corresponds to the life cycle emissions of **1 EURO4 gasoline car**.



GROWTH IN THE COLLECTION OF PV PANELS



LCA ANALYSIS OF END-OF-LIFE PV PANELS

PV CYCLE ITALIA managed more than **11,000** tons of PV PANELS.

The total impact avoided over the two years amounts to **-23.579.947,11** kg CO₂eq.

This value corresponds to the life cycle emissions of **3.312 EURO4 gasoline cars**.



LCA ANALYSIS OF END-OF-LIFE WASTE MANAGED BY PV CYCLE ITALIA 2021-2022

The impact analysis conducted regarding the end-of-life of waste managed by **PV CYCLE ITALIA** during the two-year period **2021-2022**, shows that the total **CO₂eq** avoided corresponds to more than **27,000** tons, equivalent to the emissions of **3,850 EURO4 gasoline cars**.



REDUCE, REUSE, RECYCLE



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