Environmental impact assessment of photovoltaic inverter production process

Overview

The updated IEA PVPS Task 12 Fact Sheet provides a comprehensive assessment of the environmental impacts associated with PV systems. It highlights the significant advancements made in PV technology, emphasizing improved efficiencies and reduced environmental footprints. The goal of the study is to assess the environmental impacts of a photovoltaic system produced in China, Shanxi province, later transported to Germany for the use and end-of-life phases, when it is transported to a facility in Münster for recycling while the non-recyclable fraction is sent to. To address sustainability concerns in the PV sector, GEC launched its EPEAT® ecolabel in 2017, providing a framework and standardized set of performance objectives for the design and manufacture of more sustainable PV modules. The analysis was carried out applying the ReCiPe 2016 model and the Life Cycle Assessment (LCA) approach.

Article Content

IEA-PVPS releases fact sheet on environmental life ...

The updated IEA PVPS Task 12 Fact Sheet provides a comprehensive assessment of the environmental impacts associated with PV ...

Photovoltaic Manufacturing Factories and Industrial ...

Two comparative LCAs are performed. The first compares the annualized environmental impacts of the developed LCI sets with four existing ...

Case study: modeling the life cycle of a PV system with HiQLCD ...

The system includes a PV module, its mounting structure and other system components, including a PV inverter and junction box. This LCA is carried as an internal study with the purpose of using the ...

An Updated Life Cycle Assessment of Utility-Scale Solar ...

We analyze and present results for four main LCA metrics: cumulative energy demand (CED), greenhouse gas (GHG) emissions, energy payback time (EPBT), and carbon payback time (CPBT).

PHOTOVOLTAIC MODULES AND INVERTERS

To address sustainability concerns in the PV sector, GEC launched its EPEAT® ecolabel in 2017, providing a framework and standardized set of performance objectives for the design and ...

Life cycle assessment of photovoltaic electricity production ...

Therefore, the objective of this study is to assess the environmental and human health impacts of PV electricity production by grid-connected mono-Si residential PV systems in Canada ...

Original Research Environmental Impact Assessment of the ...

(1) To make the impact assessment process reasonable and efective, the selection and definition of appraisers should be based on the production process and the mechanism of environmental ...

Comparative life cycle assessment of photovoltaic systems: An ...

The production of photovoltaic (PV) systems is subject to continuous technological development and geographical shifts in manufacturing, leading to changes in economic aspects and ...

Management of Environmental Life Cycle Impact Assessment of a ...

A life cycle assessment was carried out on a real 2 MW photovoltaic power plant located in the northern part of Poland. The analysis was carried out applying the ReCiPe 2016 model and the ...

Environmental Life Cycle Assessment of Electricity from PV systems ...

Life Cycle Assessment (LCA) is a structured, comprehensive method of quantifying material and energy flows, including the associated emissions caused in the life cycle of goods and services.

Contact Us

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