



Global Institute for  
Structure relevance,  
Anonymity and  
Decentralization i.G.

**GISAD comment on [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12819-Ecodesign-European-Commission-to-examine-need-for-new-rules-on-environmental-impact-of-photovoltaics\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12819-Ecodesign-European-Commission-to-examine-need-for-new-rules-on-environmental-impact-of-photovoltaics_en) .**

GISAD (Global Institute for Structure relevance, Anonymity and Decentralisation i.G.) is an institute in founding. GISAD wants to develop a digital system (EU-D-S) from the perspective of the citizens of Europe, which can hold its own in system competition with gatekeepers and a social credit system.

The aim of GISAD is to support the creation of a holistic Marshall Plan, as called for by the President of the European Commission, Ursula von der Leyen. The core of the Marshall Plan must be a digital concept adapted to civil rights and diversity. If individual measures are taken without an overall system of their own, Europe runs the risk of losing the system competition to other economic areas such as a centrally controlled China.

- GISAD's opinion is subject to the proviso that it is to be as part of an overall digital concept understood (multiple use of the same infrastructure without additional costs).

GISAD has defined three goals on which a Marshall Plan should focus:

1. The optimal refinement and simple exploitation of digital data, while maintaining diversity and performance-adopted involvement of all parties involved in the value creation.
2. The stigma-free, lifelong digital inclusion of all citizens with incentives for self-development.
3. The digital guarantee of the necessary state tasks to maintain security for citizens, the economy and the state, while preserving pre-digital democratic achievements.

### **Challenges:**

GISAD welcomes the initiative of the EU Commission to standardize photovoltaic modules, inverters and systems. GISAD does not see it as its task to deal with the details of legal regulations. GISAD develops general principles and recommendations from the perspective of an EU Marshall Plan, which should be into account taken in the legislation. GISAD negates 1. "no action" or 2. "self-regulation" as this has not worked in the past. This leaves options 3-6. GISAD has already commented on the fundamental challenges for PV installations in various EU initiatives, see <http://gisad.eu/en-eu-initiative-digitalising-the-energy-sector/> , <http://gisad.eu/eu-initiative-anpassung-an-den-klimawandel/> and <http://gisad.eu/de-eu-initiative-energieeffizienz-ueberarbeitung-der-richtlinie-ueber-die-gesamtenergieeffizienz-von-gebaeuden/> .

Interdisciplinary aspects need to be into account taken in the development of guidelines for PV.

### **Economic incentives:**

- Energy efficiency must be decentral calculated for each object, taking into account a "product carbon footprint". For each energy producer in the portfolio, the manufacture, extraction, transport of raw materials, preliminary products, production and distribution must be deducted from the "product carbon footprint" (business-as-usual CO<sup>2</sup> expenses). Use, after-use and disposal/recycling remain. These values are to be in a table entered and set against the measured real consumption.
- It must always be more expensive to replace a working inverter instead of upgrading an old inverter.
- Business models and digital systems must be, based on them promoted in which additionally required energy can be exchanged among several decentralized load balance systems.
- Develop staggered subsidy incentives depending on the self-sufficiency of the systems.

### **Technological Concepts:**

- Promote load management concepts which can provide as precisely as possible with the help of artificial intelligence the amount of additional electricity to volatile power sources in order to achieve load balancing in a decentralized manner in the object or a region.
- Consideration of a sustainable design of an inverter that can be via single modules expanded and cascaded when are PV modules expanded.
- In an EU-D-S it is possible to offer surplus electricity anonymously via a unidirectional interface or to exchange it at another time, see <http://komon.gettime.de/patentanmeldungen/>. Suppliers can remain anonymous and bill anonymously too.
- Only for updates does the user have to establish a bidirectional connection; for example, he can trigger an action via his smartphone.
- The decentralized system with unidirectional connections ensures maximum data security and largely prevents cyberattacks.
- Downward compatible open software interfaces should become standard. All values provided by old inverters must also be available for the new inverters, optionally only for the intranet. A display of device values should be only in the cloud prevented.

### **Legal framework:**

- Laws and standards should be with economic and technological requirements aligned. For example, a legal update obligation should not justify the behavior of inverter manufacturers to display the PV annual yield in the cloud.