



# Ecodesign, Energylabel and Ressource efficiency of chalgogenide thin film technologies

Progress update on the Sustainable Product  
Policy Instruments in the EU

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President, PVthin, 25 May 2020  
Virtual Chalcogenide PV Conference

# Agenda

- Reminder: EU Product Policy Instruments
- Results of the Preparatory Study
- Next steps in the regulatory process
- Opportunities for chalcogenide thin film technologies
- Community to-do's

# EU Product Policy Instruments

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- Eco-Design
- Energy Labelling
- Green Public Procurement
- Ecolabelling





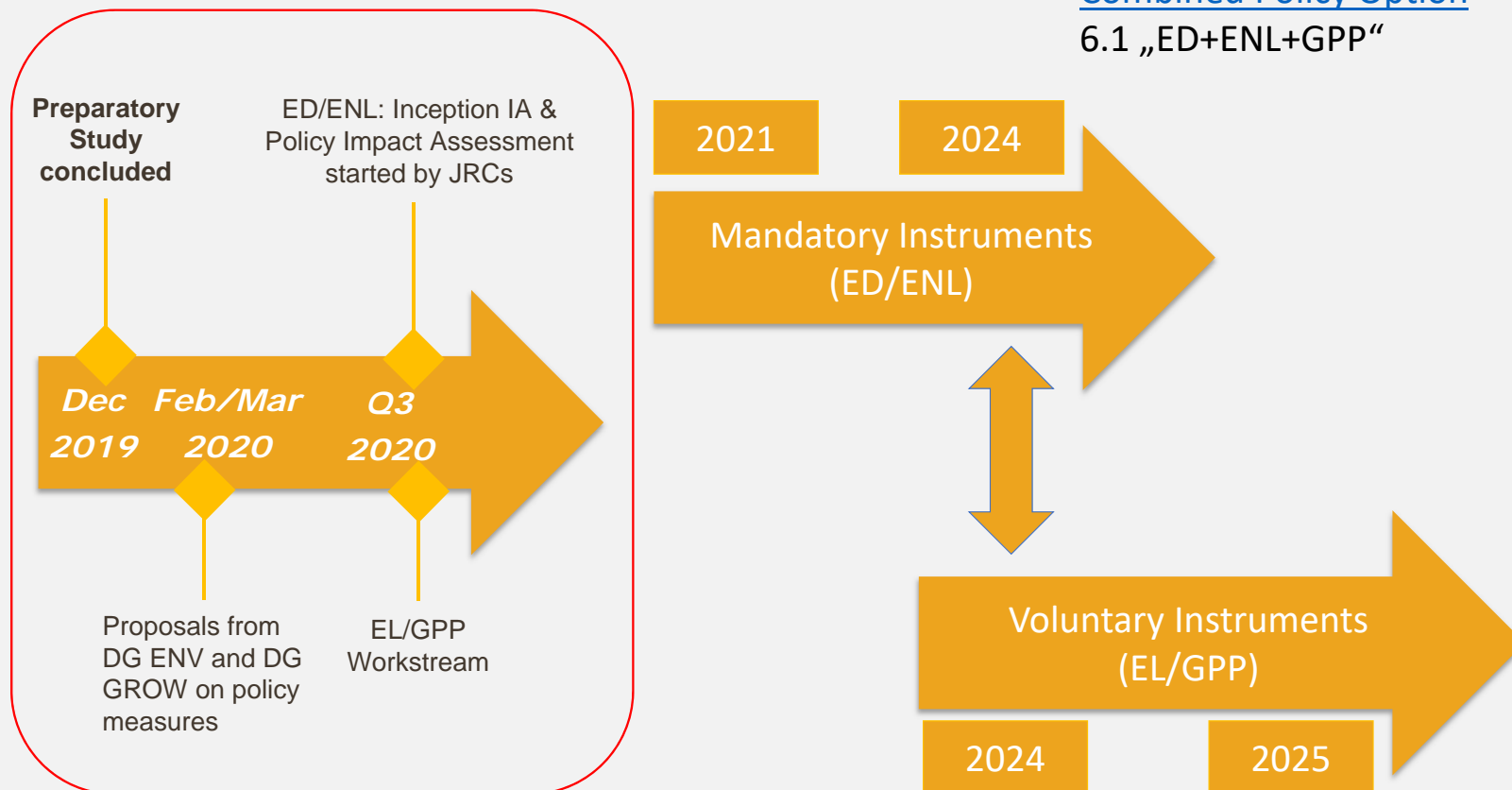
# Results of the Preparatory Study

- **Residential-scale PV systems:** „The CIGS module is the best (currently) available technology (BAT) from an environmental perspective (when looking at primary energy), taking into account that the 2025 option is a hypothetical case.”
- **Commercial & utility-scale PV systems:** „In the commercial market segment, the design option incorporating a CdTe module technology is the BAT. Whereas at the utility scale the design options incorporating a tracker and CdTe respectively are closely matched as the BAT.”
- **Energy Efficiency:** „Based on the results obtained from the Ecoreport tool for the lead indicator of primary energy (GER), the Best Available Technology (BAT) is, for the residential market segment, the CIGS thin film design and for the commercial and utility segments, the CdTe thin film design.”
- **Life Cycle Costs:** „From a life cycle cost perspective, the thin film products also appear to deliver the least life cycle costs.”

Chalcogenide Thin-Film PV technologies have been confirmed as best available technology (BAT) options with the lowest resource use and emission profiles as well as least life cycle costs for solar electricity generation.

# Next steps in the regulatory process

## Combined Policy Option 6.1 „ED+ENL+GPP“



Source: [Preparatory study for solar photovoltaic modules, inverters and systems - Draft Report Task 8: Policy Recommendations](#); Dodd, Nicholas; Espinosa, Nieves; December 2019

# Opportunities for Chalcogenide Thin-Film PV

## ➤ PV modules:

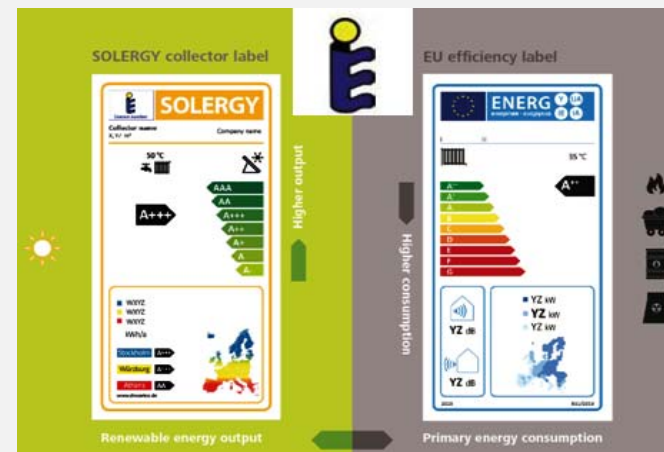
- Requirements on **life time electricity yield** (2.1)
- Performance requirements on **quality, durability and circularity** (2.2)
  - Durability product test sequency (IEC 61215/IEC TS 62941/IECRE OD 405)
  - Declaration on lifetime performance degradation (30 years)
  - Reporting on Repairability
  - Reporting on Dismantleability
  - Material disclosure

## ➤ Life Cycle GER and GWP information requirement

- EPD for representative product from each module / inverter – including at least GER and GWP shall be developed (in conformity with EN 15804 / PEFCR + registration)

## ➤ Energy Label for residential systems:

- < 10 kWp system size, including BIPV (if made up of one discrete array)
- As-built label (not as-monitored)
- In conjunction with ED requirement for modules (2.1) and inverters (2.3)
- Yield calculation according to transitional method
- System yield-based Energy Efficiency Index (EEI)
- Calculation of overall yield derived from module, inverter yield and performance ratio
- Notional 30 years service life
- For closest representative climate zone
- Application of listed derate factors with prescribed default values (from implementing regulation)



# Community To Do's

- **Get involved** in the different consultation processes throughout the next year (Consultation Forum Standards & Consultation Forum Obligatory Policy Instruments)
- **Share your expertise** with the ETIP-PV Joint Mission Group [WG5-ECO] to draft input recommendations for the European Commission and the JRC on specific criteria and the current state-of-the-art



# Thanks!

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the global voice of thin-film  
PV?

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