

# **Submission from Angela Evangelou on the Plugs and Sockets etc. (Safety) Regulations 1994 and Electricity Safety, Quality and Continuity Regulations 2002 (Amendment) Regulations 2026**

## **Plug-in solar: safety assurance, consumer protection and practical implementation**

**Purpose of this submission.** I respectfully invite the Committee to obtain clarification from the Department for Energy Security and Net Zero (DESNZ) and to consider whether SI 2026/848 should be drawn to the special attention of the House under paragraph 3(a), (c) and/or (d) of the Committee's terms of reference: issues of public policy likely to be of interest to the House, possible imperfect achievement of the policy objective, and insufficient explanatory material about intended implementation. This submission concerns policy effects and implementation, not legal drafting. (*SLSC Terms of Reference, para. 3(a), (c) and (d).*)

**Fair starting point:** I am not arguing that plug-in solar is inherently unsafe or should be prohibited. DESNZ's commissioned electrical study found that representative systems could operate safely within the conditions tested, and the Government strengthened the Interim Product Specification (IPS) after consultation. Nor do I assume that an Energy Networks Association (ENA) "non-compliant" status proves a product is dangerous. My concern is narrower: whether the safeguards for a nationwide consumer self-install route were fully evidenced, clearly explained and operational when the instrument commenced.

### **1. Government documents published when the instrument was made recorded that further legacy protective-device testing was not complete**

**The documentary point is unusually clear.** The Government Response published on 16 July 2026 - the date the instrument was made - discussed older residual-current devices (RCDs) and residual-current circuit breakers with overcurrent protection (RCBOs), and stated that its precautionary approach was being adopted "ahead of the final tests being completed". The final IPS also records that some circuit arrangements may be acceptable only "subject to verification through further testing now being undertaken by DESNZ". The instrument came into force on 27 August.  
(*Government Response, Technical Annex, p.46; final IPS, note 9, p.33; Parliament SI timeline.*)

**The counterargument matters.** There were six weeks between 16 July and commencement. I have not located a separately published final Type AC RCD/RCBO follow-up report in the public sources reviewed up to 30 August, but

absence from a public search does not prove that the testing was not completed or that its results were adverse. The appropriate question is therefore evidential, not accusatory: was the testing completed, reviewed and satisfactorily resolved before 27 August, and if so where is the record?

## **2. The Impact Assessment recognises that some homes may need electrical work not included in the central economic case**

**The final Impact Assessment assumes that 20% of cases will require minor electrician support.** It then gives a 0% assumption for larger electrical works in the main modelling. Crucially, the document says this is “not because we expect that plug-in solar can be safely installed in all homes” given the current condition of electrical circuits; it explains that modelling a need for larger works, such as consumer-unit replacement, would significantly weaken the financial case for installers. (*Final Impact Assessment, paras 25-28 and Table 6, pp.24-25.*)

**Again, there is a legitimate defence.** A household needing major electrical work may decide not to install, or may upgrade for wider property-safety reasons, so it would be wrong to allocate every such cost wholly to plug-in solar. Nevertheless, the practical effect is important: the policy is presented as a low-cost self-install route, while the central economic model expressly states that plug-in solar cannot be expected to be safely installed in every home in its current electrical condition.

## **3. Evidence captured on 30 August raises a practical question about the compliance system**

**The Government’s published consultation outcome says only plug-in solar devices compliant with the IPS will be able to be sold in the UK and plugged in under the amended route.** On the morning of 30 August I captured the complete ENA Plug-in Solar register: 31 devices were listed, of which 20 were marked compliant and 11 non-compliant. A register containing non-compliant entries is not itself a failure; it may demonstrate that the screening system is functioning. The concern is what consumers were simultaneously being told in the retail market. (*GOV.UK consultation outcome; ENA evidence ENA-01/02 captured 08:39-08:44 on 30 August 2026.*)

| <b>Example</b> | <b>Consumer-facing position on 30 Aug 2026</b>                                                                                                                | <b>Counterpoint / why I do not overstate it</b>                                                                                                            |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modular Solar  | 340W and 475W units were advertised as “Fully compliant with new UK government regulations”, “Plugs into a 13A socket” and “Approved for grid connection”. My | The sales page does not display the ENA reference or hardware revision. I therefore describe this as an apparent discrepancy requiring reconciliation, not |

|                      |                                                                                                                                                                                                             |                                                                                                                                                                                                                                  |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | dated ENA capture showed MODUL/21168/V1 (340W) and MODUL/21169/V1 (475W) as non-compliant.                                                                                                                  | proof of unsafe or unlawful conduct.                                                                                                                                                                                             |
| Plug In Solar/ Storm | Storm 360W DIY kit was shown "In Stock" with an Add to cart button. The same page stated that its micro-inverters were ENA type-tested but "the moulded plug is still undergoing testing for ENA Approval". | The page also states a four-week lead time and welcomes pre-orders, so approval could be intended before dispatch. The policy question is whether consumers can readily distinguish pending approval from full plug-in approval. |

**These examples do not ask the Committee to adjudicate individual products.** They illustrate a practical implementation question squarely within the Committee's remit: if the policy objective is a simple consumer route limited to verified compliant products, how is that distinction made clear and enforced at the point of sale?

#### **4. The explanatory material may not give Parliament a complete picture of the remaining implementation questions**

**The Explanatory Memorandum records an expedited two-week consultation, saying the timetable was necessary to make plug-in solar available in shops within months.** It also records extensive expert engagement, which is significant evidence in the Government's favour. The same Memorandum says the Government does not intend to monitor the instrument because existing review plans include the development of industry-led product standards, includes no statutory review clause, and records "Matters of special interest to Parliament: None". The Impact Assessment separately describes wider policy monitoring and further evidence gathering, so this should not be read as an absence of all monitoring. (*Explanatory Memorandum, paras 7.3, 10.1-10.2 and 11.1; Final Impact Assessment, paras 22-23, p.12.*)

**I do not suggest that Parliament was deliberately misled.** However, it is reasonable to ask whether the explanatory material should have highlighted that final protective-device testing was still described as underway in Government documents published when the instrument was made, and how any final result would be incorporated before commencement. A Find a Tender procurement record also identifies a DESNZ "Plug-in Solar PV Fire Study", involving laboratory fire testing, engineering analysis and policy-relevant recommendations, with a stated contract period from 17 June to 16 October 2026. That may well have been follow-on standards research rather than a launch prerequisite; the Committee could clarify its purpose and what, if any, interim findings informed commencement. (*Find a Tender Service, Notice 072493-2026.*)

#### **5. Questions I respectfully ask the Committee to put to DESNZ**

1. Was the further testing of older Type AC RCBOs and other legacy protective-device arrangements, described as unfinished in the Government Response published on 16 July, completed before 27 August

- 2026? If yes, will DESNZ provide the report, completion date, testing laboratory, methodology, results and technical review?
2. What did that testing conclude about whether the IPS limit on smooth direct-current (DC) residual current adequately addresses the risk of desensitising older Type AC RCDs/RCBOs and other relevant legacy protective device arrangements?
  3. What final safety-assurance or residual-risk submission was provided to Ministers before commencement on 27 August, and did it contain new evidence beyond that publicly available when the instrument was made on 16 July?
  4. Why does the central Impact Assessment assume 0% for larger electrical works after expressly stating that it does not expect plug-in solar can be safely installed in all homes given the current condition of electrical circuits, and how was that modelling limitation reflected in consumer-facing claims about cost and self-installation?
  5. What launch-day market-surveillance arrangements existed to identify products presented to consumers as compliant with the plug-in route while the corresponding device was absent from or marked non-compliant on the ENA register, and what response times or stop-sale/escalation arrangements apply?
  6. What was the purpose of the DESNZ Plug-in Solar PV Fire Study, what interim findings were available by 27 August, and was any part of that study treated as material to the commencement decision?

## Conclusion

**The narrow issue is not whether plug-in solar can be safe - the Government's own study shows that it can within tested conditions.** The issue is whether a mass-market, self-install electrical-generation route came into force with a sufficiently complete and transparent safety-assurance record, and with a retail compliance system capable of delivering the safeguards on which the regulatory framework depends. I respectfully ask the Committee to obtain the answers above and consider whether the instrument merits special attention under paragraph 3(a), (c) and/or (d), or at minimum an information paragraph before scrutiny is concluded.

- House of Lords Secondary Legislation Scrutiny Committee, Terms of Reference, para. 3(a), (c) and (d).
- DESNZ, Plug-in solar electrical safety study, 16 June 2026.
- DESNZ, Plug-in Solar: Government Response, 16 July 2026, Technical Annex, "Legacy RCDs/MCBs and Bidirectional RCDs", pp.46-47.
- DESNZ, Final Interim Product Specification v2.0, July 2026, note 9, p.33.
- DESNZ, Plug-in Solar Final Stage Impact Assessment, 16 July 2026, paras 22-23, 25-28 and Table 6, pp.12, 24-25.
- DESNZ, Plug-in solar consultation outcome, updated 16 July 2026.
- DESNZ, "Households can save as plug-in solar panels come to market", 26 August 2026.
- Explanatory Memorandum to SI 2026/848, paras 7.3, 10.1-10.2 and 11.1.
- UK Parliament Statutory Instruments Service, SI 2026/848 timeline.

- Energy Networks Association, Type Test Register, Plug-in Solar category; dated screenshots held, captured 30 August 2026.
- Modular Solar Technologies, 340W/475W Plug-in Modular Solar Units, accessed 30 August 2026.
- Plug In Solar Ltd, Storm 360W Plug In Solar DIY Kit, accessed 30 August 2026.
- Find a Tender Service, Notice 072493-2026, RAF 006/2627: Plug-in Solar PV Fire Study (DESNZ / Arceio Ltd).

**30 August 2026**

## **Response from The Department for Energy Security and Net Zero**

**Q1) was the testing completed, reviewed and satisfactorily resolved before 27 August, and if so where is the record?**

A comprehensive safety study was undertaken that demonstrated that plug-in solar was safe on UK wiring and, following public consultation, this was extended in response to industry comments around testing plug-in solar with older style circuit protective devices. This additional electrical test was completed by the 27th of August. DESNZ will soon publish the full results of this study.

**Q2) the policy is presented as a low-cost self-install route, while the central economic model expressly states that plug-in solar cannot be expected to be safely installed in every home in its current electrical condition.**

It is assumed that the cost of remedial work on house wiring if required would mean that plug-in solar devices would be uneconomic for this group and they would therefore be unlikely to install it. Clear guidance is given to consumers on the Energy saving Trust website to help consumers determine whether plug-in solar is suitable for their home and where it can be installed safely.

Importantly, the impact assessment modelling splits up costing assumptions about electrical works into minor (£200 average) and larger (£700 average). We include minor electrical installation works in our monetised cost and benefits for a minority (20%) of installers as these do not hamper the economic case for plug-in solar significantly enough to make it economically unviable for customers, whereas larger electrical works are much more likely to. For that reason, larger electrical works are excluded from monetised costs and benefits (more on this in our response to Q10 below).

**Q3) The concern is what consumers were simultaneously being told in the retail market.**

Due to limitations of the ENA website, products awaiting assessment or additional information from suppliers could be shown as 'non-compliant' or may not have appeared on the register. This did not necessarily mean that the products were noncompliant. As plug-in solar is a new product category with a unique supply chain and retail model, some aspects of the registration process are still being refined and will continue to evolve. Consumers are advised to purchase only products identified as compliant on the ENA register and are directed to the register through the Energy Saving Trust consumer guidance.

| Example               | Consumer-facing position on 30 Aug 2025                                                                                                                                                                                                                  | Counterpoint / why I do not overstate it                                                                                                                                                                                         |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modular Solar         | 340W and 475W units were advertised as "Fully compliant with new UK government regulations", "Plugs into a 13A socket" and "Approved for grid connection". My dated ENA capture showed MODUL/21168/V1 (340W) and MODUL/21169/V1 (475W) as non-compliant. | The sales page does not display the ENA reference or hardware revision. I therefore describe this as an apparent discrepancy requiring reconciliation, not proof of unsafe or unlawful conduct.                                  |
| Plug In Solar / Storm | Storm 360W DIY kit was shown "In Stock" with an Add to cart button. The same page stated that its micro-inverters were ENA type-tested but "the moulded plug is still undergoing testing for ENA Approval".                                              | The page also states a four-week lead time and welcomes pre-orders, so approval could be intended before dispatch. The policy question is whether consumers can readily distinguish pending approval from full plug-in approval. |

**Q4) The sales page does not display the ENA reference or hardware revision. I therefore describe this as an apparent discrepancy requiring reconciliation [SEE SCREENSHOT ABOVE], not proof of unsafe or unlawful conduct.**

Consumers are advised to purchase only products identified as compliant on the ENA register and are directed to the register through the Energy Saving Trust consumer guidance.

**Q5) if the policy objective is a simple consumer route limited to verified compliant products, how is that distinction made clear and enforced at the point of sale?**

Consumers are advised to purchase only products identified as compliant on the ENA register and are directed to the register through the Energy Saving Trust consumer guidance.

The distinction is made through the ENA registration process and publicly available ENA register, which provides consumers with a means of verifying product status.

Manufacturers and retailers are responsible for ensuring that products marketed for use under the plug-in solar framework comply with the Interim Product Specification (IPS), and products awaiting assessment should be clearly identified as not yet approved. Compliance is enforced through the existing product safety and consumer protection regimes, with oversight from Office for Product Safety and Standards.

**Q6) whether the explanatory material should have highlighted that final protective device testing was still described as underway in Government documents published when the instrument was made, and how any final result would be incorporated before commencement.**

The Explanatory Memorandum reflected the Government's approach. The core safety testing underpinning the policy and the Interim Product Specification (IPS) had been completed and published in May and the IPS contained requirements to ensure compatibility with legacy Residual Current Devices including limits on DC leakage current. The additional testing was undertaken to strengthen the evidence base rather than to establish the safety of plug-in solar.

**Q7) Was the further testing of older Type AC RCBOs and other legacy protective-device arrangements, described as unfinished in the Government Response published on 16 July, completed before 27 August 2026? If yes, will DESNZ provide the report, completion date, testing laboratory, methodology, results and technical review?**

Yes, this additional electrical test was completed by the 27th August and DESNZ will soon publish the full results of this study

**Q8) What did that testing conclude about whether the IPS limit on smooth directcurrent (DC) residual current adequately addresses the risk of desensitising older Type AC RCDs/RCBOs and other relevant legacy protective-device arrangements?**

The study, despite testing a variety of inverters with different residual DC leakage currents into the AC circuit and a wide variety of older models of Type AC RCBOs and MCBs, was unable to identify any desensitisation of the protective devices. All devices continued to operate within the stated standard timescales when tripped.

**Q9) What final safety-assurance or residual-risk submission was provided to Ministers before commencement on 27 August, and did it contain new evidence beyond that publicly available when the instrument was made on 16 July?**

Plug-in solar is not a new technology and millions of devices are operating safely and reducing consumer bills in Europe. A comprehensive safety study was undertaken that demonstrated that plug-in solar was safe on UK wiring and, following public consultation, this was extended in response to industry comments around testing plugin solar with older style circuit protective devices.

Ministers were made aware that the additional tests on older Type AC RCBOs, MCBs and other legacy protective-device arrangements had not identified any desensitisation effects. Ministers were also advised that the Interim Product Specification already contain requirements to ensure compatibility with legacy Residual Current Devices, including limits on DC leakage current. The additional testing was part of the Department's wider evidence gathering activity in response to stakeholder feedback.

**Q10) Why does the central Impact Assessment assume 0% for larger electrical works after expressly stating that it does not expect plug-in solar can be safely installed in all homes given the current condition of electrical circuits, and how was that modelling limitation reflected in consumer-facing claims about cost and self-installation?**

Clear guidance was given to consumers on the Energy saving Trust website to help consumers determine whether plug-in solar is suitable for their home and where it can be installed safely.

We did not model costs and benefits for consumers requiring significant electrical works (such as replacing a consumer unit) because analysis from the IA

highlights that such a need would significantly undermine the financial case for installers. It is likely that some consumers will indeed carry out more significant and costly upgrades, but we assume that in the majority of those cases, this will be motivated by a combination of solar and other aims/ upgrades for their property in which case there may be both additional costs and additional benefits not monetised. This approach was a modelling simplification to ensure a fair assessment of the economic impacts of the policy of enabling installation of plug-in solar devices specifically and reflect the challenges of estimating such wider household impacts within the limits of available evidence.

Clear guidance was given to consumers on the Energy saving Trust website to help consumers determine whether plug-in solar is suitable for their home and where it can be installed safely.

**Q11) What launch-day market-surveillance arrangements existed to identify products presented to consumers as compliant with the plug-in route while the corresponding device was absent from or marked non-compliant on the ENA register, and what response times or stop-sale/escalation arrangements apply?**

DESNZ worked closely with suppliers ahead of products being placed on the UK market. A number of devices were still progressing through the ENA registration process when the legislation came into force. Due to limitations of the ENA website, products awaiting assessment or additional information from suppliers could be shown as 'noncompliant' or may not have appeared on the register. This did not necessarily mean that the products were non-compliant. Consumers are advised to purchase only products identified as compliant on the ENA register and are directed to the register through the Energy Saving Trust consumer guidance.

**Q12) What was the purpose of the DESNZ Plug-in Solar PV Fire Study, what interim findings were available by 27 August, and was any part of that study treated as material to the commencement decision?**

A comprehensive safety study published in May demonstrated that plug-in solar was safe on UK wiring. Following the consultation, the IPS adopted a precautionary approach to fire safety, incorporating the most stringent fire product safety requirements for plug-in solar in Europe. The purpose of the Plug-in Solar PV fire study was to assess whether existing lightweight panels would meet the very strict Euroclass B rating specified in the IPS, whether manufacturers would need to redesign their products to meet our high fire safety standards and whether this would then increase cost to consumers. The fire safety study formed part of the Department's evidence gathering activity. However, the core safety evidence underpinning the commencement decision had already been completed and published in May.

**Q13) The issue is whether a mass-market, self-install electrical-generation route came into force with a sufficiently complete and transparent safety-assurance record, and with a retail compliance**

**system capable of delivering the safeguards on which the regulatory framework depends.**

Plug-in solar is not a new technology and millions of devices are operating safely and reducing consumer bills in Europe. A comprehensive safety study was undertaken that demonstrated that plug-in solar was safe on UK wiring and, following public consultation, this was extended in response to industry comments around testing plugin solar with older style circuit protective devices. The product specification that devices on sale in the UK need to meet was designed to be precautionary, and exceed the technical specifications used in Europe in several areas such as fire safety, DC residual currents and anti-islanding requirements. In the UK, local Trading Standards Officers (TSOs) work alongside the national regulator, the Office for Product Safety and Standards (OPSS), to identify, seize, and penalise non-compliant household appliances that do not meet the product specifications. There is therefore a great deal of evidence demonstrating that plug-in solar is indeed safe on UK wiring.

***3 September 2026***