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Cadre réglementaire de l'agrivoltaïsme en France

Rechtlicher Rahmen für Agri-Photovoltaik in Frankreich



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French Renewable Energy Acceleration Law (2023) establish a legal framework for agrivoltaics in France

- ⇒ Agrivoltaic projects had already been emerging for several years, but the legislator has now provided a clear definition of what agrivoltaics officially entails.
- ⇒ Agrivoltaics enables the combination of agricultural production and renewable electricity generation on the same land, delivering tangible benefits to farming activities."

Agrivoltaics provides a direct service to the agricultural plot. Agricultural activity must be significant and remain the primary activity.



The Government's intent—shared by all stakeholders—is to avoid restricting agrivoltaics to a single technology. Instead, the decree's definition is deliberately broad to foster innovation and accommodate local specificities.



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A distinction is made between agrivoltaics and solar pv on agricultural land

- ⇒ These are 'conventional' projects located on agricultural, natural, or forested land
- ⇒ solar PV on land designated for agricultural, pastoral, or forestry use must remain compatible with that land's primary vocation. Such installations must be sited within areas identified in a framework document approved by the prefect, based on proposals from the Chamber of Agriculture (e.g., fallow or unused land for a minimum duration set by decree)



The Government aims to avoid overly restricting solar farms development, while still allowing targeted deployment on 'favored' lands—such as agricultural brownfields—where photovoltaic (PV) projects are prioritized.

Legislative texts, regulatory provisions, and guidances



Article 54 of the Law of March 10, 2023, on the Acceleration of Renewable Energy Production (APER Law)



Decree of April 8, 2024, on the Development of Agrivoltaics and the Conditions for Installing Photovoltaic Systems on Agricultural, Natural, or Forested Land



Order of July 5, 2024, on the Development of Agrivoltaics and Its Implementation Conditions



Ministerial Instruction on the Publication of the Decree and the Implementation Timeline for Its Provisions

Technical guidance



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Agricultural activity must remain the primary use

- The non-exploitable area < 10%
- The installation height and inter-row spacing must allow normal farming operations

Maximum Coverage Ratio

- 40% for installations over 10 MWp, excluding proven technologie
- Defined by ministerial order for established technologies

Compliance checks

- Annual monitoring reports on agricultural production by an independent body
- Crop yields
- Inspections

Active farmer

Direct benefit to agriculture

- No substantial impairment to any single service
- No limited impairment to two or more services

Significant agricultural production

Yield exceeding 90% of a reference value (control plot, local benchmark, etc.)

Sustainable revenues

higher than the pre-installation average

Agrivoltaics





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What services does agrivoltaics provide for agricultural activities?

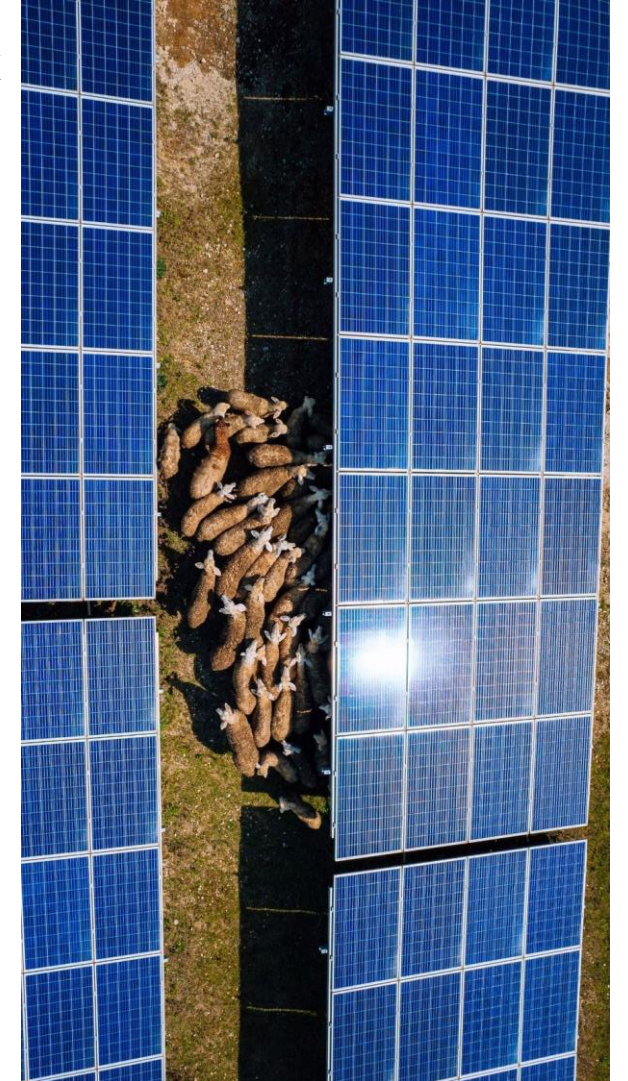
The law governs agrivoltaics for both crop production and livestock farming.

Projects must demonstrate at least one direct benefit to agricultural activities.

Required Agricultural Services:

- **Improvement of Agricultural Potential:** Enhancement of soil agronomic qualities, Increased or maintained crop yield, At minimum, mitigation of yield decline trends.
- **Climate Change Adaptation:** Thermal, hydric, radiative, and evapotranspiration regulation
- **Protection Against Hazards:** Mitigation of meteorological risks (e.g., punctual extreme weather events).
- **Animal Welfare Improvement**

No substantial impairment of any single service.
No limited impairment of two or more services.





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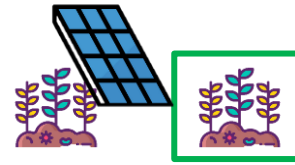
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Estimate significant agricultural production

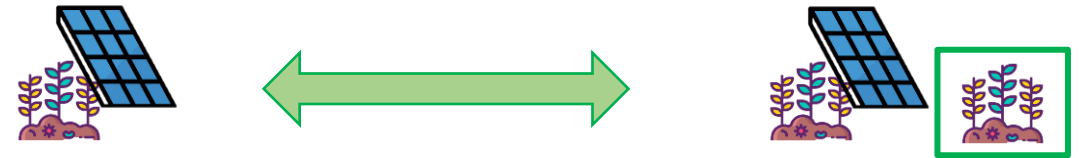
The regulations require monitoring of crop yields or relevant indicators compared to a control baseline. This necessitates comparative data from a control plot.

Control Plot:

Case 1: A control plot located near the agrivoltaic installation, cultivated under identical conditions to the agrivoltaic plot



Case 2: A similar agrivoltaic installation in the same department or region, with equivalent pedoclimatic conditions and an existing control plot.



Case 3: Existing regional or departmental benchmark allowing comparison of production values under the agrivoltaic plot against a reference standard.



The data produced are aggregated in an observatory managed by ADEME, which will then be responsible for assessing which technologies are effective.



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Key technical and regulatory parameters for agrivoltaic

Proven technology	Non proven technology		
Coverage ratio adapted based on the technology	≤ 10 MW		> 10 MW
	No restriction on coverage ratio		Coverage ratio < 40%
	Coverage ratio < 40%	Coverage ratio ≥ 40%	
Possibility of waiving the control plot requirement, as the technology is listed as proven	<u>Crops</u> : Possibility of a waiver for the control plot requirement <u>Livestock and greenhouses</u> : Control plot not mandatory	<u>Crops</u> : Control plot mandatory <u>Livestock and greenhouses</u> : Control plot not mandatory	<u>Crops</u> : Possibility of a waiver for the control plot requirement <u>Livestock and greenhouses</u> : Control plot not mandatory
Controls are conducted in the 6th year after commissioning, and then every 5 years	Controls are conducted in the 6th year after commissioning, and then every 3 years	Controls are conducted in the 6th year after commissioning, and then every year	Controls are conducted in the 6th year after commissioning, and then every 3 years



Lifetime of agrivoltaic project

Process

The four direct services that can be provided
Authorization Application Process
Technical Criteria for Agrivoltaic Classification: coverage rate, height, area not accessible for agriculture, etc.

Project lifetime

Monitoring Requirements for Agrivoltaic Installations:
Significant Agricultural Production: "Monitoring of crop yield or relevant performance indicators compared to a control baseline
Sustainable Revenue: Long-term yield tracking to ensure durable agricultural income

+ Associated Controls and Sanctions
Non-compliance with agrivoltaic requirements may trigger controls and sanctions under the French Energy Code

Decommissioning phase

End-of-Life Provisions for the Installation:

Limited duration (40 years)
Mandatory decommissioning at the end of this period



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Thanks