

Photovoltaic shading systems are used to cover outdoor car parks to comply with the obligations arising from the "Climate Act" of 22 August 2021¹ and the "Aper Act" of 10 March 2023². The plethora of laws and regulations governing these obligations makes practical implementation perilous.

In the wake of new regulations 'green' aimed at reducing the environmental impact of human activities and limiting the consequences of global warming, the Climate and Energy Acts have imposed new obligations for the installation of photovoltaic shading systems on certain car parks.

As a result, many actors are wondering whether they are concerned by the installation of these shading systems in their car parks. Articles 101 of the Climate Act and 40 of the Aper Act, which have not been fully codified, and their implementing regulations³ define the scope of these obligations, their areas of application and the cases in which they may be excluded.

On the one hand, the French Climate Act sets a target **for car parks to be shaded**, with the aim of covering more than 50% of the surface area of the car park with photovoltaic shading systems or vegetated systems.

On the other hand, the APER law, with the aim of **producing renewable energy**, requires the installation of photovoltaic shading systems covering more than 50% of the surface area of the car park, or any other process with equivalent results.

These two laws require similar but not superimposable resources to meet the objectives of shading and renewable energy production.

The coordination of the obligations set out in these Acts needs to be considered in advance for car parks that are subject to both Acts.

A "Guide to the implementation of the regulations relating to the installation of rainwater management and shading systems in car parks" published by the Ministry for Ecological Transition and Territorial Cohesion, the "Guide", last updated in May 2024, provides clarifications, particularly practical ones, but has not yet been updated to include the decree implementing the Aper Act and the order of 4 December 2024.

1. What are the new requirements for installing photovoltaic shading systems in car parks?

1.1. Obligations under the Climate Act

Car parks falling within the scope of the regulations must incorporate vegetated systems or photovoltaic shading systems for areas at least half of their surface area.

If the car parks include shadehouses, these must incorporate a renewable energy production process over the entire surface area.⁴ Concretely, only photovoltaic shaded areas appear to meet the criteria set out in the regulations. Pergolas with vegetated system, for example, would not meet the obligation.

Regarding the "vegetated systems" referred to in the Act, this pompous term seems to cover only trees. The obligation is met by the planting wide-canopied trees throughout the park, at a rate of one tree for every three parking spaces.⁵

¹ Act no. 2021-1104 of 22 August 2021 to combat climate change and strengthen resilience to its effects

² Law no. 2023-175 of 10 March 2023 on accelerating the production of renewable energies

³ Two decrees and two orders have been issued to clarify the application of the Climate Act and the Aper Act:

- Decree no. 2023-1208 of 18 December 2023 applies article L.171-4 of the French Construction and Housing Code and article L.111-19-1 of the French Town Planning Code.
- The Order of 5 March 2024 applies this decree.
- Decree no. 2024-1023 of 13 November 2024 applies article 40 of the Aper Act (*hereinafter the "Decree implementing the Aper Act"*). The decree is the subject of an appeal to the French Conseil d'Etat by eleven federations, including distributors, which could ultimately lead to further changes to current regulations.
- The Order of 4 December 2024 implementing the decree of application of the Aper Act and amending the aforementioned of 5 March 2024 Order

⁴ Article L.111-19-1 created by Article 101 of the Climate Act

⁵ Article R.111-25-8 of the Town Planning Code

On reading the Guide, it seems that a mixed solution involving the installation of shading systems, and the planting of trees could be envisaged to achieve the objectives set by the Climate Act.

1.2. Obligations under the Aper Act

Parking areas that fall within the scope of the regulations must be equipped with at least half of this surface area:

- shadehouses incorporating a renewable energy production process over the entire upper part of the shadehouse; or
- any renewable energy production process that produces an equivalent amount of renewable energy to that which would result from the installation of the shadehouses.

With regard to "*any equivalent process*", the implementing regulations for article 40 of the Aper Act specify that these are the processes listed in article L.211-2 of the Energy Code, i.e. energy produced from renewable non-fossil sources, such as wind energy, solar thermal or photovoltaic energy, geothermal energy, ambient energy, tidal, wave or osmotic energy and other marine energies, hydroelectric energy, biomass, landfill gas, gas from wastewater treatment plants and biogas.⁶

As things stand, it is difficult to determine what could replace the installation of photovoltaic shadehouses to meet the requirements of the Aper Act.

1.3. Coordination of obligations under the Climate Act and the Aper Act

If the car park is subject to the obligations of both the Climate Act and the Aper Act, particular attention will need to be paid to the solution that is implemented.

Firstly, there is no option under the Aper Act for installing vegetated systems. This is not surprising, given that its aim is to encourage the production of renewable energy.

However, if the car park is shaded by trees over at least half of its surface area, this constitutes grounds for exemption from the obligations arising from the Aper Law.⁷ Consequently, if the owner of the car park has already anticipated compliance with the obligations arising from the Climate Law by ensuring that it is shaded by trees, it will not have to install photovoltaic shading systems or any equivalent process to meet the obligations of the Aper Act.

Secondly, the choice of a mixed solution to meet the obligations of the Climate Act is not recommended if the car park is also subject to the provisions of the Aper Act because of the thresholds it imposes.

2. Which car parks are covered by these obligations?

2.1. Car parks subject to the provisions of the Climate Act

To determine which car parks are subject to the provisions of the Climate Act, article L.111-19-1 of the Town Planning Code, article L.171-4 of the Building and Housing Code and article 101 V of the uncodified Climate Act must be read together.

Under Article L.111-19-1 of the French Town Planning Code, two types of outdoor car park are subject to shading requirements:

- Those over 500 square meters associated with buildings or parts of buildings to which the obligation set out in article L.171-4 of the French Building and Housing Code applies.
- Those open to the public of more than 500 square meters when they are new.

There is no difficulty in interpreting the concept of outdoor car parks of more than 500 square meters open to the public. However, the situation is different regarding the first hypothesis, which refers to buildings to which the obligation set out in article L.171-4 of the French Building and Housing Code applies.

The Article L.111-19-1 refers to car parks "*associated with buildings or parts of buildings to which the obligation applies set out in Article L.171-4 of the French Construction and Housing Code*".

Article L.171-4 of the French Building and Housing Code refers to a certain number of constructions, extensions and major renovations of buildings or parts of buildings subject to the obligation to integrate a renewable energy production process or a vegetated system based on two cumulative criteria:

- Their use: construction of buildings or parts of buildings for commercial, industrial, craft or administrative use, construction of buildings or parts of buildings for office or warehouse use, construction of hangars do not open to the public and used for commercial purposes, hospitals, sports, recreational and leisure facilities, school and university buildings or parts of buildings, and covered car parks open to the public.
- Their footprint: more than 500 square meters.

A literal reading of the texts leads us to understand that outdoor car parks are subject to the obligations of the shading system if they are associated with a building whose use and footprint result in the said building being subject to the obligation set out in article L.171-4.

⁶ Article 5 of the Order of 4 December 2024

⁷ See point II, 3° of article 40 of the Loi Aper and article R.111-25-8 of the Town Planning Code as amended by decree no. 2024-1023 of 13 November 2024 - art. 13.

However, neither the Guide nor the legal doctrine, which is not very abundant on this subject, mention this condition of a floor area of more than 500 square meters for the building with which the car park is associated. This is particularly surprising given that when the floor area of the building in question is less than 500 square meters, the building is not subject to any obligation under article L.171-4 of the French Building and Housing Code.

Logic would dictate that only the type of building with which the car park is associated should be considered, and not the surface area of the building. The aim is to ensure that the car park is shaded, whereas a literal reading of the text would mean that car parks with a surface area of more than 1,000 square meters, for example, would be exempt from the shading requirement on the grounds that they are associated with a commercial building with a footprint of 499 square meters.

Another difficulty of interpretation is that of article 101 V. of the Climate Law, which surprisingly has not been codified and states:

"The conclusion of a new public service concession contract, service provision contract or commercial lease relating to the management of a car park, or its renewal, is subject to the obligations set out in the first paragraph of Article L.111-19-1 of the Town Planning Code.

At this stage, this provision raises several questions. It is difficult to determine whether it refers to:

- Contracts *"for the management of a car park"* in the strict sense of the term, i.e. for the purpose of managing the car park, irrespective of its surface area.
- Or, on the contrary, in the broadest sense, when, for example, a commercial lease is entered into or renewed for warehouse premises with an associated outdoor car park of more than 500 square meters.

A legislative, regulatory or ministerial clarification would be welcome to interpret this provision and its lack of codification.

2.2. Car parks subject to the provisions of the Aper Act

Determining whether a car park is subject to the obligations of the Aper Act is much easier. Only two cumulative criteria are required:

- The parking area is external, i.e. not integrated into a building.
- Its surface area exceeds 1,500 square meters.

2.3. Combining the Climate Act and the Aper Act

The Climate Act and the Aper Act can only be combined if the surface area of the car park is greater than 1500 square meters ("**sqm**") and provided that the other conditions of the Climate Act are met.

The coordination between the two Acts could be schematized according to the surface area of the car park as follows:

	External car parks subject to the legislation	
	Obligations	
Surface area	Climate Act	Aper Act
Less than 500 sqm	No ⁸	No
Between 500 sqm and 1500 sqm	Yes ⁹	No
More than 1500 sqm	Yes¹⁰	Yes

⁸ Unless we consider that the conclusion or renewal of any public service concession contract, commercial lease or service provision contract relating to the management of a car park is subject to no surface area condition by virtue of paragraph 5 of article 101 of the uncodified Climate Act.

⁹ Provided that the other conditions are met, i.e. the park is open to the public or is associated with a building or part of a building to which the obligation set out in article L.171-4 of the Building and Housing Code applies.

¹⁰ Same reservation as footnote 7.

3. Are there any exemptions to these obligations?

Decree no. 2024-1023 of 13 November 2024 specifies the grounds for exemption from the obligation under the Aper Act and specifies certain grounds for exemption that had been codified in the Town Planning Code for the Climate Act. The decree's aim is to ensure that the measures for applying these two laws are harmonized, and that the systems are coordinated and operational.

Although this list is not intended to be exhaustive, the following are grounds for exemption under the Climate Act, as they are under the Aper Act:

- technical constraints, such as :
 - the nature of the soil, due to its geological composition or slope.
 - the technical impossibility to avoid aggravating a natural or technological risk relating to civil security or national security because of the installation.
 - the incompatible use of the car park with the device.
 - In the case of photovoltaic shading systems, insufficient sunlight generates investment costs that significantly affect the profitability of the installation.
- economic constraints, such as :
 - the cost of work generated by obligations that compromise the park owner's economic viability or initial financing capacity.
 - specifically for photovoltaic shading systems, the impossibility of installation due to excessive total costs, excluding tax, of the work generated by the obligation.
 - specifically for the Climate Act concerning tree shading systems, the total pre-tax costs of the work generated by these obligations are excessive, if these costs are increased by a technical constraint.
- conversions or deletions already planned:
 - regarding the Climate Law, the total or partial removal or conversion of the car park if the first planning permission was issued before 1st July 2023.
- the location of the car park:
 - the location of the car park in the vicinity of historic monuments, within the perimeter of an outstanding heritage site, in a site listed or classified under the Environment Code or within a national park.
 - Under the Aper Act, a temporary exemption may be granted by the departmental prefect for car parks located within the perimeter of a development project or operation, or in a concerted development zone (ZAC), where one of the adjoining lots or plots is to be used for a building likely, by virtue of its size and footprint, to qualify for one of the exemptions provided for in articles 4 to 6 of decree no. 2024-1023.

Where the car park is shaded by the planting of trees with a wide canopy covering at least half of its surface area, it meets the obligations under the Climate Act and may constitute grounds for exemption under the Aper Act.

Lastly, article 5 II. of the decree implementing the Aper Act specifies that the obligation arising from the Act does not apply to car parks for which it has been demonstrated that the installation of these systems is impossible due to its incompatibility with the application of the provisions of the Environmental Code aimed at preserving the environment.

This is a broader exemption, which was not provided for in the obligation arising from the Climate Act. The implementing decree does not provide any additional information on its implementation or the assessment of this exemption.

4. Owner or manager? Landlord or tenant? Who is subject to these obligations?

The debtor of the obligations arising from the Climate Act is the owner¹¹ whereas the debtor of the obligations arising from the Aper Law is the car park manager.

If the car park is subject only to the obligations arising from the Climate Act, landlords may attempt to transfer the burden of their obligations to the tenants, even though they would be held responsible and subject to any penalties for non-compliance with the regulations.

If the car park is subject to both Acts, the work required to comply with the new obligations and the liability of the landlord and tenant in the event of non-compliance will certainly give rise to new negotiations between the parties.

We can expect to see the emergence of new clauses in commercial leases on this subject, as was the case with the tertiary sector decree imposing new obligations on buildings with a surface area of more than 1,000 square meters.

¹¹ Article R.111-24-19 of the Town Planning Code "(...) it is up to the owner of the car park" to justify the reasons for exemption.

5. Practical implementation: what difficulties do professionals subject to the obligations encounter?

In addition to the complexity of the legislative and regulatory framework, which is sometimes incomplete and incoherent, the professionals subject to these measures are already experiencing practical implementation difficulties in the face of the operational and commercial constraints they are bound to encounter in implementing these new obligations.

While the environmental objectives pursued by these two Acts are laudable and necessary in principle, in practice they imply:

- On the one hand, substantial costs related to the carrying out of studies and installation of the photovoltaic shading systems or their equivalents, coupled with serious doubts about their long-term ecological and economic profitability.
- On the other hand, there are operational consequences, such as a reduction in sale area (particularly outdoor exhibition areas, such as car dealerships) and in the number of parking spaces available in the car parks of shops or shopping centers, which is likely to have a commercial impact.

Moreover, although the Acts have an environmental objective, it is sometimes necessary to cut down dozens of trees to meet the obligations imposed, in the absence of the mixed solution proposed by the Aper Act.

Eleven federations, including major French retailers such as Carrefour, Casino and Ikea, announced that they had lodged an appeal with the French Conseil d'Etat on 13 January 2025 to challenge the decree implementing the Aper Act, criticizing it for imposing deadlines "*unachievable*" and "*implementation disconnected from local feasibility*".

This recourse, and the initial feedback from professionals on these measures, testify to the general concern generated by the introduction of these new measures.

Our teams are on hand to answer any questions you may have, to determine whether you are subject to the obligation to install photovoltaic shading systems, and to help you with the practical implementation of these new provisions.

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