return on investment and payback years, is found in those scenarios in which the surpluses discharged to the grid are compensated, as long as a battery system is not used. The savings are very similar in cases 1 and 2, although in this latter case the savings are slightly higher.

Thus, the collective self-consumption studied is more interesting the more similar the demand curve and the generation curve are, since the price received for the surplus low compared to the price charged for consumption from the grid. In addition, tariffs with hourly discrimination (Spanish tariff 2.0 DHA) are more economically attractive than general tariffs (Spanish tariff 2.0 A).

The analysis has been carried out without taking into account any type of regional subsidy or any type of tax incentive at the municipal level, so that these installations are profitable on their own without the need to be subsidized in any way, as long as a setting is chosen in which surpluses are remunerated and energy storage systems are not installed.

Finally, the current legislative framework indeed has very positive aspects, such as collective self-consumption, it also has some negative aspects, such as limiting the simplified compensation mechanism to a maximum of one month. However, the fact that Spain now has legislation that encourages self-consumption without premiums or subsidies, thus allowing its economically sustainable development can be considered an important advancement for the energy sector.

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