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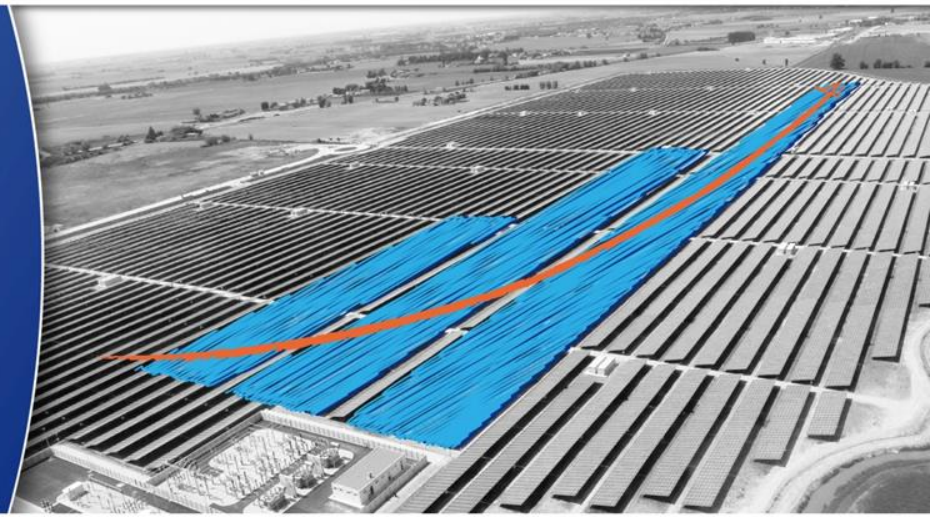
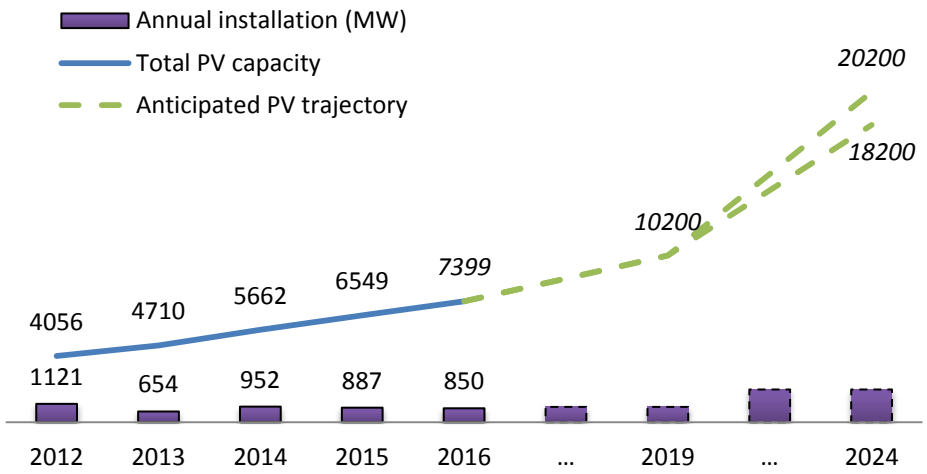
Introducing Collective self-consumption in France



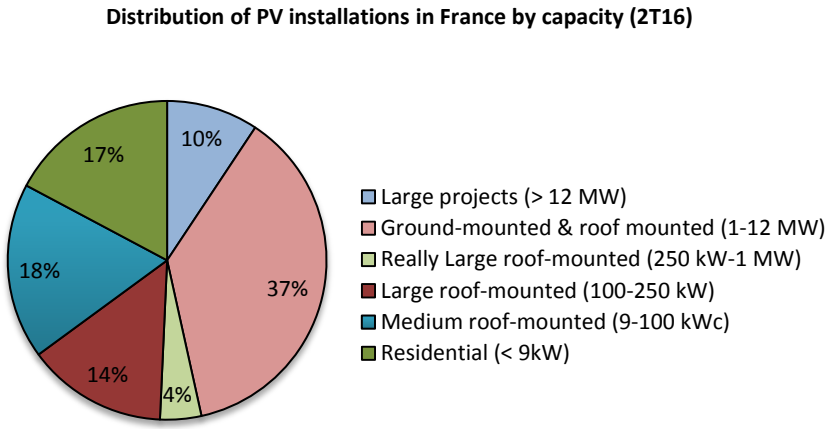
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 646554

BRIEF REMINDER OF THE FRENCH PV LANDSCAPE

Overview of PV deployment



Source: SOeS, 2nd quarter 2016 & Multi annual energy programs



Source: Observatoire de l'énergie solaire photovoltaïque en France, September 2016

- French electricity is cheap for consumers: 14-15 €cts/kWh for individuals, 8-13€cts for the commercial segment;
- PV electricity production represented 1.6% of the total French electricity consumption in 2015

Evolution of PV business models

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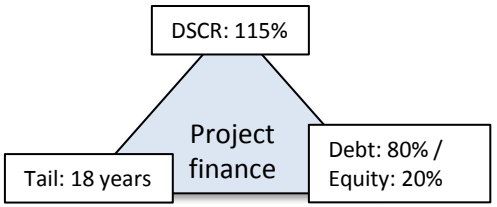
Feed-In Tariffs & tenders

In days of yore

For households, a special FiT was introduced to promote roof integrated PV

- Larger projects
- Long process of selection



ENERGY TRANSITION LAW

Implementation of a feed-in premium

2015 - 2016

- Market based remuneration;
- 1 year of collaboration with professionals
- Concerns PV installations above 500 kWc
- Rise of aggregators;
- Implementation of a last recourse buyer;
- Increase the financial risk for investors and banks

Tenders are still the rule for a feed-in premium mechanism

2016...

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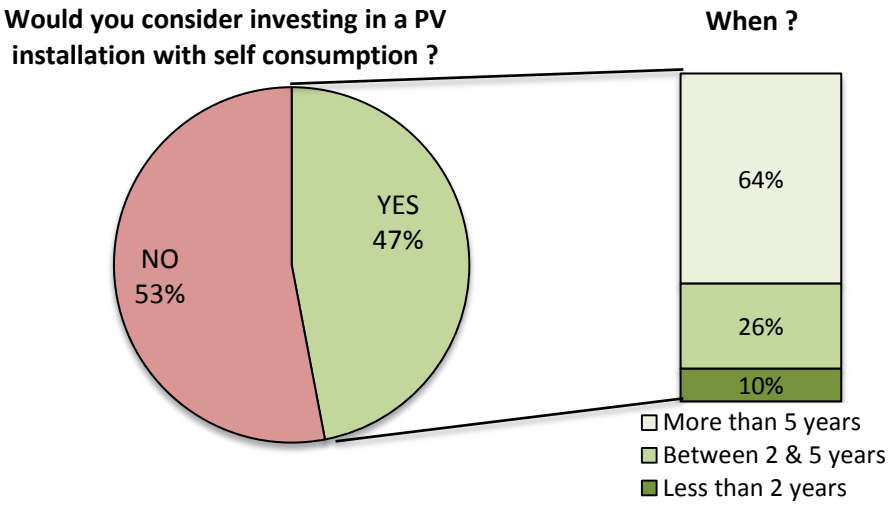
(COLLECTIVE) SELF-CONSUMPTION

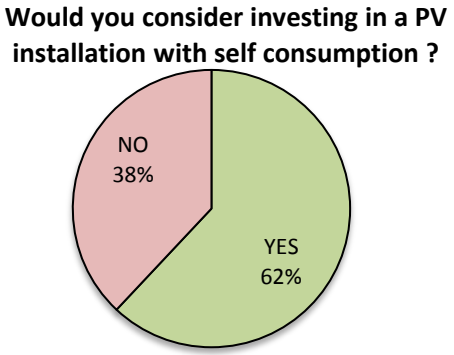
An attractive business model

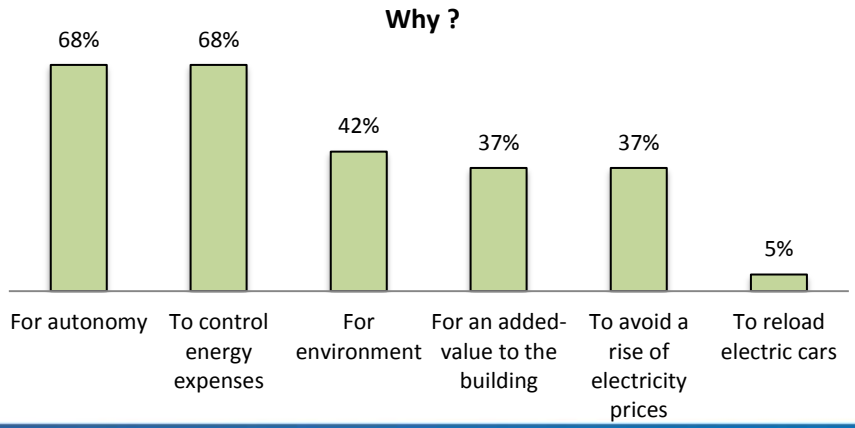
- Among citizens



- Although PV has a bad image, people are keen to self-consumption
- Commercial centres is the segment where self-consumption makes sense:
  - Electricity = 40% of their budget
  - They anticipate a 5% rise in their electricity price
- Self-consumption also raises interest in social housing.

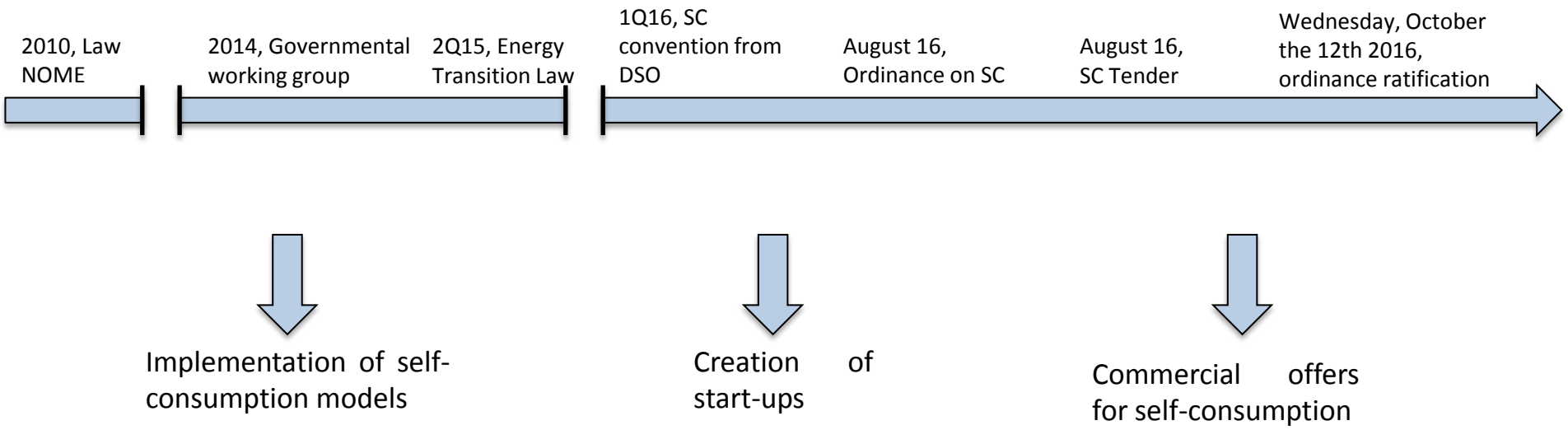
- Among commercial centers





Source: Enerplan colloquium, 25 May 2016

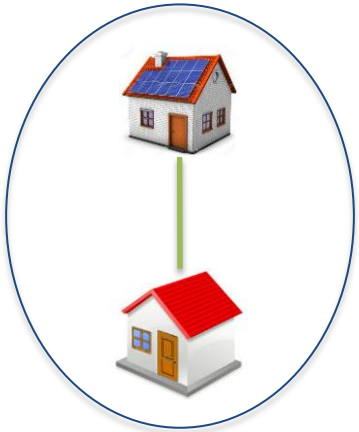
Self-consumption at a glance

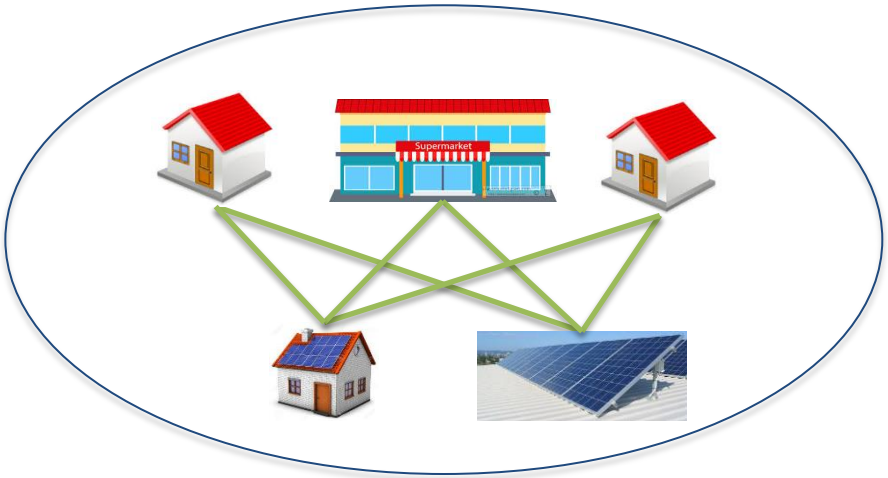


« *Self-consumption is the situation when a producer, named self-producer, consumes himself all or a part of the electricity produced by his installation.* » (Art. L 315-1, Energy Code).

- The tariff for using public grid (Turpe) has to be defined for self-producers.
- DSOs have to implement "*acceptable conditions for the implementation of self-consumption operations*".
- Tender for 40 MW of PV published in August 2016: 100 – 500 kW, at least 50% of SC.

Collective self-consumption

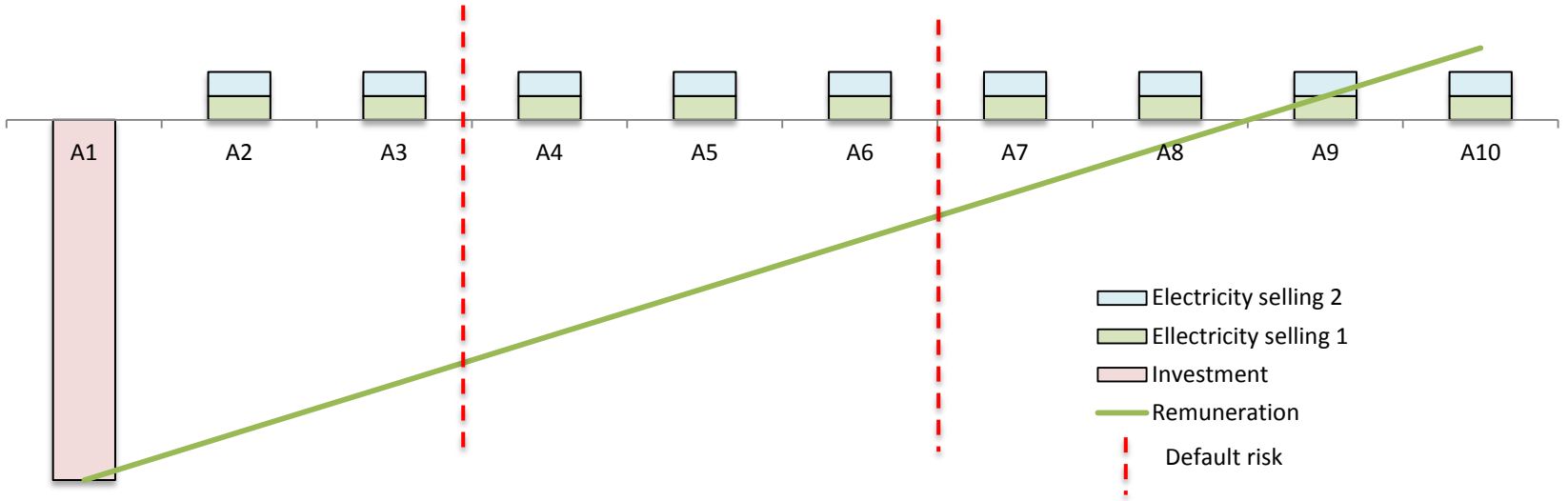




« *Self-consumption is collective when the electricity exchange is made between one ore more electricity producers and one or more final consumers, linked together by a legal entity, and from which the injection and exit points are on the same low-voltage loop of the public distribution grid.* » (Art. L 315-2, Energy Code).

- Producers and consumers HAVE TO be part of a same legal entity.
- The choice of the type of entity is free (company, cooperative, association…)
- The entity in charge of the whole operation:
  - It manages the relationship between consumers and producers
  - It informs the grid operator about the breakdown of consumed electricity among consumers

Economic model



- It is called self-consumption, but it is a direct selling scheme.
- The risk is the default of the customer and the question is the transmission of the contract.

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BARRIERS: WHAT IS IMPORTANT ?

Is the producer an electricity supplier ?

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First draft of the text 

Final version of the text 

« The producer **SELLS** the electricity »

« The producer **SUPPLIES** the electricity »

Does the electricity producer needs the status of “electricity supplier” ?
Is it the producer or the legal entity ?

- An electricity supplier has major obligations:
  - It needs a ministerial approval
  - It has to present securities
  - It has a balancing responsibity
  - It has to inform the consumer about the origin of electricity.

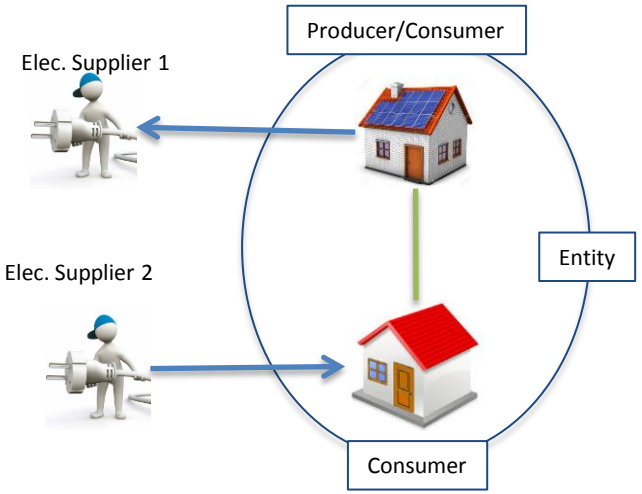
The answers will determine whether collective self-consumption can be the next major evolution of French photovoltaic deployment

Excess electricity

New article L315-5, Energy Code: Excess electricity can be sold or fed into the grid for free. Nothing about its storage in a battery.

Two electricity providers can be added to the scheme:

- One for the injection of excess electricity;
- One for the consumer to cover excess electricity demand



- According to the new ordinance, if the producer wants to feed excess electricity into the grid, its installation should not exceed a certain capacity
- This maximal capacity will be set up by decree
- The model of collective self-consumption will therefore depends on the choice of this maximal capacity…. 3 kWc ? 10 kWc ? 35 kWc ?

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Thank you for your attention

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