



Electric Vehicles and Global Urban Adoption

Required investments and challenges for EVs in
multifamily buildings: the case of France

4th June 2019 - Berkeley

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AGENDA

1. Diversity of legal frameworks
2. EU law
3. French legal framework
4. How to socialize or share the costs?
5. Questions to conclude

1. Diversity of legal frameworks applicable to charging infrastructure

- Private v. public charging infrastructures
 - Existing v. new buildings
 - Commercial v. multifamily buildings
- Focus on existing multifamily buildings

2. EU Law (I)

Treaty on the functioning of the European Union:

Areas of shared competence

Article 4:

2. Shared competence between the Union and the Member States applies in the following principal areas:

[...]

(g) transport;

[...]

(i) energy;

2. EU Law (II)

Transport	Energy
<p>Directive 2014/94/EU, 22 October 2014, on the deployment of alternative fuels infrastructure</p>	<p>Directive 2018/844, 30 May 2018, amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency</p>
<p>§23 : Private owners of electric vehicles depend to a large extent on access to recharging points in collective parking lots, such as in apartment blocks and office and business locations. <u>Public authorities should take measures to assist users of such vehicles by ensuring that the appropriate infrastructure with sufficient electric vehicle recharging points is provided by site developers and managers</u></p>	<p>§23: Electric vehicles constitute an important component of a clean energy transition based on energy efficiency measures, alternative fuels, renewable energy and innovative solutions for the management of energy flexibility. <u>Building codes can be effectively used to introduce targeted requirements to support the deployment of recharging infrastructure in car parks of residential and non-residential buildings.</u> Member States should provide for measures to simplify the deployment of recharging infrastructure with a view to addressing barriers such as split incentives and administrative complications which individual owners encounter when trying to install a recharging point on their parking space.</p>
<p>Article 4 Electricity supply for transport : §3. Member States shall also take measures within their national policy frameworks <u>to encourage and facilitate</u> the deployment of recharging points not accessible to the public.</p>	<p>Article 8§7: Member States shall provide for measures in order <u>to simplify the deployment</u> of recharging points in new and existing residential and non-residential buildings and address possible regulatory barriers, including permitting and approval procedures, without prejudice to the property and tenancy law of the Member States</p>

3. French legal framework

French building regulations (code de la construction et de l'habitation):

Right to equip a parking space with a facility dedicated to the electric charging of an electric or rechargeable hybrid vehicle → « Droit à la prise »

Article L.111-6-4-I:

“The owner of a building equipped with secure access parking spaces for private use or, in the case of co-ownership, the syndic (facility management office) may not object without serious and legitimate grounds to the equipment of the parking spaces dedicated to electric charging for electric or rechargeable hybrid vehicles and allowing individual counting, at the request of a tenant [...] **and at his expense**”. (free translation)

- Main barrier: costs are borne by the future user (the tenant or the owner of the flat)
- Is it efficient?

4. How to socialize or share the costs?

Public grants or subsidies

- European Union; and/or
- State; and/or
- City.

- Example of Paris Climate Action Plan (Towards a carbon neutral city and 100% renewable energies):

Financial incentives and support measures

Financial incentives and support measures are required to encourage professionals and households to invest in low-carbon vehicles and to adopt active forms of mobility. The City has currently established a scheme that provides grants and support for Parisians who stop using their old vehicles, for professionals and SMEs, for young drivers and for owners of condominiums to promote the installation of bike shelters and electric charging stations. The Metropolitan Council has established a complementary

Energy sector

- **Network tariffs:** Socialization through network tariffs (see draft legislation - loi LOM - and the debate related to public charging infrastructure)
→ Risk of side effects?

- **White certificates scheme:** Include the installation of a charging infrastructure on the list of actions eligible to this scheme.

- **Renewable energy support scheme:** provide a bonus for the installation of a charging station

Transport sector

- Car makers?
→ See the initiative of Renault, e-Totem and Demeter for public charging infrastructure

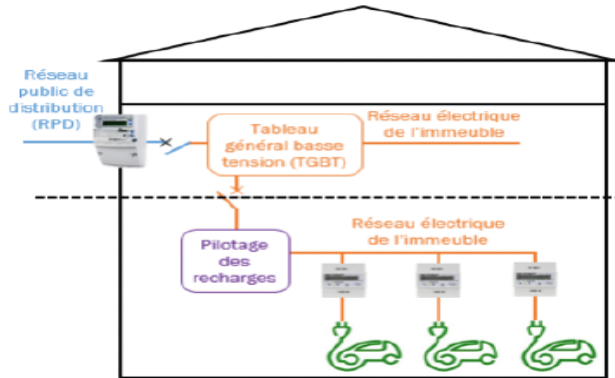
5. Questions to conclude

- Should those who benefit the most from the development of the electric vehicle contribute to the financing of private charging infrastructure? (positive externalities?)
- Should the intensity of the support be different if the charging infrastructure is shared among the occupants of the building?
- Should there be a « leading entity » to coordinate and facilitate the financial aspects of the installation of a charging infrastructure in a multifamily building?

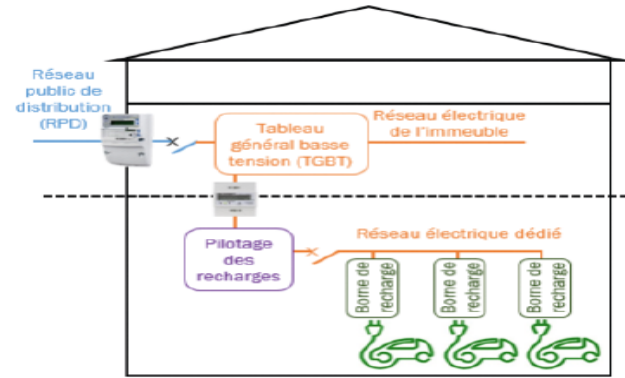
Thank you for your attention

Annex I

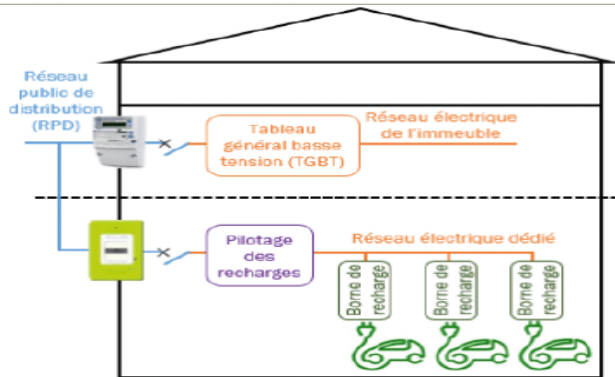
Figure 7 Les principaux schémas de raccordement des IRVE identifiés par la CRE dans les immeubles collectifs, conformes à la directive 2014/94/UE et au code de la construction et de l'habitation.



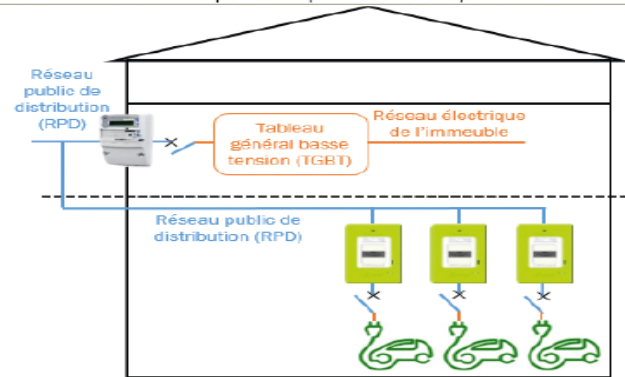
1. Raccordement de l'IRVE au réseau électrique de l'immeuble et mise en place d'un système de mesure privé permettant une facturation individuelle des recharges.



2. Raccordement de l'IRVE au réseau électrique de l'immeuble et mise en place d'un système de mesure privé commun à toutes les bornes (la facturation des recharges est faite ensuite selon des clés de répartition par le syndic ou par un opérateur tiers).



3. Raccordement de l'IRVE au réseau public de distribution et création d'un point de livraison commun à toutes les bornes.



4. Raccordement individuel de chaque borne de recharge au réseau public de distribution.

Source : voir page 207

Annex II

The French program of white certificates:

Under this program, energy suppliers (electricity, gas, heating oil, LPG, heat, refrigeration) must meet government-mandated targets for energy savings achieved through the suppliers residential and tertiary customers. Suppliers are free to select the actions to meet their objectives, such as informing customers how to reduce energy consumption, running promotional programs, providing incentives to customers and so on. A list of ratified activities was ratified to help the various actors to facilitate the operations.