

# Electricity sharing in the 2 Seas region

## Introduction

This document focusses on the legal framework for electricity sharing in four countries: The Netherlands, France, the United Kingdom and Belgium (Flanders).

The document does not cover the legal framework for heat exchange, as heat exchange is freely allowed in all four countries.

Electricity sharing in this document means renewable energy production and delivering behind the meter. Electricity sharing in this framework does not cover exchange via a (green) supplier, or financial participations with financial returns. Both these forms of electricity sharing are allowed and encouraged in the four countries.

## Short overview per country

### *The Netherlands*

- For Direct Current (DC) there are no limitations to exchange electricity.
- In case of Alternating Current (AC), private, direct lines are prohibited.
- Since 2014 electricity sharing is allowed under the “postcoderoos” regulation for both residential consumers and business (with a small energy use). Within this framework a discount on the energy tax is given to co-investors in renewable energy production.

Conditions for the investor to get the discount are:

1. To be a member of an energy cooperation (share of businesses in the cooperation can be maximum 20%)
2. To live in the neighborhood
3. To be a small consumer

### *France*

- Legal framework for collective self-consumption (or electricity sharing via the public grid) is setup in 2017. The new framework is currently in a test phase.
- Both residential consumers and businesses are allowed to share electricity through the public grid.
- Specification under which electricity sharing is allowed:
  1. All consumers and producers should be connected to the grid, and all need to have a smart meter.
  2. All consumers and consumers are located behind the same LV/MV substation.
  3. All consumers and producers should be bounded by one legal entity, representing the cluster in the contact with the network operator.

### *United Kingdom*

- Use of direct line/private wire is allowed to share electricity
- The use of a virtual private network , eg. sharing electricity through the public grid, is currently in a trial stage.
- This is tested in two variations:

1. Through the supplier who generates, supplies and balances locally
2. Through the DNO in charge of handling local constraints

### Belgium - Flanders

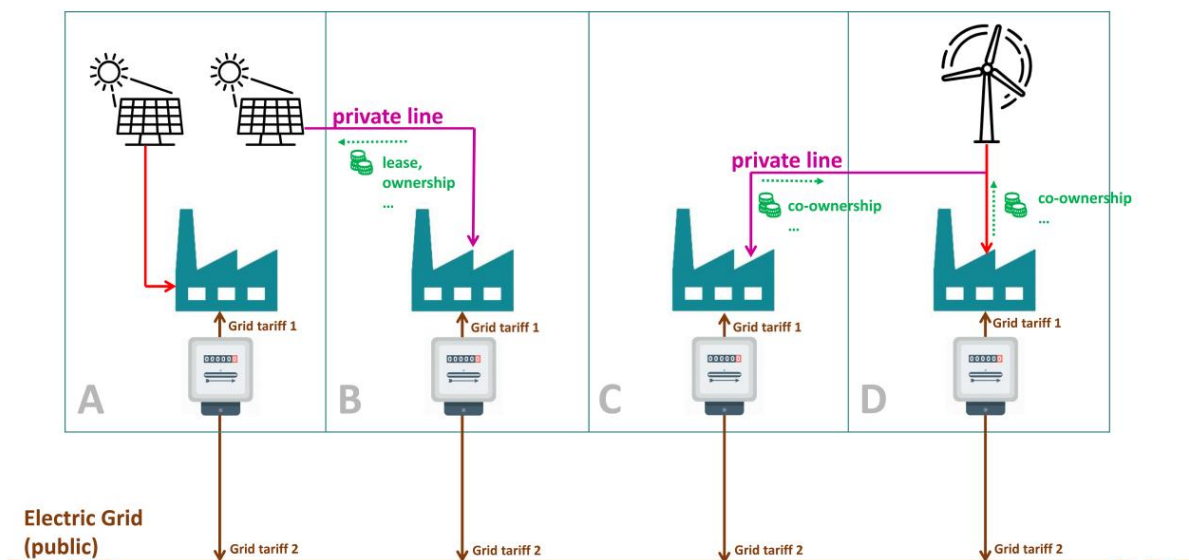
- The use of direct lines for electricity sharing is not prohibited, but discouraged. Use of the existing grid as much as possible is preferred.
- Direct lines are allowed in three scenarios:
  1. On one site
  2. On different sites when authorization is obtained (only in exceptional cases)
  3. A private industrial grid can be allowed, but is strongly restricted.
- Electricity sharing via the public grid is only allowed for residential consumers, not for businesses.
- With the start of the 'Solar Sharing' programme in 2018, residential consumers are allowed to share electricity from solar panels by co-investing in a PV installation from an organization. The energy profit will directly show up on the energy bill of the residential consumer.
- Specifications under which PV sharing is allowed:
  1. PV installations > 10kVA and < 250KVA
  2. Participants are LV consumers and have a reversing meter
  3. Each participant gets a fixed share of the large installation < 10 KVA
  4. Participants freely choose their supplier
  5. No geographical limits

### Overview per scenario

Three possible scenarios for electricity sharing among businesses are presented here:

#### Scenario 1: Energy exchange via direct, private lines

Two or more businesses geographically nearby exchange renewable electricity through a private, direct line. The ownership of the renewable energy installation could be privately or co-owned by the the businesses.



The Netherlands: Prohibited

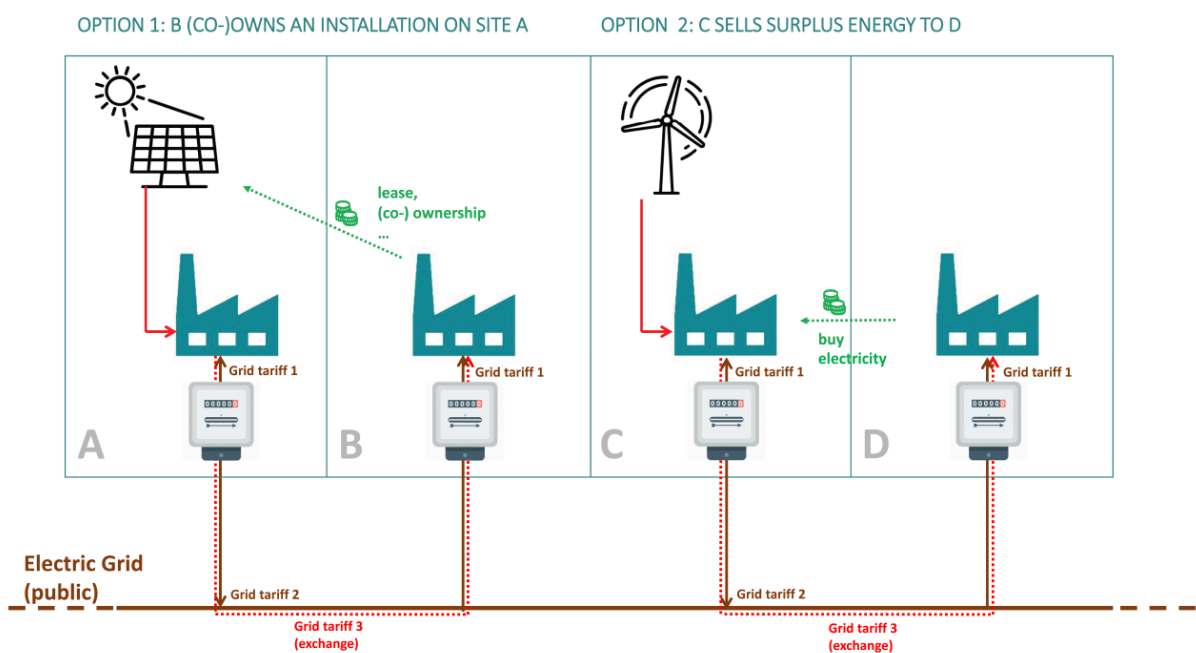
France:

UK: Allowed

Belgium: Allowed, but discouraged

### Scenario 2: Energy exchange via public grid

Two or more businesses whether or not geographically nearby directly exchange renewable electricity using the existing public grid. The energy receiving partner could either be owner or co-owner of the electricity installation or could just directly buy energy surplus.



The Netherlands: Allowed, under conditions (businesses must be small users and geographically nearby)

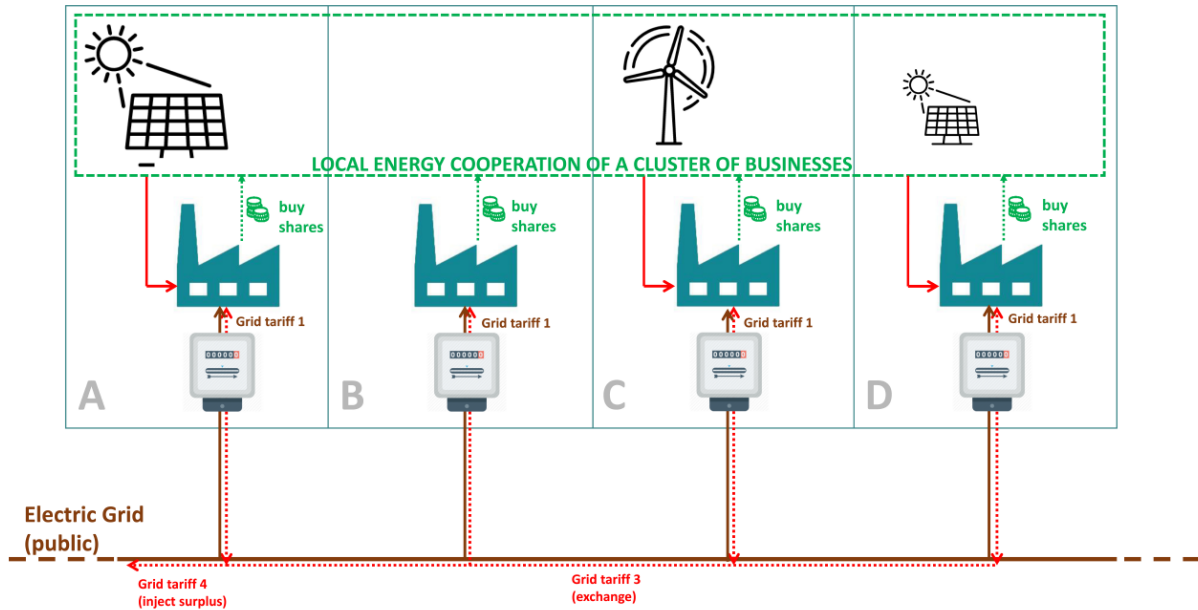
France: Allowed (businesses must be geographically nearby)

UK: Allowed

Belgium: Not allowed

### Scenario 3: Local energy cooperation

Businesses organize themselves in a local energy cooperation in charge of their collective energy production. The businesses buy energy and receive shares from the cooperation.



The Netherlands:

France:

UK:

Belgium: Allowed but the cooperation must have a supplier license. Grid costs are charged, thus fairly limited financial incentive

## Overview matrix

	NL	FR	UK	BE (FL)
<b>Electricity sharing through private direct line</b>				
Electricity sharing direct line allowed	No		Yes	Yes
<b>Electricity sharing through public grid</b>				
Electricity sharing for individuals	Yes	Yes		Yes
Electricity sharing for businesses	Yes (only small users)	Yes		No
Electricity sharing geographically bounded	Yes	Yes		No
<b>General information</b>				
Capacity vs Consumption tariff	Combination	Consumption	Consumption	Consumption
Reversing meter	Yes	No	Limited	Yes
Feed-in tariff	No	High	Yes	No

## Conclusion

Electricity sharing is rare in all four project regions at this moment. In all countries initiatives are currently taken to facilitate electricity sharing. However, the initiatives are still in test phase, or in pre-test phase. Only in France electricity sharing among (non-small energy consuming) businesses is allowed under certain conditions. In the other project countries electricity sharing is solely allowed for individuals or small users.

In three of the four regions electricity sharing is geographically restricted. This is remarkable as there is no clear indication that there are cost (or other) benefits to locally sharing electricity compared to nationally (in case the grid infrastructure completed).

(Theoretical) profits from electricity sharing (and thus incentives to share) origin largely from the (theoretical) absence of grid costs in the energy bill, eg. avoidance of network costs. The cost of the grid depends on its capacity, not on its use. The non-payment of grid costs is thus defensible in case that local balancing (induced by local energy sharing) does reduce the investment (capacity) costs for the grid. The avoidance of network charges is not a fair and structural solution in case the grid costs are not reduced thanks to the electricity sharing.

## Policy recommendations

- To increase the production of renewable energy there should be a larger focus on business parks, because of the opportunities for economies of scale.
- Although electricity sharing will not be the game changer, it can increase overall RE production by unlocking potential. This is particularly true at business park level.
- Moreover, electricity sharing could serve as solution to avoid consumption peaks thereby reducing the necessity to further invest in grid infrastructure.
- The profits from electricity sharing should origin from the electricity price, not from the (unfair?) avoidance of tariffs and taxes.

For Flanders: The governance structure of the DSOs (consisting of local authorities, sharing in the profits) does not encourage the DSOs to charge grid users the effective price for the use of the grid. This mismatch between the objectives of the DSO governors (aiming for higher profits) and the necessary conditions for a solid (renewable) energy market obstructs fair grid charging.