

RENEWABLE COLLECTIVE-SELF- CONSUMPTION AND RENEWABLE ENERGY COMMUNITIES

The implementation hypotheses of the Regulatory Authority for energy
networks and environment



European
Commission

Clean energy for all Europeans



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The information contained in this document is purely reconnaissance: to this end, some technical details for the benefit of the narrative have been omitted. The author does not assume responsibility for any choices and actions that market operators may make on the basis of the information contained in the document. It should be noted that the application of the regulations on user systems must be duly analysed in relation to each specific case.

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RENEWABLE COLLECTIVE-SELF-CONSUMPTION AND RENEWABLE ENERGY COMMUNITIES

The implementation hypotheses of the Regulatory Authority for energy networks and environment (ARERA)¹

1. The role entrusted to the Regulatory Authority by Law no. 8/2020 on collective self-consumption and renewable energy communities

By Law no. 8 of 28 February 2020², in introducing the first implementation of the provisions of Article 21 (collective self-consumption) and Article 22 (renewable energy community) of Directive (EU) 2018/2001, has entrusted the Regulatory Authority for Energy Grid and Environment (ARERA) with the task of adopting the necessary measures to ensure the immediate implementation of the provisions of the law in relation to³:

- **metering of shared energy:** cooperation arrangements between network operators (Terna and distribution companies) to make electricity measures available for the assessment of shared energy;
- **benefits for the electricity grid:** identification of the value of the tariff components (grid tariffs and methods of covering electricity losses on the grids) that are deductible for shared energy considered as self-consumed energy;
- **monitoring:** establishment of a system for the continuous monitoring of the configurations created by foreseeing the evolution of the energy subject to the payment of charges and the various tariff components, taking into account the possible growth trajectories of the self-consumption configurations, which can be detected by the monitoring activity, and the evolution of the overall needs of the various components;
- **participation of municipalities and public administrations:** identification of ways to encourage the direct participation of municipalities and public administrations in renewable energy communities.

In relation to the powers referred to above, the ARERA has published a document for consultation⁴ which represents a further step towards the realization of new configurations of self-consumption and sharing of distributed renewable energy production that represent one of the key points of the energy transition towards the decarbonisation of the national energy system. With this document an analysis of the Authority's document is made taking into account the considerations already made in another previous study on the subject⁵.

2. General elements

The Authority's consultation document, which reviews European and national legislation, and to which reference is made for all other details not dealt with herein, provides the reader with an initial overview of the regulatory procedures that the Authority intends to adopt.

¹ <https://www.arera.it/it/inglese/index.htm>

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https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2020-02-29&atto.codiceRedazionale=20G00021&elenco30giorni=true

³ Ref. <http://www.enusyst.eu/documents/CSC-EC-Italy.pdf>

⁴ Ref. Annex 1 to the present document.

⁵ Ref. previous note 3.

General interpretative criterion of the concept of self-consumption: with the need to reconcile the design of the national regulations with the Community regulatory framework, the Authority starts from the consideration that the European Directive deals with the configuration of self-consumption (individual or collective) of renewable energy without introducing an autonomous definition of the concept of self-consumption. In this regard, the Authority refers, from a technical point of view, to the concept of "self-consumption" around which the national regulations are drawn up, which is the consumption of electricity produced in the same site where it is consumed, both instantaneously and through storage systems, regardless of the subjects (even if different) who play the role of producer and final customer, as long as they operate in the same "site" appropriately defined and confined, and regardless of the source that feeds the production plant. The Authority underlines, furthermore, that in relation to the renewable energy communities, the directive 2018/2001 never makes explicit reference to self-consumption) while, instead, the theme of the sharing of electric energy among the subjects belonging to the configuration occurs both in the case of collective self-consumption and in the case of the renewable energy communities.

In relation to this area, the Authority confirms the notion of self-consumption, production units, consumption units and sites already present in the regulations and referable to the methods of regulation of efficient user systems. It emerges from this the general consideration that one can speak of self-consumption in relation only to a specific site. Aggregations of self-consumers in relation to the same condominium/building are possible. For the realities of energy sharing that derive from the involvement of several sites (e.g. energy communities) the shared energy, in principle and technically, is not energy that can be understood as self-consumed.

Producers: in relation to the issue of production, the Authority presents two very important elements for the effective implementation of the new models in question, it being understood that the new regime introduced can only consider the production of new plants built from March 1, 2020 and no later than 60 days after the entry into force of the law implementing Directive (EU) 2018/2001. More precisely:

- with regard to self-consumption in condominiums, the Authority clarifies that the group of self-consumers can be identified as the sum of simple end customers, simple producers and/or end customers and producers operating in one of the permitted private configurations, as long as they all belong to the same building or condominium (in other words, the group includes the subjects previously mentioned limited to the connection points, of any type, located within the perimeter of the building or condominium). This makes it possible to say that even a system made in common within the condominium can participate in the community;
- as far as energy communities are concerned, the Authority analyses the point concerning the ownership of production plants producing energy from renewable sources which belong to and are developed by the legal entity in question (it should be noted, in this respect, that the English wording of the Directive provides, on this point, that projects - not necessarily production plants - are owned or developed by the community); however, in Article 22(2)(b), Directive 2018/2001 explicitly speaks of 'renewable energy produced by production units owned by such a renewable energy producer/consumer community'. The wording in English therefore leaves room for interpretation.

Consequently, the Authority:

- as regards the figure of the self-consumer: adheres to the principle, also indicated by the European Directive, that the plant of the self-consumer of renewable energy may be owned

or operated by a third party, provided that the third party remains subject to the instructions of the self-consumer of renewable energy;

- as far as the energy community is concerned, it allows producers to be subjects that are not part of the community (including those that carry out the production activity as their main activity) provided that the production plants managed by them are held by the community itself: these third party producers will not be part of the community but the energy they supply will be taken into account for the identification of the shared energy.

The above is a very important point as it allows the intervention of one or more third party producers (including plant owners) not part of the aggregate but having a technical-commercial relationship with it, which could support the investments.

Electricity networks: with regard to the issue of electricity networks, the Authority notes that the possibility of building or operating alternative electricity networks to the network with an obligation to connect third parties is not explicitly addressed in European legislation. The latter is addressed in Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 (hereafter referred to as "Directive 2019/944"): Directive 2019/944), which specifies in Article 16 that a Member State may grant to its national energy communities the right to operate the distribution system in its area of operation and to set up the relevant procedures without prejudice to the provisions of Chapter IV (on distribution system operation) and other rules and regulations applicable to distribution system operators, while allowing them to be subject to the exemptions provided for in Article 38(2) of the Directive (these are the exemptions for closed distribution system operators - TDI). The Authority also notes that Law no. 8/2020 provides that for both collective self-consumers and energy communities, no networks other than those already permitted and that, therefore, each final customer and each producer belonging to a collective self-consumer or energy community, maintain their existing connection point (i.e. require a new connection under the current regulation).

As repeatedly pointed out, direct access to the electricity network that can play a role as a distribution network, i.e. that can provide the transport service in accordance with the regulations in force on public networks, appears to be the most efficient means to guarantee the right of final customers to have free access to the market in compliance with the principle of voluntary participation in forms of collective self-consumption and/or energy communities.

3. Proposed regulation model

The regulatory model proposed is the "virtual" one which, in practice, consists in:

- continue to apply the current regulation, for all end customers and participating manufacturers;
- having to formulate the request to the GSE⁶ for access to the regulation provided for in the case of "collective self-consumption from renewable sources" or "renewable energy community": the applicant is identified in the figure of the producer (the producer present or in the case of several producers, one chosen among them);
- return, by the GSE, any amounts or tariff components due in relation to the energy consumed by the collective consumption or self-consumption (return of amounts or tariff components already paid to the seller)⁷;
- to provide, by the GSE, the incentive, as will be specifically defined by the Minister of Economic Development.

⁶ www.gse.it

⁷ Ref. para 4 - Benefits

The need not to resort to structural changes in the electricity system and not to modify commercial settlement systems is probably, in the intermediate, the most effective way from the point of view of timing for the new realities to begin to take effect.

4. Benefits linked to collective-self-consumption and energy communities initiatives

The Authority has already listed the potential benefits of self-consumption in the past, taking up a broader discussion in the Consultation Document. The recognised benefits are differentiated by collective self-consumption and by energy community.

Collective self-consumption:

- the unit amount to be refunded is defined as the sum of the transmission tariff component defined for low voltage consumers (equal, for the year 2020, to 0.761 c€/kWh) and the higher value of the variable distribution component (equal, for the year 2020, to 0.061 c€/kWh);
- the amount of avoided losses recognised is 1.2% in the case of plants connected to medium voltage networks and 2.6% in the case of plants connected to low voltage networks. The avoided losses that will actually be recognised are valued at the hourly zonal price (market price);
- the total amount refunded is equal, on an hourly basis, to the sum of two terms:
 - the product between the unit amount subject to restitution (for the year 2020, a total of 0.822 c€/kWh) and a quantity of electricity equal to the minimum between the electricity injected by the production plants and the total electricity withdrawn from the connection points belonging to the same building or condominium in the ownership of end customers belonging to the group of self-consumers who act collectively or who have issued the release for the use of their measurement data;
 - the product between the coefficient of avoided losses (1.2% or 2.6%), the hourly zonal price and a quantity of electrical energy equal to the minimum between the electrical energy supplied by the production plants and the total electrical energy taken from the connection points referred to in the previous point and connected at or below the voltage level of the production plant.

Energy communities: due to the particular configuration of the defined energy communities, the benefit is only equal to the unit charge of 0,822 c€/kWh applied to the shared energy calculated on the basis of the withdrawals of the participating entities only.

5. Conclusions

The Authority proposes a model to meet the expectations of a quick start for the operation of the new configurations of collective self-consumption and energy community as defined by the law n. 8/2020. The actual convenience of these configurations must be verified on a case-by-case basis already on the basis of the benefits attributed by the Authority without neglecting the fact that a specific incentive must also be defined by a specific decree. The proposed model, which is inconsistent with the need to start the initiatives immediately, captures the main effects of energy sharing but does not introduce a new effective form of shared energy exchange for which deeper

interventions would be necessary at least at the level of metering management and market settlement.

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Annex 1 – ARERA consultation document⁸

⁸ Unofficial translation

GUIDELINES FOR THE SETTLEMENT OF THE ECONOMIC ITEMS RELATING TO ELECTRICITY SUBJECT TO COLLECTIVE SELF-CONSUMPTION OR SHARING WITHIN RENEWABLE ENERGY COMMUNITIES

Foreword

This consultation document defines the Authority's guidelines for the regulation of the economic items relating to electricity subject to collective self-consumption or sharing within renewable energy communities.

These guidelines are presented taking into account the provisions of Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (hereinafter: Directive 2018/2001) and Decree Law no. 162 of 30 December 2019, coordinated with Conversion Law no. 8 of 28 February 2020 (hereinafter: Decree Law 162/19).

Interested parties are invited to submit their comments and proposals to the Authority in writing, if possible in an electronic format allowing transcription of the text, by 9 May 2020.

Interested parties wishing to preserve the confidentiality or secrecy of all or part of the documentation submitted are required to indicate which parts of their documentation are to be considered confidential.

In order to facilitate the publication of the contributions received in response to this document for consultation, please send documents in electronic format through the interactive service made available on the Authority's website www.arera.it or, alternatively, to the e-mail address info@arera.it or to the institutional pec address protocollo.aeegsi@pec.energia.it.

1. Introduction and purpose of this consultation document

- 1.1 Article 42-bis of Decree-Law 162/19 sets out the terms and conditions for the activation of collective self-consumption from renewable sources and the establishment of renewable energy communities, as the first implementation of Articles 21 and 22 of Directive 2018/2001 and pending its full transposition.
- 1.2 Article 42-bis also requires the Authority to adopt the necessary measures to ensure the immediate implementation of the provisions set out therein, assigning the Authority certain specific tasks referred to below.
- 1.3 The purpose of this consultation document is to present the Authority's guidelines for the implementation of Article 42-bis of Decree-Law 162/19, taking into account the provisions of Directive 2018/2001.

2. The chosen interpretative criterion

- 2.1 The European directive does not introduce an autonomous definition of self-consumption. In European legislation, self-consumption is defined only in relation to the configuration of a renewable energy self-consumer (individual or collective). This point is highlighted in advance because of the difficulties of interpretation it entails in relation to the national legal framework.
- 2.2 From a strictly technical point of view, in fact, the concept of 'self-consumption' identifies the consumption of electricity produced on the same site where it is consumed, both instantaneously and through storage systems, regardless of the parties (even if they are different) who act as producer and final customer, as long as they operate on the same suitably defined and confined 'site', and regardless of the source supplying the production plant. Around this technical notion of "self-consumption" is drawn the national discipline.
- 2.3 For the purposes of this consultation document, an interpretative approach is adopted that makes it possible to reconcile the design of the national framework with the Community regulatory framework.

3. The provisions of Directive 2018/2001

- 3.1 Directive 2018/2001 distinguishes between self-consumers of renewable energy (individual or collective) and renewable energy communities, as better highlighted below.

3.A Self-consumers of renewable energy

- 3.2 According to Directive 2018/2001, a 'self-consumer of renewable energy' is a final customer who, operating on his own sites located within defined boundaries or, if permitted by a Member State, on other sites, produces renewable electricity for his own consumption and may store or sell self-produced renewable electricity provided that, for a self-consumer of renewable energy other than households, such activities do not constitute the main commercial or professional activity.
- 3.3 'Self-consumers of renewable energy acting collectively' are a group of at least two self-consumers of renewable energy acting collectively and located in the same building or condominium.
- 3.4 Article 21 of Directive 2018/2001 is entirely dedicated to self-consumers of renewable energy. As far as this article is concerned, it provides that:
- self-consumers of renewable energy, in relation to electricity self-generated from renewable sources that remains available to them, shall not be subject to discriminatory or disproportionate procedures or to charges or tariffs. They may also install and operate electricity storage systems combined with renewable electricity generation plants for their own consumption without being subject to any double charge, including network tariffs for stored electricity that remains available to them. The installation of the renewable energy self-consumer may be owned by a third party or operated by a third party in relation to installation, operation, including meter operation, and maintenance, provided that the third party remains subject to the instructions of the renewable energy self-consumer. The third party shall not in itself be considered as a self-consuming renewable energy consumer. Each self-consumer shall retain his or her rights and obligations as a final consumer of electricity;
 - self-consumers of renewable energy located in the same building, including condominiums, are authorised to organise the exchange of renewable energy produced at their own site(s) among themselves, without prejudice to grid charges and other relevant charges, fees, levies and taxes applicable to each self-consumer of renewable energy.
- 3.5 Member States may distinguish between individual renewable energy self-consumers and renewable energy self-consumers acting collectively, provided that any different treatment is proportionate and duly justified.
- 3.6 Finally, Member States are required to establish a framework that is conducive to promoting and facilitating the development of self-consumption of renewable energy which, as far as it is noted here, gives self-consumers of renewable energy a non-discriminatory access to the relevant existing support schemes, as well as to all segments of the electricity market, and ensures that self-consumers of renewable energy make an appropriate and balanced contribution to the overall cost sharing of the system when electricity is fed into the grid.

3.B Renewable energy communities

- 3.7 Under Directive 2018/2001, the 'renewable energy community' is a legal entity:
- a) which, in accordance with applicable national law, is based on open and voluntary participation, is autonomous and is effectively controlled by shareholders or members that are located in the vicinity of renewable energy production plants that belong to and are developed by the legal entity in question (it should be noted, in this respect, that the English wording of the Directive requires projects - not necessarily production plants - to be owned or developed by the community); however, Article 22(2)(b) of Directive 2018/2001 explicitly mentions in Article 22(2)(b) 'renewable energy produced by production units owned by that community producer/consumer of renewable energy');
 - b) whose shareholders or members are natural persons, small and medium-sized enterprises or local authorities, including municipalities;
 - c) whose main objective is to provide environmental, economic or social benefits at community level to its shareholders or members or to the local areas in which it operates, rather than financial profits.
- 3.8 Article 22 of Directive 2018/2001 is entirely dedicated to renewable energy communities. As far as this article is concerned, it provides that:
- final customers, in particular domestic customers, have the right to participate in renewable energy communities, while maintaining their rights or obligations as final customers and without being subject to unjustified or discriminatory conditions or procedures that would prevent their participation in a

renewable energy community, provided that, with regard to private companies, their participation does not constitute their main commercial or professional activity;

- renewable energy communities have the right to:
 - a) produce, consume, store and sell renewable electricity, including through renewable electricity purchase and sale agreements;
 - b) exchange, within the same community, renewable electricity produced by the production units owned by that renewable electricity producer/consumer community, without prejudice to other requirements and the maintenance of the rights and obligations of the members of the renewable electricity producer/consumer community as customers;
 - c) access to all electricity markets, directly or by aggregation, in a non-discriminatory manner.

3.9 Member States are required to establish a support framework to promote and facilitate the development of renewable energy communities. Such a framework must ensure, as far as this is concerned, that:

- the relevant grid operator cooperates with renewable energy communities to facilitate electricity transfers within renewable energy communities;
- renewable energy communities are subject to fair, proportionate and transparent procedures, in particular registration and licensing procedures, and to grid charges that take into account costs as well as relevant charges, levies and taxes, ensuring that they contribute in an appropriate, fair and balanced way to the overall cost allocation of the system in line with a transparent cost-benefit analysis of distributed energy resources carried out by the competent national authorities;
- rules are available to ensure fair and non-discriminatory treatment of consumers participating in a renewable energy community;
- Member States take into account the specificities of renewable energy communities when designing support schemes in order to enable them to compete on an equal footing with other market participants for support.

3.10 It should be noted that, in relation to renewable energy communities, Directive 2018/2001 never makes explicit reference to self-consumption. On the other hand, the issue of electricity sharing between the parties involved in the configuration is used both in the case of collective self-consumption and in the case of renewable energy communities.

3.11 Similarly, the possibility of establishing or operating alternative electricity networks with a third-party connection obligation is not explicitly addressed. The latter is addressed in Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 (hereinafter referred to as 'Directive 2019/944'): Directive 2019/944), which specifies in Article 16 that a Member State may grant to its national energy communities the right to operate the distribution system in its area of operation and to set up the relevant procedures without prejudice to the provisions of Chapter IV (on distribution system operation) and other rules and regulations applicable to distribution system operators, while allowing them to be subject to the exemptions provided for in Article 38(2) of the Directive (these are the exemptions for closed distribution system operators - CDS).

3.C The provisions of Article 42a of Decree-Law 162/19

3.12 Article 42-bis of Decree-Law 162/19, which defines the terms and conditions under which collective self-consumption from renewable energy sources or the establishment of renewable energy communities may be activated, aims, as stated in the first paragraph, to acquire useful elements for the implementation of Articles 21 and 22 of Directive 2018/2001, pending its full transposition.

3.13 The provisions contained therein are therefore of a transitional nature and, as stated in the article itself, are aimed at persons who produce electricity for their own consumption (individual or collective) with plants powered by renewable sources of a total power not exceeding 200 kW, which came into operation after the date of entry into force of the law converting Decree-Law 162/19 (1 March 2020) and within 60 days of the date of entry into force of the measure transposing Directive 2018/2001 (expected by 30 June 2021, as provided for by the directive itself).

3.14 More in detail, it provides that end customers shall associate in compliance with the following conditions:

- a) in the case of self-consumers of renewable energy acting collectively, entities other than households are associated only if the electricity production and trading activities do not constitute the main commercial or professional activity;
 - b) in the case of renewable energy communities, shareholders or members are natural persons, small and medium-sized enterprises, local authorities or local authorities, including municipalities, provided that, for private enterprises, participation in the renewable energy community does not constitute the main commercial or industrial activity. The main objective of the association is to provide environmental, economic or social benefits at community level to its shareholders or members or to local areas where the community operates, rather than financial profits. Finally, participation in renewable energy communities is open to all final customers, in particular household customers, located within the perimeter specified below, including those belonging to low-income or vulnerable households.
- 3.15 Article 42-bis also requires participating entities to share electricity produced using the existing distribution network and that the electricity shared for instantaneous self-consumption (including through storage systems) is equal to the minimum, in each hourly period, between the electricity produced and fed into the network by renewable energy installations and the electricity withdrawn by all associated final customers.
- 3.16 With reference to the geographical scope of these configurations, the same Article 42bis provides that
- in the case of self-consumers of renewable energy acting collectively, the self-consumers themselves are located in the same building or condominium;
 - in the case of renewable energy communities, the consumer withdrawal points and feed-in points of the installations are located on low-voltage electricity grids underlying, at the date of creation of the association, the same medium/low voltage transformer box.
- 3.17 With regard to final customers associated in one of the above configurations (i.e. self-consumers of renewable energy acting collectively or renewable energy communities), Article 42bis of Decree-Law 162/19 provides that they are to be
- maintain their rights as final customers, including the right to choose their seller;
 - may withdraw from the configuration at any time, without prejudice to any fees agreed upon in the event of early withdrawal for sharing in the investments incurred, which must in any case be fair and proportionate;
 - regulate relations by means of a private law contract that takes into account what is stated in the previous paragraphs and that uniquely identifies a delegated party, responsible for the distribution of the shared electricity. Participating end customers may also entrust this party with the management of payment and collection items to the sellers and the Gestore Servizi Energetici S.p.A. (hereinafter: GSE).
- 3.18 With regard to the regulation of economic items relating to collective self-consumption or the renewable energy community, Article 42bis of Decree-Law 162/19 provides that it is left to the Authority, which, in addition to adopting the necessary measures to ensure the immediate implementation of the provisions of the same article:
- a) take the necessary measures to ensure that network operators cooperate in order to enable the implementation of the provisions of that Article, in the simplest possible way, with particular regard to the way in which shared electricity measures are made available;
 - b) identify, including on a flat-rate basis, the value of the regulated tariff components, as well as those related to the cost of the electricity raw material, which are not technically applicable to shared electricity, since electricity is instantly self-consumed in the same portion of the low-voltage grid and, for this reason, comparable to physical self-consumption in situ. It should be noted, in this regard, that paragraph 6 of the same Article 42-bis expressly provides that electricity withdrawn from the public grid by end customers, including that which is shared as part of the collective self-consumption or renewable energy community, shall be subject to the tariff components to cover general system charges;
 - c) ensure that a system is set up for the continuous monitoring of the configurations implemented in implementation of the same article; in this context, it shall provide for the evolution of the electricity subject to payment of these charges and the various tariff components, taking into account the possible growth trajectories of the self-consumption configurations, detectable by the monitoring activity, and the evolution of the overall needs of the various components. For these purposes, the Authority may use the companies of the GSE group;
 - d) it identifies ways to encourage the direct participation of Municipalities and Public Administrations in renewable energy communities.

- 3.19 Finally, with reference to the incentive instruments, Article 42bis provides that they should apply to plants powered by renewable energy sources present in collective self-consumption or renewable energy communities and that they should be specifically defined by the Minister for Economic Development as an alternative to the incentives and special commercial schemes currently in force (which, therefore, would not apply). The new incentives, specifically defined, would be cumulative only with the tax deductions provided for in Article 16-bis, paragraph 1, letter h), of the Consolidated Income Tax Act and would be defined on the basis of the following criteria:
- a) the incentive tariff is paid by the GSE and is intended to reward instantaneous self-consumption and the use of accumulation systems;
 - b) the mechanism is implemented taking into account the principles of simplification and ease of access and provides for a system of reporting and monitoring of economic and energy flows by the GSE, with a view to acquiring useful elements for the general reform of the exchange mechanism on the spot, to be carried out in the context of the transposition of Directive 2018/2001;
 - c) the incentive tariff shall be paid for a maximum period of use and shall be modulated between the different incentive configurations in order to guarantee the profitability of the investments;
 - d) the mechanism is implemented taking into account the overall balance of charges in the bill and the need not to increase the trend costs compared to those of the mechanisms in force;
 - e) a single adjustment is provided for, consisting of the payments deriving from the Authority's regulation and the incentive tariff.

4. **Guidelines of the Authority on the implementation of Article 42a of Decree-Law 162/19**

4.A Definitions

- 4.1 Below are some indications of the definitions that are relevant for the purposes of this document, based on the chosen interpretation criterion and starting from the elements already contained in Directive 2018/2001 and Decree-Law 162/19, also taking into account the limits of the Authority's intervention and without prejudice to a different interpretation resulting from the adoption of additional regulatory provisions when fully transposing Directive 2018/2001.

Definitions regarding self-consumption

- 4.2 "Self-produced renewable energy consumer": a final customer who, operating in his own sites located within defined boundaries, produces renewable electricity for his own consumption and can store or sell self-produced renewable electricity provided that, for a self-consumer of renewable energy other than households, such activities do not constitute the main commercial or professional activity. The installation of the self-consumer of renewable energy may be owned or operated by a third party, provided that the third party remains subject to the instructions of the self-consumer of renewable energy.
- 4.3 From an operational point of view, pending any different provisions that may arise from the forthcoming implementation of Directive 2018/2001, it is considered that the self-consumer of renewable energy must continue to be the final customer as identified by the regulation in force (Annex A to Resolution 578/2013/R/eel - TISSPC, to which reference should be made) who can create one of the private configurations currently provided for by the regulations in force (SEU or ASAP) within the limits and in the manner provided for by the aforementioned regulation. The regulations and regulations in force today already allow, in relation to SEUs, the possibility that the producer is a third party with respect to the end customer: this producer operates by feeding into the grid the electricity not instantaneously consumed through the connection point that remains in the ownership of the customer;
- 4.4 "Self-consumers of renewable energy acting collectively" means a group of at least two self-consumers of renewable energy, as defined in point 4.2, acting collectively and located in the same building or condominium. The persons who intend to be part of the group are domestic customers or other persons provided that, in the latter case, the electricity production and exchange activities do not constitute the main commercial or professional activity. Moreover, only production plants powered by renewable sources, located in the same building or condominium, with an overall power not exceeding 200 kW and all of which entered into operation after the date of entry into force of the law converting Decree Law 162/19 (i.e. March 1, 2020) and within sixty days after the date of entry into force of the measure transposing Directive 2018/2001, are considered to be collective self-consumption.

- 4.5 It is also considered that;
- the group of self-consumers can be identified as the sum of simple end customers, simple manufacturers and/or end customers and manufacturers operating in one of the permitted private configurations (SEU or ASAP), provided that they all belong to the same building or condominium (in other words, the group includes the entities previously mentioned limited to the connection points, of any type, located within the perimeter of the building or condominium);
 - the producers present may possibly be third parties (including those who carry out the production activity as their main activity) since Directive 2018/2001 allows the possibility that the production activity may be delegated to a third party provided that the latter operates in compliance with the indications given by the relative final customer (these third party producers will not be part of the group of self-consumers but the electricity they supply will be used to identify self-consumed energy since they operate in compliance with the indications given by the relative final customer). In any case, there are no limits on the voltage level at which each individual person is connected to the grid with the obligation to connect third parties;
- 4.6 Finally, it is believed that the building and the condominium are identified on the basis of the definitions in force today and in particular:
- the building is a system that complies with the definition set out in Article 2, paragraph 1, letter a) of Legislative Decree 192/05 and falls within the categories set out in Article 3 of Presidential Decree 412/93, including multipurpose buildings (buildings used for different purposes) ;
 - the condominium is a system that complies with the definition in article 2, paragraph 2, letter f) of Legislative Decree 102/14.

Definitions concerning renewable energy communities

- 4.7 'Renewable Energy Community' means a legal entity:
- which is based on open and voluntary participation, is autonomous and is effectively controlled by shareholders or members which are located in the vicinity of renewable energy installations held by the community;
 - whose shareholders or members are natural persons, small and medium-sized enterprises, regional or local authorities, including municipalities, provided that, for private undertakings, participation in the renewable energy community is not the principal commercial and industrial activity;
 - whose main objective is to provide environmental, economic or social benefits at the community level to its shareholders or members or the local areas in which it operates, rather than financial profits.
- 4.8 Shareholders or members of the renewable energy community have connection points on low-voltage electricity grids underneath the same medium/low voltage transformer box. They are simple end customers, simple producers and/or end customers and producers operating in one of the permitted private configurations (SEU or ASAP), as long as they all belong to the same perimeter (in other words, the parties referred to above, limited to connection points of any type, located within the perimeter, fall within the community);
- 4.9 For the purposes of identifying shared energy in the community, only renewable production plants, located within the perimeter referred to in point 4.8, with an individual total power not exceeding 200 kW and all of which entered into operation after the date of entry into force of the law converting Decree-Law 162/19 (i.e. 1 March 2020) and within 60 days of the date of entry into force of the measure implementing Directive 2018/2001.
- 4.10 It is also considered that:
- a) the Authority cannot present any further considerations here regarding the legal nature of the 'renewable energy community' entity, as these take on value and have effects beyond the scope of the Authority's remit;
 - b) producers may, where appropriate, be entities that are not part of the community (including those that carry out the production activity as their main activity) provided that the production facilities they operate are held by the community in the sense specified above (such third party producers will not be part of the community but the energy they input is taken into account for the purposes of identifying shared energy).
- 4.11 Finally, it should be noted that the renewable energy community, without any obligation, can also play the role of a sales company, dispatching user, balance service provider (BSP). In relation to these possible roles, all parts of the legal entity 'renewable energy community' are subject to the relevant regulations in force.

4.B The "virtual" regulatory model

4.12 First of all, it should be noted that Article 42bis of Decree-Law 162/19:

- a) takes over and refers to the definitions of Directive 2018/2001, distinguishing between self-consumers of renewable energy acting collectively (whose perimeter is represented by the same building or condominium) and renewable energy communities (whose perimeter is represented by low-voltage networks belonging to the same medium/low voltage transformer station);
- b) provides that in both cases no networks other than those already permitted are built and managed . Therefore, each end customer and each producer belonging to one of the configurations referred to in letter a) maintain their existing connection point (i.e. require a new connection in accordance with the regulations in force);
- c) provides that each final customer belonging to one of the configurations referred to in point (a) shall retain its rights, including the right to choose its seller, and may withdraw at any time from the collective self-consumption or renewable energy community configuration;
- d) provides that the incentives (soon to be defined by the Minister of Economic Development) shall be determined in order to ensure the profitability of the investment in production plants from renewable sources and, if necessary, of the storage systems associated with them, and shall be recognised by the GSE jointly with the disbursements resulting from the regulation of the Authority *de jure condendo*.

4.13 The approach summarised here appears to be substantially in line with the indications formulated by the Authority, on 12 March 2019, with its memorandum 94/2019/I/com on the business of supporting production activities through the use of electricity generation, storage and self-consumption systems, to which reference should be made.

4.14 This approach, keeping the case of collective self-consumption separate from the case of renewable energy communities (as they have different configurations and definitions), makes it possible to implement a 'virtual' regulatory model, such as the one set out in memo 94/2019/I/com.

4.15 The 'virtual' regulatory model applied to the configurations in question consists in

- continue to apply the regulation in force, for all end customers and manufacturers present in the configurations (including the part relating to Simple Production and Consumption Systems - SSPC, such as Efficient User Systems - SEU and Other Auto-Production Systems - ASAP, and to TDI which would not be modified), in all its parts (connections, choice of vendor, switching, etc.), guaranteeing all stakeholders all the rights currently safeguarded;
- provide for the request to a third party, such as the GSE (since it is already implicitly identified in Decree-Law 162/19 and since it appears to be the entity most suitable for the purpose), to have access to the regulation provided for in the case of "collective consumption from renewable sources" or "renewable energy community", in compliance with the respective definitions provided for in Directive 2018/2001 and within the transitional limits set out in Decree-Law 162/19. This request is relevant for the application of the regulation as described below;
- to provide for the reimbursement, by the GSE, of amounts or tariff components due in relation to energy for self-consumption or collective consumption;
- provide for the payment, by the GSE, of the incentive, as will be specifically defined by the Minister of Economic Development.

4.16 The model outlined makes it possible to extend the benefits, where present, deriving from on-site consumption of locally produced electricity to a number of parties, avoiding the need to implement technical solutions (such as electricity networks other than those requiring connection by third parties) or corporate solutions (such as those required to be classified among the SSPCs currently permitted under national legislation) in order to obtain these benefits. The model outlined, being virtual, also allows each participant to modify its choices, both in relation to the configuration of self-consumption and, and independently, of its energy supply choices, without having to request new connections or make new electrical connections at the same time: as such, the model outlined appears flexible, sustainable over time and easily adaptable to any future need.

4.17 In the context of this flexibility, the 'virtual' regulatory model could be kept identical in its structure, even when faced with different needs: for example, with the same model, the amounts or tariff components could

be different in the case of collective self-consumption rather than in the case of renewable energy communities, if the resulting systemic benefits were different.

4.18 Lastly, the 'virtual' regulatory model makes it possible to implement it in a short space of time, as it is not unlike the equally virtual model currently in place for exchange on the spot; this feature is also essential in view of the need to have the results of the experimentation available in time for transposition of the directive.

4.19 The following is a more detailed description of the guidelines for implementing the 'virtual' regulatory model.

4.C *Submitting the request to the GSE to access the regulation foreseen in the case of "collective self-consumption from renewable sources" or "renewable energy community"*

4.20 As mentioned above, it is first of all considered that in order to be able to access the regulation provided for in the case of 'collective self-consumption from renewable sources' or 'renewable energy communities' on the basis of the virtual model outlined in paragraph 4.B (as better described below) it is necessary to submit an appropriate request to the GSE; it is also considered that the person responsible for submitting such a request is the person who, within the new configuration, intends to act as producer (this does not exclude the possibility that there may be more than one producer). In fact, any benefits deriving from the establishment of one of the new configurations derive from the installation of an electricity production plant at consumption units, regardless of the existence of private electrical connections or particular corporate or contractual arrangements (i.e. electricity would still be used on site).

4.21 The producer (which in the case of condominiums could also be the administrator of the condominium and in the case of renewable energy communities could coincide with the community itself, given that they play the role of the producer) should be required to submit to the GSE, in accordance with procedures to be defined by the GSE, all the documentation needed to certify compliance with the requirements of Directive 2018/2001 and Decree-Law 162/19.

4.22 More specifically, in order to be able to access the regulation provided for in the case of 'collective consumption from renewable sources', the producer (i.e. one of the producers present), as the contact person for the new configuration, must point out to the GSE that

- the parties intending to be part of the configuration are domestic customers or other parties provided that, in the latter case, the electricity production and exchange activities do not constitute the main commercial or professional activity (i.e. producers that carry out this activity as their main commercial or professional activity cannot be part of the configuration and do not qualify as self-consumers). These subjects are owners of connection points (to be listed, specifying the type of subject and user) pertaining to the same building or condominium, as defined by the regulations in force at national level. It is also considered appropriate, for reasons that will be clear below, that the identification codes of all the connection points (POD) pertaining to the same building or condominium are transmitted to the GSE, subject to a release issued by the respective owners;
- the persons referred to in the previous paragraph have given a mandate to the reference manufacturer for the construction of the new configuration;
- all the production plants that are identified for the purposes of identifying collective self-consumption (for which the producer and the connection point must be identified) are powered by renewable sources, are located in the same building or condominium referred to in the previous point, have an overall power of no more than 200 kW and all of them entered into operation after the date of entry into force of the law converting Decree Law 162/19 (i.e., March 1, 2020) and within 60 days of the date of entry into force of the measure implementing Directive 2018/2001.

4.23 In order to access the regulation provided for 'renewable energy communities', the producer (i.e. one of the producers present, within the limits set out above), as the contact person for the new configuration, must inform the GSE that

- the persons who intend to be part of the configuration are natural persons, small and medium-sized enterprises, local authorities or local authorities, including municipalities, for which, in the case of private companies, participation, as members or shareholders, in the renewable energy community is not the main commercial and industrial activity. These entities are holders of connection points (to be listed, specifying the type of entity and user) on low-voltage electricity grids underneath the same medium/low voltage transformer substation (or mainly underneath, if the power supply can also take place through several

secondary substation: for this purpose, it may be appropriate to attach the confirmation issued by the competent distribution company or it is possible to provide for this verification to be carried out by the GSE following the request);

- the parties referred to in the previous paragraph have actually set up the legal entity known as the "renewable energy community" in accordance with national law and have delegated the producer to act as a contact person, if different from the community itself;
- all the production plants that they take over for the purpose of identifying the shared energy in the new configuration are powered by renewable sources (for which the producer and the connection point must be identified), are held by the community in the sense explained in paragraph 4. A, are connected on low-voltage electrical grids underlying the same low/medium-voltage transformer substation referred to in the previous point, individually have a total power of no more than 200 kW and all of them entered into operation after the date of entry into force of Decree-Law No. 162/19 (i.e., March 1, 2020) and no later than 60 days after the date of entry into force of the measure implementing Directive 2018/2001.

4.24 It is also considered appropriate that the GSE should define, punctually and on the basis of the indications set out herein, the operating procedures for access to the regulation provided for in the case of 'collective consumption from renewable sources' or 'renewable energy communities' (including a list of the necessary documentation) and the documentation that may be required if changes occur that may have an impact on the regulation itself. It is also considered that these operating procedures should be as simple as possible.

Return of amounts or tariff components already paid to your seller

4.25 In order to be able to determine, even on a flat-rate basis, the amounts or tariff components to be refunded by the GSE, attention must first be focused on the benefits of the configurations covered by this document for consultation, to which such refund should be commensurate. It is precisely for this reason that, in principle, the amounts or tariff components to be refunded could be different in the case of collective self-consumption than in the case of renewable energy communities.

4.26 To this aim, it is important to recall some considerations already set out in Memo 94/2019/I/com.

4.27 From a technical point of view, the concept of 'self-consumption' identifies the consumption of electricity produced on the same site where it is consumed, either instantaneously or by means of storage systems, regardless of the parties (even if they are different) who act as producer and final customer, provided they operate on the same 'site', suitably defined and confined, and regardless of the source that feeds the production plant (in Decree-Law 162/19, on a transitional basis, this is limited to plants powered by small and newly built renewable sources). This means that, where it is intended to recognize a specificity (an advantage) to self-consumption, the same would be ascribable to the "physical" configuration of the system (on site) and the way it is used and not, instead, to the "commercial" configuration, which is linked to the ownership of the plants and the energy exchanged.

4.28 The benefits deriving from self-consumption were set out in memorandum 94/2019/I/com and are essentially due to:

- a) grid losses: electricity produced and consumed in neighbouring areas, by reducing transits on the grids, leads to a reduction in grid losses compared to the case where energy comes from the transmission grid at higher voltage levels. In the current regulation, the reduction in grid losses attributable to self-consumption is already recognised by the flat-rate increase in the amount of electricity fed into the low and medium voltage grids. More specifically, the amount of electricity fed into the low and medium voltage grids is increased by applying a percentage coefficient that takes into account the avoided grid losses, which are equal to the technical losses from the very high voltage up to the transformer between the voltage level in question and the higher voltage level: the avoided grid losses do not include also the losses of the grid having the same voltage level to which the production plant is connected, assuming that on average this grid is still used to connect production units and neighbouring consumption units (as things stand at present, the increase in electricity input that takes account of avoided grid losses is 2.3% in the case of plants connected to medium voltage grids and 5.2% in the case of plants connected to low voltage grids) ;
- b) grid connection: the electricity produced and consumed on site could, in certain situations, make it possible to optimise the use of delivery booths and stalls for connection, thereby reducing connection costs. However, this possible reduction in connection costs is only hypothetical, at least at present;
- c) upgrading or development of new networks: electricity produced and consumed on site could, in perspective, reduce the need to upgrade existing networks or build new networks, to the extent that it

contributes to reducing the maximum power required at the connection points rather than helping to reduce transits. In fact, investment costs, which are higher than operating costs, are related to the fact that electricity grids, especially distribution grids, are usually sized and developed so that they are able to guarantee the maximum power that each user requires at the connection point. However, this possible reduction in the costs of upgrading or developing new networks is only hypothetical, at least at present;

- d) dispatching: self-consumption could in theory reduce dispatching costs, but not necessarily. In fact, Terna S.p.A., in order to operate the electricity system in safe conditions, must in any case take into account the need to supply reserve capacity in order to meet the power requirements of the load inside the self-consumption system during the hours when production inside the said system is zero, also due to production plant failures. Moreover, as "source volatility" increases, dispatching costs tend to rise.

The case of collective self-consumption

4.29 In the case of collective self-consumption at the level of an individual building or condominium, all the technical benefits are attributable to the location of generation spread over the electricity grid with respect to the location of demand and feed-in and withdrawal profiles: consequently, any regulation aimed at exploiting the technical benefits described should disregard the structure of commercial energy purchase/sale relationships.

4.30 On the basis of the above and the elements currently available, it is possible to state that the technical benefits not already recognised (not also the technical benefits attributable to part of the lower network losses, since these are already recognised by the regulation in force) deriving from collective self-consumption at the level of the individual building or condominium, justify first of all, in an approximate manner, the return, by the GSE to the producer responsible for the configuration, of unit amounts equal to the sum of the parts that can be assumed to be cost reflective of the variable components (expressed in c€/kWh) of the transmission and distribution tariffs paid by final customers for a quantity of electricity equal, for each hour, to the minimum between the electricity injected (from the plants admitted by decree-law 162/19) and the total electricity withdrawn (net of only the electricity withdrawn for which the transmission and distribution tariff components are not applied, such as, if present, that intended for the supply of auxiliary services where permitted by the regulation in force) . In other words, it is as if this restitution allowed (albeit in an approximate manner) to apply the transmission and distribution tariffs in such a way as to be even more cost reflective than the current situation: in this sense, the restitution is not to be understood as an incentive to collective self-consumption.

4.31 In addition, limited to a quantity of electricity equal, for each hour, to the minimum between the electricity injected by the plants permitted by Decree-Law No 162/19 and the total electricity withdrawn by the final customers connected at or below the voltage level of the production plant, it is considered that the producer concerned may also be recognised as having avoided grid losses on the electricity grid at the voltage level of the production plant. This makes it possible to recognise even more precisely the avoided grid losses resulting from the installation of production facilities in the same building (i.e. without even using the extended distribution network) where the withdrawals take place, provided that these are at a voltage level equal to or below the voltage level of the production facility. Also the disbursement of the amounts related to the lower grid losses not already recognized by the regulation in force is aimed at achieving, albeit ex post, a regulation as cost reflective as possible. For the same reasons, on the other hand, it is not considered necessary to recognise the commercial losses attributable to low and medium voltage withdrawals to the aforementioned producers, since these losses have no correlation with the costs generated/avoided by the specific grid configuration, but rather constitute the instrument for socialising the related charges.

4.32 From a conceptual point of view, the benefit from which the calculation of the amounts provided by the GSE should take into account the total energy withdrawn at the same time by all final customers in the same building or condominium and not only those who have chosen to be part of the collective self-consumption configuration. Such is, in fact, the benefit corresponding to the construction of the production plant at that point. To this end, it is necessary that the reference producer submits to the GSE appropriate documentation signed by all the POD holders present in the building or condominium in order to give the reference producer and the GSE the right to use the measurement data (including that relating to the PODs of those present in the building or condominium, but not interested in a direct participation in the collective self-consumption configuration). Should one or more POD holders fail to issue the above mentioned release, the related electricity withdrawals cannot be considered for the purposes of quantifying the electricity subject to collective self-consumption.

- 4.33 Finally, for the reasons initially mentioned, it is considered that there are currently no other elements to be taken into account in calculating the amounts to be paid out by the GSE, since the proposed solution appears to correctly value the benefits associated with self-consumption and not already valued by the regulation in force.
- 4.34 As regards the unit value of the tariff amounts to be returned (as mentioned above, equal to the sum of the cost reflective parts of the variable components of the transmission and distribution tariffs), account should be taken of all the types of users present in the configuration, to the extent that for each of them it would be necessary to highlight different values of these amounts. To this end, the energy injected in the configurations referred to in this document should be distributed, every hour, for each final customer present, so as to determine the unit value of the amounts to be returned according to those actually applied to each type of user: such a procedure inevitably has complexity profiles.
- 4.35 In this regard, assuming in a realistic way that the connections that they detect for the purposes of this document are only (or mainly) low voltage, it is noted that:
- in the case of domestic end customers, the variable components of transmission and distribution tariffs coincide with the THREE-PHASE component (equal, for the year 2020, to 0.761 c€/kWh);
 - in the case of other low voltage consumers (BTAU), the transmission tariff is equal to the transmission component and the distribution tariff also has a variable component (equal, for the year 2020, to 0.061 c€/kWh in the case of available power up to 16.5 kW and 0.059 c€/kWh in the case of available power above 16.5 kW), with the sole exception of low voltage consumers for public lighting and for exclusive supply of electric vehicle charging points in places accessible to the public;
 - in the case of low-voltage public lighting and low-voltage consumers for the exclusive supply of electric vehicle recharging points in places accessible to the public, in the interested cases the transmission tariff is entirely expressed in energy quotas (which, therefore, assumes higher values than those typical of other consumers, since neither the fixed quota nor the power quota is present). However, this tariff structure expressed entirely in energy quota derives from the need to take into account the characteristics of these specific types of users, renouncing to be as close as possible to the real underlying cost structure; therefore, also for these specific types of users, for the purposes set out in this document, reference will be made to the variable component of the distribution tariff for low voltage non-household users (BTAU).
- 4.36 Therefore, the theoretical unit value of the amounts to be refunded would be equal to the transmission component to which the variable distribution component should be added.
- 4.37 In order to avoid significant procedural complications, taking into account the low unit amount of the variable distribution component present in the case of other low-voltage users, it is considered appropriate to provide that, for all types of users present within the same building or condominium (including domestic customers), the unit amount to be refunded is defined in the same way and using a single unit value equal, in an approximate and flat-rate manner, to the sum of the transmission component defined for low voltage consumers (equal, for the year 2020, to 0.761 c€/kWh) and the higher value of the variable distribution component defined for BTAU consumers (equal, for the year 2020, to 0.061 c€/kWh). The unit amount to be refunded, calculated as a lump sum, would always be the same, regardless of the users actually present (i.e. even if there were medium voltage connections within the same building or condominium for which, however, the unit value of the corresponding tariff components is similar).
- 4.38 As regards grid losses avoided as a result of the installation of production systems in the same building (and not already recognised by the regulation in force), it is considered that they can be quantified on the basis of the most up-to-date data currently available as summarised in Table 7 of the document for consultation 202/2015/R/eel: more in detail, they can be estimated at 1.2% along medium voltage lines and 2.6% along low voltage lines (these data are derived from precise estimates, starting from a representative sample of the reality on the national territory and correctly modelled with all the necessary information: therefore, they are considered to represent a reliable result). Therefore, in an approximate way, it could be assumed that the amount of avoided losses that can be recognised is 1.2% in the case of installations connected to medium voltage networks and 2.6% in the case of installations connected to low voltage networks. The avoided losses that will actually be recognised can be valued at the hourly zonal price.
- 4.39 The total amount to be refunded would be equal, on an hourly basis, to the sum of two terms:

1) the product between the unit amount subject to restitution (for the year 2020, a total of 0.822 c€/kWh) and a quantity of electricity equal to the minimum between the electricity injected by the plants allowed by decree-law 162/19 and the total electricity withdrawn from the connection points belonging to the same building or condominium in the ownership of end customers belonging to the group of self-consumers who act collectively or who have issued the release for the use of their measurement data;

2) the product between the coefficient of avoided losses (1.2% or 2.6%), the hourly zonal price and a quantity of electrical energy equal to the minimum between the electrical energy injected by the plants admitted by decree-law 162/19 and the total electrical energy taken from the connection points having the characteristics referred to in point 1) and connected at a voltage level equal or lower than the voltage level of the production plant.

An example is given below to better clarify what has been stated so far.

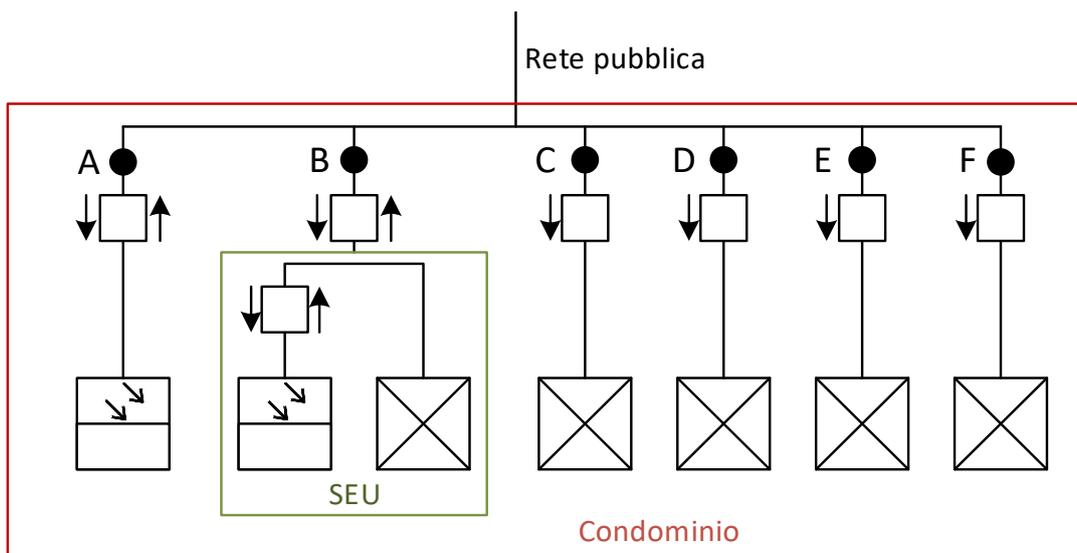
Consider, by way of example, a condominium in which they are present (ref. figure):

- 4 consumption units managed by 4 different end customers (e.g. 3 condominiums and one shop) each of which owns its own low voltage connection point (C, D, E and F);
- a shared condominium consumption unit (which includes, if necessary, condominium use columns for recharging electric vehicles) with its low voltage connection point B to which a photovoltaic system built and commissioned before 1 March 2020 is connected, creating an SEU;
- a photovoltaic system that entered into operation after 1 March 2020 with its low voltage connection point A. It is also assumed that, for this system, an expert's report has been submitted to the competent grid operator, as permitted by the regulations in force, stating that the electricity withdrawn through connection point A is exclusively intended for ancillary services (therefore, this electricity is not subject to the transport tariff components, nor to the components covering general system charges).

On the basis of the above, regardless of the parties who choose to be part of the group of collective self-consumers (and assuming that the non-members have issued a release for the use of their metering data), the quantity of electricity for which, on an hourly basis, the variable part of the transmission and distribution tariffs (conventionally calculated as above and equal, for the year 2020, to 0.822 c€/kWh) is returned is the minimum between:

- the sum of the withdrawals measured at connection points B, C, D, E and F (any withdrawals through connection point A do not count, as they are not burdened with transport tariffs);
- inputs measured only at connection point A (in fact, the system underlying connection point B was built before 1 March 2020).

An amount that takes into account the lower network losses not already recognised by the regulation in force would also be recognised, equal to the product between 2.6% of the same quantity of electricity mentioned above and the hourly zonal price.



SEU = SSPC, simple production/consumption system

Rete pubblica = public network

Condominio = Condominium

The case of renewable energy communities

- 4.40 The considerations set out so far in relation to the identification of the tariff components subject to restitution are deemed to be extended to the case of renewable energy communities as outlined in Decree-Law 162/19, since they are confined to 'local' low-voltage networks. (i.e. under the same medium/low voltage transformer cabin). This geographical limitation, which is not strictly provided for in Directive 2018/2001 (which in fact leaves it to the Member States to define operationally the more general concept of the 'proximity' of production plants to places of consumption), makes it possible to state that, even in the case of this electricity community, the technical benefits resulting from self-consumption (e, unlike the lower network losses, which are not already recognised) can justify the return, by the GSE to the producer responsible for the configuration, of unit amounts equal to the sum of the cost reflective parts of the variable components (expressed in c€/kWh) of the transmission and distribution tariffs paid by final customers. These unit amounts can be determined in a similar way to the case of collective self-consumption, in an amount equal, for the year 2020, to 0.822 c€/kWh).
- 4.41 On the other hand, it is considered that it is not possible to recognise, in the case of renewable energy communities, any further avoided grid losses not already recognised by the regulations in force, since in any case the electricity shared within the community uses the distribution electricity grids (communities, in fact, are not confined within a single building or condominium).
- 4.42 In other words, the geographical limitation of the extension of renewable energy communities (conventionally declined in relation to the medium/low voltage transformer cabin) makes it possible to recognise the benefits of self-consumption, albeit less than those identifiable in the case of collective self-consumption.
- 4.43 Unlike collective self-consumption, it is also considered that, in the case of communities, it is not possible, for operational reasons, to quantify the total amounts returned on the basis of the electricity withdrawn, at the same time, from all end customers connected to the same low-voltage networks, regardless of whether they belong to the community, but that this determination should be limited to the electricity withdrawn by end customers belonging to the community.
- 4.44 In general, if there are no benefits from extended self-consumption, it is considered that there is no reason to provide for refunds of amounts or tariff components in the case of renewable energy communities. In fact, the energy communities themselves do not allow the technical benefits of on-site electricity consumption to be obtained simply by complying with the definitions contained in the European regulatory framework. In fact, these energy communities have overall purposes other than on-site self-consumption, such as, in particular, that of facilitating investment in production plants from renewable sources through the aggregation of small investors, making the most of local resources, or that of facilitating the collective purchase of electricity, simplifying access to electricity markets, without neglecting social purposes, including the fight against "energy poverty" as is the case in European best practices: This seems to be consistent with the use of different instruments (such as, for example, those of a fiscal nature, which are more in line with their actual aims) for the promotion of energy communities.

Operating modes

- 4.45 As stated above, it is considered that in the case of collective self-consumption from renewable sources and in the case of renewable energy communities as defined by Decree-Law 162/19 there are grounds for a similar determination of the amounts paid by the GSE to the producer concerned.
- 4.46 From an operational point of view, the GSE is deemed to receive the same amount of funding as under the current regulation:
- - from the Integrated Information System (IIS), the measurement data of the electricity withdrawn from all the withdrawal points relating to the same building or condominium (regardless of the subjects belonging to the collective self-consumption configuration) or relating only to the withdrawal points of the end customers belonging to the renewable energy community;
 - - by the competent grid operators, the measures of the electricity fed into the grid through the connection points of the production plants whose producers are part of the collective self-consumption configuration or of the renewable energy community.

- 4.47 With regard to the need to have data on withdrawal and input on an hourly basis for the purpose of determining shared energy, provision is made for distribution companies to adopt any procedures necessary to ensure the availability of such data. In particular, where there are withdrawal or feed-in metering points not already processed on an hourly basis or not yet equipped with second-generation meters, without prejudice to any different guidelines that may emerge as a result of this consultation, it is considered appropriate to provide that network operators configure the 1G meters concerned in such a way as to collect hourly data: these hourly data, although not validated, would be made available by the network operators to the reference producers of the new configurations and to the GSE and would only be used to determine the shared hourly energy (in more detail, the non-validated data would be used by the GSE for the sole purpose of the hourly profiling of the measurement data for bands or single time periods validated by the network operators), while the switch to hourly treatment for settlement purposes of the customers concerned would continue to take place according to the normal rules already foreseen in case of replacement/installation of the second generation meter.
- 4.48 The GSE calculates, for each hour and for each configuration, the minimum between the electrical energy supplied by the plants admitted by decree law 162/19 and the total electrical energy withdrawn (the latter, from the connection points belonging to the same building or condominium in the ownership of final customers belonging to the group of self-consumers who act collectively or who have issued the release for the use of their measurement data, (i.e. only the withdrawal points belonging to the renewable energy community), net of only the electricity withdrawn for which the transmission and distribution tariff components are not applied, such as, if present, that intended for the supply of auxiliary services where permitted by the regulations in force.
- 4.49 In the sole case of collective self-consumption, the GSE shall also calculate, for each hour, the minimum between the electricity injected by the plants permitted by Decree-Law No 162/19 and the total electricity withdrawn from the connection points referred to in the previous point, provided that the voltage level is equal to or lower than the voltage level of the production plant, net only of the electricity withdrawn for which the transmission and distribution tariff components are not applied, such as, if any, that intended for the supply of auxiliary services where permitted by the regulations in force. It is considered, however, that in most cases the minimum quantity of electricity referred to in this point coincides with the minimum quantity referred to in point 4.48.
- 4.50 The GSE calculates an hourly amount, to be refunded to the reference producer of the configuration, equal to the product between the minimum quantity referred to in point 4.48 and a flat-rate unit fee always equal (i.e. regardless of the users actually present) to the sum of the TRASE component defined for low voltage users (equal, for the year 2020, to 0.761 c€/kWh) and the higher value of the variable distribution component defined for BTAU users (equal, for the year 2020, to 0.061 c€/kWh). The flat-rate unit fee, calculated as indicated herein, would be updated on an annual solar basis.
- 4.51 In the sole case of collective self-consumption, the GSE also calculates, for each hour, the product between the coefficient of avoided losses (1.2% in relation to the electricity fed in at medium voltage or 2.6% in relation to the electricity fed in at low voltage), the minimum quantity referred to in point 4.49 and the hourly zonal price.
- 4.52 The total amount, which is refunded to the relevant manufacturer of the configuration, is therefore equal to
- - in the case of collective self-consumption, the sum, in the reference time period, of the hourly amounts referred to in points 4.50 and 4.51;
 - - in the case of renewable energy communities, the sum of the hourly amounts referred to in point 4.50 over the reference time period.
- 4.53 It is also considered that this total amount is paid by the GSE to the reference producer in accordance with procedures defined by the GSE on a monthly basis (and in any case only if the amounts to be paid exceed EUR 100). The amount, especially in the event that hourly measurement data are not available for all connection points in the same configuration, may be paid by the GSE on account, subject to adjustment, on the basis of conventional criteria defined by the GSE on the basis of the criteria already in force in the on-site exchange.
- 4.54 It is considered that the total amounts paid by the GSE, given their nature, are to be charged to the Account for the equalisation of electricity transmission, distribution and measurement costs, as well as to the

mechanisms for promoting aggregation and revenue integration, fed by the UC3 component, rather than to the Account for new plants from renewable and assimilated sources. To this end, it will be necessary to provide for appropriate cash flows from the Energy and Environmental Services Fund (CSEA) to the GSE.

- 4.55 Finally, it is considered that no consideration will be applied to the reference producers to cover the administrative activities carried out by the GSE, at least during the transitional phase in implementation of Decree-Law 162/19.

4.E Further elements of the Authority's competence

- 4.56 Article 42-bis of Decree-Law 162/19 also provides that the Authority shall ensure that a system of continuous monitoring of the configurations implemented in implementation of the same article is set up, also using the companies of the GSE group. In this regard, since the GSE is the entity responsible for issuing the qualifications of the new configurations, it is considered that the GSE is the entity best placed to set up and manage the relevant monitoring system, including forecasts of related developments.
- 4.57 Lastly, Article 42bis of Decree-Law 162/19 requires the Authority to identify ways of encouraging the direct participation of municipalities and public administrations in renewable energy communities. First of all, it is considered appropriate to specify that Municipalities and Public Administrations, where there are no other interested parties, may set up energy communities consisting even only of their own users (as they are potentially numerous) and production plants, provided that the requirements set out in Article 42bis (with particular reference to the geographical requirement) are met, as there are no elements that would be contrary in this regard, not even in the Community definitions. In addition, it is believed that municipalities and public administrations can benefit from an assistance service such as the one that the GSE already operates with regard to access to the incentive instruments referred to in the interministerial decree of 16 February 2016 (so-called thermal account).

4.F Aspects relating to incentive instruments

- 4.58 Lastly, Article 42bis of Decree-Law 162/19 provides that the Minister for Economic Development shall define special incentive tariffs in order to guarantee the profitability of investments in plants for the production of electricity from renewable sources as part of collective self-consumption or renewable energy communities, rewarding instantaneous self-consumption and the use of storage systems.
- 4.59 If these tariffs were defined on the basis of the same scheme adopted in the interministerial decrees of 23 June 2016 and 4 July 2019, the incentive actually disbursed would be equal, on an hourly basis, to the difference between the basic tariff calculated on the basis of source and technology (possibly differentiated if storage systems are also present) and the zonal hourly price, or equal to a fixed premium in the case of electricity self-consumed at an individual site level. An explicit incentive calculated in this way would guarantee the profitability of the investment over a time horizon comparable with the useful life of the production plant and, at the same time, would contain a bonus element in the case of individual or collective self-consumption (in the latter case, the incentive would be added to the benefit recognised for self-consumption and subject to monetisation).
- 4.60 The 'virtual' regulatory model set out in this document also lays the foundations for the incentive to be recognised and disbursed in a simple way: access to it could, for example, be direct and could take place following a single request for access to the regulation provided for in the case of 'collective self-consumption from renewable sources' or 'renewable energy communities' referred to in paragraph 4.
- 4.61 As provided for in Article 42a of Decree-Law 162/19, the explicit incentive would be granted by the GSE to the same producer, together with the amount calculated as assumed in this consultation document.

4.G Conclusions

- 4.62 When implementing Decree-Law 162/19, it is not considered necessary to regulate the way in which the producer responsible for the configuration allocates the total amounts paid by the GSE (including the incentive) to its members. In fact, the decree-law itself provides, in this regard, that the relationships between the members of the configurations are regulated by a private law contract and that a delegated party is uniquely identified, responsible for the distribution of shared electricity.

4. 63 The same Decree-Law No 162/19 also provides that the participating final customers may delegate to that delegated party the management of payment and collection items to sellers and the GSE: it is considered, in this regard, that this operating method may represent a further advantage for end customers involved in the configuration of collective self-consumption or in the renewable energy community because, through the "filter" operated by the delegate, they would have charged economic items already netted which, therefore, result in lower overall costs for the purchase of electricity withdrawn, without altering the normal systemic flows and the normal procedures for the definition of electricity bills.