

ANALYSIS OF THE LEGISLATIVE FRAMEWORK AND ITS IMPLEMENTATION-RELATED PROBLEMS REGARDING THE INDUSTRIAL USE OF THE BIOMASS FROM FORESTRY AND RELATED INDUSTRIES

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REVIEW ARTICLE

Abstract

This document analyzes the impact of legislative changes on the issuance of certificates of origin, documents that represent the basis for the issuance of green certificates, within the support scheme for the energy production from renewable energy sources. The biomass coming from forestry and related industries is an important source of energy. Its use in the process of producing electricity and thermal energy requires, on the one hand, caution in order to maintain a balance between economic benefits and ecological impact, and, on the other hand, careful monitoring in order to prevent fraud.

Keywords: biomass from forestry and related industries, forestry, renewable energy, energy legislation, certificates of origin

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INTRODUCTION

Time and evolution have shown that existence depends on the ability to use renewable energy sources, especially since the current context, generated by climate change and the increase in the carbon dioxide content of the atmosphere, causes a general state of concern among decision-makers and calls imperatively finding alternative sources of energy production, while maintaining a balance between economic development and environmental costs. The first combustible material used by man to produce energy was wood. It seems that humanity cannot give up wood, as a material used for energy production, but on the contrary is returning to it, this time trying a rational and efficient use of this precious resource. In recent years there has been an increasing interest in the use of biomass from forestry, for the production of electricity and thermal energy.

Since the 1990s, at the European level, the public policy documents (e.g. White Paper - An energy policy for European Union- 1995) emphasize investments in the research on the use of renewable energy sources. The directions of action from the public policy documents of the European Union are transposed into a series

of normative acts that aim to regulate the production, use and increase of efficiency in the field of energy from renewable sources. In the last 20 years, at least 5 European directives aimed at promoting energy produced from renewable sources have been identified. The renewable energy sources have gained major importance based on the increasing phenomenon of climate change and the development of technology.

Thus, at the level of 2018, the climate and energy policy program had in view to achieve some objectives regarding:

- reduction of greenhouse gas emissions by at least 40% compared to the levels in 1990;
- an increase of 32% in the share of renewable energies in energy consumption;
- an improvement of 32.5% in energy efficiency;
- interconnection of at least 15% of the EU electricity systems.

(<https://www.europarl.europa.eu/factsheets/rsheet/68/politica-energetica-principii-generale>)

Thus, the FIT FOR 55 legislative package, promoted by the European Union in 2021, aims at the EU objective of reducing net greenhouse gas emissions by at least 55% by 2030. The proposed package has in view to align EU legislation with the 2030 objective

(<https://www.consilium.europa.eu/ro/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/>). As part of this legislative package, the target for energy consumption from renewable sources is changed from 32% to 40%.

The objective promoted by this legislative package must be transposed in all Member States' National Climate and Energy Plans (NCEPs).

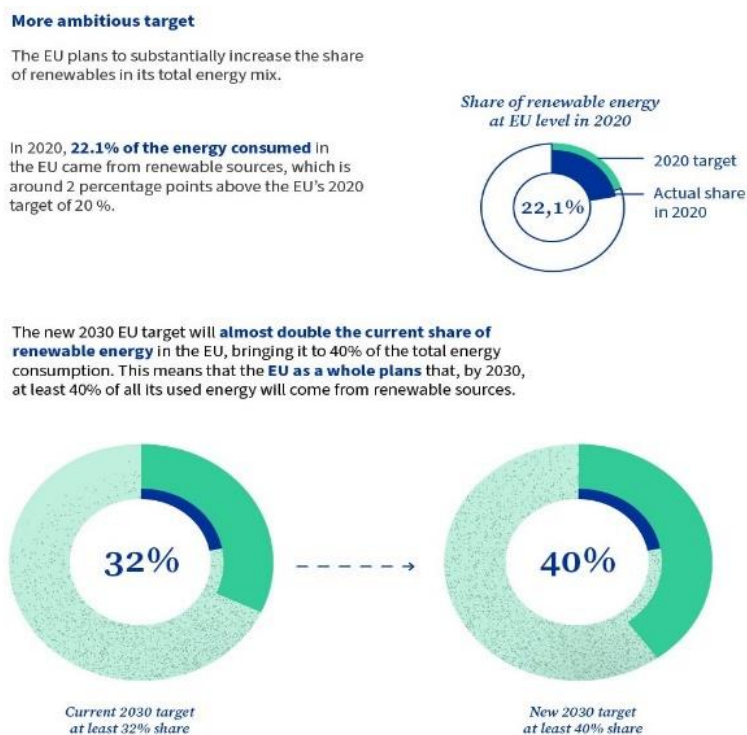


Figure 1. **The renewable energy growth plan related to the FIT FOR 55 package**
(<https://www.consilium.europa.eu/en/infographics/fit-for-55-how-the-eu-plans-to-boost-renewable-energy/>)

MATERIALS AND METHODS

Since 2008, Romania, as a member state of the European Union, proceeded to the implementation of the European directives by establishing a system that promotes the production of energy from renewable sources. The first normative act adopted in this sense, Law no. 220 of 2008 for the establishment of the system that promotes the energy production from renewable energy sources (RES), was the one that created the general legal framework in the field.

The legislative mechanism for implementing the system that promotes the energy production from renewable energy sources.

WHY?

- Law no. 220 of October 27, 2008 for the establishment of the system that promotes the energy production from renewable energy sources, with subsequent amendments and additions (18 amendments)

HOW?

- Order no. 44 of October 20, 2011 for the approval of the Regulation on the organization and operation of the green certificate market (2 amendments)
 - Order no. 43 of October 20, 2011 for the approval of the Regulation on issuing green certificates (1 amendment)
 - Order no. 46 of March 5, 2012 regarding the approval of the Procedure for issuing the origin certificate for the biomass from agriculture and related industries, used as fuel or raw material for the production of electricity (1 amendment)
 - Order no. 1341 of May 3, 2012 regarding the approval of the Procedure for issuing certificates of origin for the biomass from forestry and related industries (3 amendments)
- WHO?
- Order no. 42 of October 20, 2011 regarding the approval of the Accreditation Regulation of the electricity producers from renewable energy sources for the application of the promotion system through green certificates (7 amendments)

A primary analysis of the content and evolution of the normative acts in the field of energy production from renewable sources generates the following findings:

- The normative act of the highest rank (the law), which establishes the general framework, is the one that has undergone the most changes (more than one a year!)

- The second normative act in terms of number of amendments is the act that defines the main actors of the promotion system - Order no. 42 of October 20, 2011 regarding the approval of the Regulation on the accreditation of electricity producers from renewable energy sources for the application of the promotion system through green certificates (approximately one change every year and a half)

- The third normative act in terms of number of amendments is the one that presents the procedure for issuing certificates of origin for the biomass from forestry and related industries (Order No. 1341 of May 3, 2012 on the approval of the Procedure for issuing origin certificates for the biomass from forestry and related industries).

The novelty of the field addressed, the number of interested factors, as well as the impact generated in economic, ecological and even social terms, can constitute plausible explanations of these legislative fluctuations.

In 2020, Romania adopted the Integrated National Plan in the field of Energy and Climate Change 2021-2030, a plan through which revises the level of ambition regarding the share of energy from renewable sources compared to the updated version of National Plan Integrated in the Field of Energy and Climatic Changes (NPIECC), from an initially proposed quota of 27.9%, to a quota of 30.7%. (https://energy.ec.europa.eu/system/files/2020-04/ro_final_necp_main_ro_0.pdf)

Biomass is defined by using three notions:

- The bios
- Mass (physical size)
- Energy (physical quantity)

According to DEX

(<https://dexonline.ro/definitie/biomas%C4%83>).

1. The total mass of plant and animal micro- and macro-organisms, living on a certain unit of surface or in a certain volume of air or water.
2. Biological matter.

Another definition of biomass, related to energy, is the following:

Biomass is a form of solar energy storage through the process of photosynthesis. Biomass is a generic term that refers to any kind of plant matter that produces thermal energy through direct combustion. (<https://despretot.info/biomasa-definitie/>)

At European level, Directive 2018/2001/EC defines biomass as the *biodegradable fraction of products, waste and residues of biological origin from agriculture, including plant and animal substances, from forestry and related industries, including fishing and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin*; (<https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32018L2001&from=es>)

The national legislation, by art. 2, letter b from Law no. 220 of October 27, 2008 for the establishment of the system that promotes the energy production from renewable energy sources, with subsequent amendments and additions, defines biomass as the biodegradable fraction of products, waste and residues of biological origin from agriculture (including plant and animal substances), forestry and related industries, including fishing and aquaculture, as well as the biodegradable fraction of industrial and municipal waste, codified according to the legal provisions.

The regulations of the system that promotes the energy from renewable sources in the field of forestry were directly implemented by the Order of the Minister of Environment and Forests no. 1341 of May 3, 2012 regarding the approval of the Procedure for issuing certificates of origin for the biomass from forestry and related industries.

This regulation was modified by the Order of the Minister of Environment and Climate Change no. 85 of January 28, 2013 regarding the modification and completion of the Procedure for issuing certificates of origin for the biomass from forestry and related industries, approved by Order of the Minister of Environment and Forests no. 1341/2012. On July 28, 2016, Order no. 1534 is released regarding the approval of the Procedure for issuing certificates of origin for the biomass originating from forestry and related industries and used in the production of electricity from renewable energy sources, which repeals the Order of the Minister of Environment and Forests no. 1341 of May 3, 2012 regarding the approval of the Procedure for issuing

certificates of origin for the biomass from forestry and related industries. Later, as a result of the changes made to Law no. 46/2008-Forestry Code, the procedure for issuing certificates of origin is changed by Order no. 2303 of December 18, 2020 regarding the amendment and completion of the Procedure for issuing certificates of origin for the biomass coming from forestry and related industries and used in the production of electricity from renewable energy sources, approved by Order of the Minister of Environment, Water and Forests no. 1.534/2016, a normative act in force on this date.

Indirectly, the implementation of the regulations regarding the system for promoting the production of energy from renewable sources was achieved through a series of normative acts, among which there are listed:

- Law no. 46/2008-Forestry Code (has an impact by defining wood materials, control competences, ways of producing biomass and how to use it)
- Decision no. 497 of June 25, 2020 for the approval of the Norms relating to the origin, circulation and trade of wood materials, to the regime of storage spaces for wood materials and round wood processing facilities, as well as those regarding the origin and circulation of wood materials intended for the owner's own consumption and of measures to apply the provisions of Regulation (EU) no. 995/2010 of the European Parliament and Council of October 20, 2010 establishing the obligations of operators who introduce wood and wood

products to the market (has an impact by defining the obligations of economic operators active in the field of acquisition, storage and processing of wood materials, defining SUMAL 2.0 as a monitoring and control tool)

- Emergency ordinance no. 77 of June 30, 2021 regarding the establishment of the National Forestry Guard
- Decision no. 43 of January 16, 2020 regarding the organization and operation of the Ministry of Environment, Water and Forests, with subsequent amendments and additions.

RESULTS AND DISCUSSIONS

The legislation that directly ensures the implementation of the system for promoting the production of energy from biomass coming from forestry and related industries has undergone changes in the last 10 years. The analysis of these changes will be carried out taking into account 4 aspects:

- a) the evolution of the definitions of the biomass from forestry and related industries;
- b) the evolution of the way of drawing up the documentation requested and submitted by the producers of electricity from renewable sources;
- c) the evolution of the document verification procedure;
- d) identification and development of the modalities for correcting the non-conformities identified after issuing the notices related to the certificates of origin.

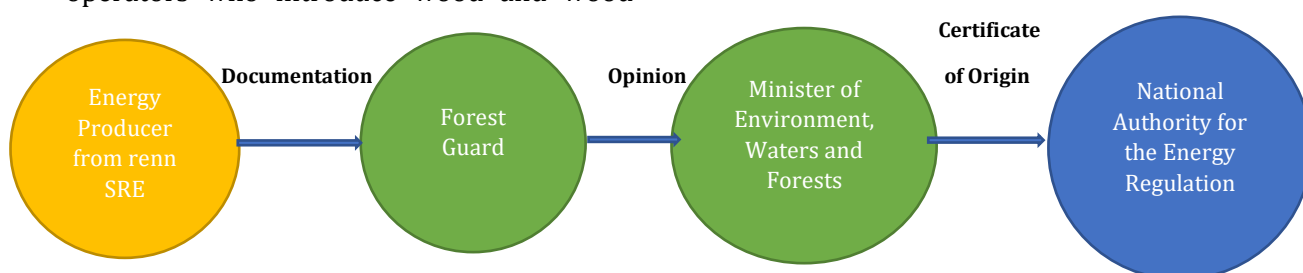


Figure 2. **Flow chart of the procedure, competent authorities and documents related to the issuance of the certificate of origin for the biomass from forestry and related industries**

a) The adoption of a definition of the biomass from forestry and related industries generated divergent positions during the elaboration of the normative acts, which were based on the interests of the involved factors. The RES electricity producers, respectively biomass, requested as the definition of the term to comply with the following requirements:

- legislative consistency

- the most diversified resource that allows the business to adapt to possible fluctuations in the wood market (wood or wood products that come directly from exploitation activities, from processing, sorting activities, wood that comes from recycling, and even imported biomass),

- eligible biomass, which, according to the definition, generates minimal acquisition costs,
- clear legal provisions, which do not generate interpretations, regarding the

traceability documents for the eligible biomass categories.

At the same time, the authority responsible for forestry had to take into account, in the elaboration of the normative act, the social component - providing the necessary firewood

for the population, the ecological component - sustainable management of forests and the economic component- the optimal usage of wood, and, last but not least, the requests of economic operators in the wood industry.

Table 1

Categories of biomass from forestry and eligible related industries, according to the renewable energy promotion system

Law 220/2008	MO no. 1341/2012	MO no. 85/2013	MO no. 1534/2016	MO no. 2303/2020
the biodegradable fraction of products, waste and residues of biological origin from agriculture (including plant and animal substances), forestry and related industries, including fishing and aquaculture, as well as the biodegradable fraction of industrial and municipal waste, codified according to legal provisions.	a) firewood from branches; b) firewood resulting from logging activities c) firewood from round wood; d) sawdust; e) waste from primary wood processing; f) wood chips.	a) firewood from branches; b) firewood resulting from logging activities; c) firewood from round wood; d) sawdust; e) waste from primary and secondary wood processing f) wood chips.	a) the biodegradable fraction of the products resulting from the primary and secondary processing of wood on the territory of Romania - bark, sawdust, chips resulting from processing, wood ends, chippings from profiling lines, wood scraps, resulting from the processing or recycling of wood material and/or of wood products, including imports, which do not fall into the category of wood materials, according to the legal provisions in force, as well as wood material downgraded in its premises as a result of the technological process of wood material processing; b) wood chips, originating only from the categories included in letter a).	a) the biodegradable fraction of the products resulting from the primary and secondary processing on the territory of Romania of wood harvested from the national territory or from import/intra-community exchanges - bark, sawdust, wood in the form of chips or particles, wood shavings from profiling lines, wood ends and the flanks of the logs, wood scraps, resulting from the processing or recycling of wood materials, as well as wood materials degraded in the own premises as a result of the technological process of processing wood materials; b) wood chips, originating only from the categories included in letter a).

Although the definition of biomass in Law no. 220/2008 is the most comprehensive and has the widest applicability, the content of normative administrative acts, respectively subsequent ministerial orders, elaborated by the central public authority responsible for forestry, presents particularized definitions with a high degree of variability.

M.O. no. 1341/ 2012 defines biomass using the criterion regarding the activity from which it originates. Art.1 of the Procedure of May 3, 2012 for issuing certificates of origin for the biomass originating from forestry and related industries classifies two major categories of biomass: that originating from the phase of exploitation of wood mass and eventual sorting (letters a, b, and c of art. 1 of the PROCEDURE of May 3, 2012) and that derived from wood processing activities (letters d, e, and f of art. 1 of the PROCEDURE of May 3, 2012). The definition of the category of biomass coming from the wood mass exploitation and

sorting phase met many of the requirements of RES energy producers, especially those that did not also own wood processing units, by the existence of this category on the market with low costs in terms of acquisition, collection and transport.

In 2013, the biomass users for energy production requested the completion of the existing normative act and thus M.O. no. 85/ 2013 introduces a new type of biomass from industrialization, through the phrase *secondary processing at point e of art. 1 of the procedure – primary and secondary processing waste*.

In 2016, as a result of the experience gained during the 4 years of application of M.O. no. 1341/2012 and the changes that occurred on the wood market, a new normative act was developed to regulate the procedure for issuing certificates of origin.

The new normative act majorly modifies the previous provisions, by redefining biomass, by priority reporting on the provision of

firewood for the population, respectively the principle of cascade use of biomass. According to the European Commission (European Commission, Guidelines on biomass cascading, with a selection of examples of good practices in woody biomass, 2019) "woody biomass cascading refers to the circular economy commitment (1) COM(2015) 614 final. to "promote the efficient use of bioresources by disseminating best practices of biomass cascading and support innovation in the bioeconomy." The main effect of the new approach was the elimination of the first category of biomass promoted by M.O. no. 1341/ 2012, respectively that of firewood from exploitation residues and that of round wood. The new regulation also brings a delimitation of the meaning of biomass, by introducing the criterion regarding the place of its production, limiting biomass to what is produced strictly on the territory of Romania, an aspect not regulated by previous orders issued in 2012 and 2013. The direct consequence, for the users of biomass, of the two essential changes was the need to identify new sources of supply and the focus on economic operators that process wood materials.

Through the emergence of Law no. 197 of September 7, 2020 for the amendment and completion of Law no. 46/2008 - The Forestry Code changes the definition of wood materials (Annex 1, point 23 of Law no. 46/2008-Forestry Code), which indirectly influences the procedure for issuing certificates of origin approved by OM no. 1534/2016.

The amendments to the Forestry Code include in the category of wood materials wood in the form of chips or particles, sawdust, wood shavings, tree bark and wood scraps

The definition of biomass ("bark, sawdust, chips resulting from processing, ends, chippings from profiling lines, wood scraps, results from the processing or recycling of wood material and/or wood products, including imports, **which do not fall under category of woody materials**"), prior to the amendments introduced by Law 197/2020, explicitly excluded any woody material from the biomass categories eligible for obtaining certificates of origin.

In this context, the competent authority in issuing the notices - the Forest Guard - implemented the new regulation, the direct result being the refusal to approve significant quantities of biomass. The legislative inconsistency has had a major negative impact on RES energy producers.

Approximately three months after the appearance of the previously mentioned normative act, the Order of the Minister of Environment, Water and Forests no. 2303 of December 18, 2020 regarding the amendment and completion of the Procedure for issuing certificates of origin for biomass originating from forestry and related industries and used in the production of electricity from renewable energy sources, approved by Order of the Minister of Environment, Water and Forests no. 1,534/2016. By issuing this regulation, the central authority responsible for forestry correlated the two normative acts, redefining biomass as the biodegradable fraction of the products resulting from the primary and secondary processing on the territory of Romania of wood harvested from the national territory or from import/intra-community exchanges - bark , sawdust, wood in the form of chips or particles, chippings from profiling lines, ends and sides of logs, wood scraps, resulting from the processing or recycling of wood materials.

- b) The evolution of the way of drawing up the documentation requested and submitted by the producers of electricity from renewable sources; From the content viewpoint, the documentation submitted by the producers of electricity from renewable sources has changed over time, the main reasons being:
- The need to check the legality and eligibility of the quantities of biomass proposed for approval
 - Legislative changes in the field of movement of wood materials and their definition
 - Streamlining the approval process and digitizing the activity.

Table 2

Comparative presentation of the regulations regarding the content of the documentation required for issuing the opinion related to the certificates of origin

M.O. no. 1341/2012	M. O. no. 85/2013	M.O. no. 1534/2016	M.O. no. 2303/2020
<p>a) request, with nomination of the attached documents;</p> <p>b) the slip of the accompanying notices of the wooden materials that constituted a resource for the production of electricity, as well as the copies of the respective accompanying notices.</p> <p>(2) In the case of the use of waste from the processing of wood materials in their own premises, without transporting them on public roads, the requests of the producers of electricity from renewable energy sources are accompanied by the minutes of sawing or any other documents from which they result with certainty the amount of resulting waste, in copy</p>	<p>a) request, with the nomination of the attached documents;</p> <p>b) the slip and notice copies of the wooden materials accompanying notices with receipts made or, as the case may be, the slip and copies of the goods accompanying notices with receipts made, for the biomass from forestry and related industries that constituted a resource for the production of electricity</p> <p>(2) In the case of the use of the biomass from the processing of wood materials in their own premises within the work points belonging to electricity producers from renewable energy sources, without this biomass requiring transport on public roads, the requests of the respective producers are accompanied by copies of the sawing/transformation/shredding reports or any other document, as the case may be, from which the amount of resulting biomass can be seen, specifying the forest species used and the humidity of the resulting biomass</p>	<p>a) request, whose model is foreseen in annex no. 2;</p> <p>b) copy of the administrative act issued by the national regulatory authority in the field of energy, proving that the applicant is a producer of electricity from renewable energy sources; this is submitted on the date of the first request and whenever there are changes to it;</p> <p>c) the slip of the accompanying goods notices and receipts made according to the model provided in annex no. 3; it is presented in written and electronic format that allows tabular calculation;</p> <p>d) copies of the notices accompanying the goods, as well as of all the documents drawn up on the occasion of reception</p> <p>- the receipt note and/or the weight slip - for the biomass from forestry and related industries purchased for the production of electricity;</p> <p>e) the slip of the internal documents and those generated from SUMAL: - the sorting report/declassification report/production report/transformation report/grinding report/shredding report, regarding the biomass production, according to the model provided in annex no. 4, which includes the documents underlying the production of biomass defined in art. 1 paragraph (1) in own production; it is presented in an electronic format that allows the tabular calculation; the situation of the log and timber warehouse, consumption receipts/outgoing documents, related to the period for which the approval is requested;</p> <p>f) situation plan of the biomass deposit in stereo coordinates 1970, according to the obligation provided for in art. 1 paragraph (2); this is submitted on the date of the first request and whenever there are changes to it.</p> <p>(2) In order to make clear possible inconsistencies regarding the quantities and documents presented, the specialized territorial structure of the central public authority responsible for forestry may request any other document it considers relevant or may carry out checks.</p> <p>(3) The documents provided for in paragraph (1) letter a), c), e) and f) must be registered and appropriated by the applicant's legal representative.</p>	-

The first regulation in the field – M.O. no. 1341/ 2012 – required a documentation certifying the provenance and quantity of biomass used for the issuance of the approval necessary to obtain the certificate of origin. Its content stipulated the existence of the following documents: the application, the bill of approvals accompanying the wood materials, the copies of these approvals, as well as the minutes of the wood mass declassification in its own premises. In the case of the biomass coming from wood processing (according to art. 1 letters d, e, and f of the PROCEDURE of May 3, 2012 for issuing certificates of origin for the biomass from forestry and related industries), the documents certifying the origin were the accompanying notices of the goods, which is why, by M.O. no. 85/ 2013, it is required to integrate the wooden material accompanying notices and the goods accompanying notices into the slips, with the mention of the related receptions carried out. M.O. 85/2013 also brings a new element, namely the request that the notices to mention

the reception carried out. The purpose of the change had a just cause, to introduce a verification key between the content of the document issued by the supplier and the quantity received by the user.

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accompanying notices into the slips, with the mention of the related receptions carried out. OM 85/2013 also brings a new element, namely the request that the notices mention the reception carried out. The purpose of the change had a just cause, to introduce a verification key between the content of the document issued by the supplier and the quantity received by the user.

The third normative act that regulated the procedure - M.O. no. 1534/ 2016 - completed the initial list of documents requested for approval, with three other documents: copy of the administrative act issued by the national authority for regulation in the field of energy, situation plan of the biomass deposit in stereo coordinates 1970, as well as the records from SUMAL regarding the situation of the log warehouse. This regulation brings something new in terms of the documentation submission format and regulates the digital submission of slips related to accompanying notices for data processing and storage. The situations identified in practice, but also the need to avoid the access of the competent authority to the relevant

documents, led to a timely completion of the normative act, namely the stipulation of the possibility of requesting any relevant documents by the advising entity.

The last amendment to the procedure, carried out by M.O. no. 2303/2020, did not generate changes regarding the content of the documentation.

In conclusion, there is an increase in the number of documents requested in the approval procedure, an aspect motivated by:

- The practical experience gained in the approval procedure
- The need to verify the provenance for all categories and the entire amount of biomass used
- Digitization of the approval and control process

c) Evolution of the documentation verification procedure

The procedure underwent changes in terms of verification deadlines, remediation of the submitted documentation, but also in terms of the quality assessment of the biomass subject to approval.

Table 3

Comparative presentation of the regulations regarding the verification of the necessary documentation for the issuance of opinions related to certificates of origin

MO no. 1341/2012	MO no. 85/2013	MO no. 1534/2016	MO no. 2303/2020
Deadline for document verification			
10 days	10 days/ 5 days deadline for the communication of the need to complete or correct the documentation	20 days/ 20 days deadline for communicating the need to complete or correct the documentation/ 10 days deadline for correction/ 20 days deadline for extending the checks subject to notifying the applicant within 15 days of the date of documentation receipt	
Qualitative assessment of biomass			
(2) In situations where the elements that influence the calorific value of the biomass from the forestry and related industries are not known or cannot be determined, the calorific value corresponding to 30% humidity will be used	3) In the event of the absence of the exact mention of the forest species in the delivery note accompanying the wooden materials or, as the case may be, in the notice accompanying the goods, the quantity corresponding to the species with the lowest calorific value will be endorsed. 4) In the case of mention in the wooden material's accompanying notice or, as the case may be, in the goods accompanying notice, of groups of forest species under "species", the species within the respective group with the lowest calorific value will be taken into account	(2) In situations where the elements that influence the calorific value of biomass from forestry and related industries are not known or cannot be determined, the calorific value corresponding to 30% humidity will be used. (3) In the event of the absence of the exact mention of the forest species in the goods accompanying notice, the quantity corresponding to the species with the lowest calorific value, corresponding to the humidity of 30%, will be approved. (4) In the event that groups of forest species are mentioned in the goods accompanying notice as "species", the species within the respective group with the lowest calorific value, corresponding to 30% humidity, will be taken into account.	(4) In the case of mention in the wooden materials accompanying notice/goods accompanying notice of groups of forest species under "species", the species within the respective group with the lowest calorific value, corresponding to the humidity of 30 %.

The evolution of the regulations related to the deadline for the verification of documentation concerned:

- increasing the time interval related to carrying out checks,

- creating the possibility to remedy the submitted documentation,

- creating the possibility of extending the deadline for the verification of the documentation.

In terms of the quality assessment of the biomass, the changes aimed at:

- Regulation of aspects encountered in practice that were not legally resolved
- Correlation of notions with the changes made to the Forestry Code and the way to use SUMAL.

d) Methods of correcting the non-conformities identified after issuing the notices related to the certificates of origin.

During the issuance of permits for the biomass from forestry and related industries, the issuing entity - the Forest Guard - identified non-conformities or was obliged, as a result of court rulings, to modify, cancel or issue new permits. The unregulated or insufficiently regulated aspects generated divergent points of view, both between the applicant and the advising entity, as well as within the authority.

Table 4

Comparative presentation of the regulations regarding the ways of correcting the non-conformities identified after issuing the notices related to the certificates of origin

MO no. 1341/2012	MO no. 85/2013	MO no. 1534/2016	MO no. 2303/2020
In situations where, after the issuance of the certificate of origin, inadvertences or certain elements of non-compliance with reality are found regarding the legal provenance of biomass from forestry and related industries, the head of the issuing structure cancels the respective certificate of origin and communicates it to the National Energy Regulatory Authority about it within 5 working days from the date of cancellation.		<p>The permit for the biomass from forestry and related industries issued by the specialized territorial structure of the central public authority responsible for forestry is canceled by its head by decision, in the following situations:</p> <p>a) inadvertences or certain elements of non-compliance with reality regarding the legal provenance of the biomass from forestry and related industries;</p> <p>b) inadvertences or certain elements of non-conformity with reality regarding the inclusion in the types of biomass foreseen in art. 1;</p> <p>c) in the case of final and irrevocable decisions issued by the courts;</p> <p>d) modification of the accreditation conditions of the electricity producers from renewable energy sources, if they concern the processing capacity, not communicated to the specialized territorial structure of the central public authority responsible for forestry;</p> <p>e) at the justified request of the central public authority responsible for forestry.</p> <p>(2) In the event of cancellation of the approval for the biomass from forestry and related industries, the head of the specialized territorial structure of the central public authority responsible for forestry communicates this to the central public authority responsible for forestry within 5 working days from the date of cancellation.</p> <p>3) The certificate of origin for the biomass from forestry and related industries is canceled by the head of the central public authority responsible for forestry by administrative act, in the following situations:</p> <p>a) inadvertences or certain elements of non-compliance with reality regarding the legal provenance of the biomass from forestry and related industries;</p> <p>b) inadvertences or certain elements of non-conformity with reality regarding the inclusion in the types of biomass foreseen in art. 1;</p> <p>c) in the case of final and irrevocable decisions issued by the courts;</p> <p>d) modification of the accreditation conditions of electricity producers from renewable energy sources, if they concern the processing capacity, not communicated to the specialized territorial structure of the central public authority responsible for forestry;</p> <p>e) in case of cancellation of the approval for biomass from forestry and related industries issued by the specialized territorial structure of the central public authority responsible for forestry, which was the basis for issuing the certificate of origin for biomass from forestry and related industries.</p> <p>(4) In the event of the cancellation of the certificate of origin for biomass from forestry and related industries, the head of the central public authority responsible for forestry communicates this to the National Energy Regulatory Authority and the specialized territorial structure of the central public authority responsible for forestry, within 5 working days from the date of cancellation.</p> <p>(5) The cancellation of the permit for the biomass from forestry and related industries, as well as the related certificate of origin for the biomass from forestry and related industries, will be carried out for the quantities for which inconsistencies with reality were found, as defined in paragraph (1) and paragraph (3); for the quantities for which no non-conformities are found, the specialized territorial structure of the central public authority responsible for forestry issues a new permit, and the central public authority responsible for forestry issues a new certificate of origin.</p> <p>(6) Certificates of origin for the biomass from forestry and related industries for which cancellation was ordered shall be communicated to the National Energy Regulatory Authority, within a maximum of 5 working days from this date.</p>	

The method of identification and resolution of non-conformities provided by art. 8 of the PROCEDURE of May 3, 2012 for issuing

certificates of origin for biomass from forestry and related industries, approved by OM no. 1341/2012, was presented without specifying

the type of non-compliance or the reason that would generate the cancellation of the approval for biomass from forestry and related industries.

Following the situations encountered in practice, the requests of the courts, the legal provisions have acquired a specific aspect, directly identifying the situations that can lead to the cancellation or modification of the opinion or the certificate of origin, as well as the persons responsible and the terms in which they can operate changes.

CONCLUSIONS

The evolution of the legislation regarding the issuance of certificates of origin for biomass from forestry and related industries aimed at adapting the regulation to the need for higher utilization of wood, establishing an efficient and quick control procedure, correlation with other normative acts in forestry, as well as the way to correct some possible non-conformities identified after the biomass certification.

In the future, it is necessary to reanalyze the way of the system of promoting energy from renewable sources in correlation with: the real ecological impact of the use of biomass from forestry and related industries, ensuring the need for electricity and thermal energy for the population and optimizing energy production capacities.

REFERENCES

- ***, 2019. European Commission, Guidelines on the cascading use of biomass with a selection of best practice examples for woody biomass, Luxembourg: Publications Office of the European Union
- ***Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources
- ***Directive (EU) 2018/2002 on energy efficiency
- ***Directive 2003/30/EC of May 8, 2003 promoting the use of biofuels and other renewable fuels for transport
- *** Law no. 46/2008-Forestry Code
- *** Law no. 220/2008 for the establishment of the system for the promotion of energy production from renewable energy sources, with subsequent amendments and additions
- ***Directive 2009/28/EC regarding the promotion of the use of energy from renewable sources
- *** Decision no. 1232 of December 14, 2011 for the approval of the Regulation on issuing and monitoring the origin guarantees for electricity produced from renewable energy sources
- *** Order no. 42 of October 20, 2011 regarding the approval of the Accreditation Regulation of electricity producers from renewable energy sources for the application of the promotion system through green certificates
- *** Order no. 43 of October 20, 2011 for the approval of the Regulation for issuing green certificates
- *** Order no. 44 of October 20, 2011 for the approval of the Regulation on the organization and operation of the green certificate market
- *** Order no. 1341 of May 3, 2012 regarding the approval of the Procedure for issuing certificates of origin for the biomass from forestry and related industries
- *** ORDER no. 46 of March 5, 2012 regarding the approval of the Procedure for issuing the certificate of origin for the biomass from agriculture and related industries, used as fuel or raw material for the production of electricity
- *** Order no. 85 of January 28, 2013 regarding the modification and completion of the Procedure for issuing certificates of origin for the biomass from forestry and related industries, approved by the Order of the Minister of Environment and Forests no. 1, 341/2012
- *** Order no. 57 of July 19, 2013 for the approval of the Regulation on the organization and operation of the green certificate market
- *** Order no. 48 of June 26, 2014 regarding the approval of the Accreditation Regulation of electricity producers from renewable energy sources for the application of the promotion system through green certificates
- *** Order no. 4 of February 4, 2015 regarding the approval of the Regulation for issuing green certificates
- *** Order no. 1534 of July 28, 2016 regarding the approval of the Procedure for issuing certificates of origin for the biomass from forestry and related industries and used in the production of electricity from renewable energy sources
- ***Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the governance of the energy union and climate actions, amending Regulations (EC) no. 663/2009 and (EC) no. 715/2009 of the European Parliament and of the Council, of Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, of Directives 2009/119/EC and (EU) 2015/652 of the Council and repealing Regulation (EU) no. 525/2013 of the European Parliament and of the Council
- *** Law no. 197 of September 7, 2020 for the amendment and completion of Law no. 46/2008 - Forestry Code
- *** Decision no. 43 of January 16, 2020 regarding the organization and operation of the Ministry of Environment, Water and Forests, with subsequent amendments and additions
- *** Decision no. 497 of June 25, 2020 for the approval of the Norms relating to the origin, circulation and trade of wood materials, to the regime of storage spaces for wood materials and round wood processing facilities, as well as those regarding the origin and circulation of wood materials intended for the owner's own consumption and of measures to apply the provisions of Regulation (EU) no. 995/2010 of the European Parliament and of the Council of October 20, 2010 establishing the obligations of operators who introduce wood and wood products on the market
- *** Order no. 2303 of December 18, 2020 regarding the amendment and completion of the Procedure for issuing certificates of origin for the biomass originating from forestry and related industries and used in the production of electricity from renewable energy sources, approved by Order of the Ministry of Environment, Water and Forests no. 1,534/2016
- *** Emergency ordinance no. 77 of June 30, 2021 regarding the establishment of the National Forestry Guard
<https://www.europarl.europa.eu/factsheets/ro/sheet/68/politica-energetica-principii-generale>, 20.10.2022
<https://www.consilium.europa.eu/ro/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/>, 20.10.2022
<https://www.consilium.europa.eu/ro/infographics/fit-for-55-how-the-eu-plans-to-boost-renewable-energy/>, 20.10.2022
https://energy.ec.europa.eu/system/files/2020-04/ro_final_necp_main_ro_0.pdf, 20.10.2022
<https://dexonline.ro/definitie/biomas%C4%83>, 20.10.2022
<https://despretot.info/biomasa-definitie/>, 20.10.2022
<https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32018L2001&from=es>, 20.10.2022
<http://aei.pitt.edu/1129/>, 19.10.2022
<https://www.consilium.europa.eu/media/25164/145359.pdf>, 19.10.2022
https://energy.ec.europa.eu/system/files/2020-04/ro_final_necp_main_ro_0.pdf, 18.10.2022
<https://energie.gov.ro/wp-content/uploads/2022/08/Strategia-2030-DGJRI-AM-12.08.2022-MU-Clean-25.08.2022-1.pdf>, 19.10.2022