

The Potential for Sustainable Biomass in the Romanian Energy Sector

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Activity 14: Political constellation analysis on the environmental vs. energy benefits trade-offs

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The **purpose** of Activity 14 has been to determine the perspectives of the main institutional stakeholders and their positioning vis-a-vis environmental and social constraints related to biomass usage in the energy sector. From a methodological perspective, we did this by conducting six small group interviews with thirteen high-level representatives of six different stakeholders, private and public, in the field of energy and environment. The interviews were conducted during the period March - June 2023. The interview guide and the list of interviewees can be found in the annexes to this report.

The believes and perceptions of the **forestry industry** are **that legislative instability and red tape** have led to a decrease of the raw material from the forest (which is currently used in the wood processing industry and also in biomass-based electricity production). Furthermore, they claim that **implementation** is also a major issue, in addition to legislative instability, as government agencies are believed not to be **doing proper and adequate on-site controls**. The main legislative ambiguity and source of instability is related, according to industry representatives, to the **certification system for the biomass harvested** from the forest. To be able to use biomass for electricity production, it needs to be certified (from a traceability and source of origin perspectives) and industry leaders believe the certification process is "**hard and cumbersome**". Another, more recent legislative obstacle for further usage of biomass in the energy sector is the recently enacted **price cap for pellets**, that the government put in place during the 2022 - 2023 energy price crisis. As a result, HS Timber (an integrated forestry company, wood processor and also biomass-based electricity producer) for instance, further decreased pellets quantities sold on the local market to under 50%. Although the domestic demand for pellets - a superior source of using biomass for household heating than wood fired stoves - is on the increase, legislative instability is preventing local pellets producers from reducing export channels and funneling instead of more the pellets produced towards the internal market. The wood processing process seems to be, according to industry testimony, efficient and sustainable, in the sense that there is no leftover that the market is not demanding: all sawdust is transformed either in pellets or in wood plates. Due to the current forestry regulations (e.g.: *amenajament silvic*) **no additional biomass can be sources from national forests** and thus potentially be used in the energy sector as sustainable biomass. Because of this **scarcity** there are only isolated local communities in Romania in which electricity producers procure biomass from local wood processors (e.g.: Suceava). Electricity production based on biomass, on the other hand,

makes more business sense for an integrated producer such as HS Timber. The usage of biomass for heating is, on the other hand, more extended. Not counting the wood burned inefficiently in over half of Romania's households, according to industry estimations there are approx. **100,000 households which consume pellets**, with an average yearly consumption of 3 tonnes of pellets. Additionally, **a similar number of semi-industrial consumers** (e.g.: bakeries, farms) also use pellets for heating. The forestry industry by and large seeks to promote more usage of biomass in the energy sector, as the most important means of achieving complete energy independence. They acknowledge however, that a more robust and reliable certification system is needed to alleviate politicians' and the general public's concerns that by promoting more biomass in the energy sector forests will be overexploited. On the other hand, the forestry industry believes that political decision-makers **enacted legislation which is excessive in terms of protection vs. production of forests**. They typically bring the example of Nordic countries and Germany, which are harvesting more of their sustainable potential exploitation rate (i.e. the growth rate of forests) - approx. twice more than is allowed per Romanian forestry regulations. As a result of this **conservative approach**, industry points out that **Romania currently harvests less than twenty years ago** by approximately 7-8 million cubic meters (19 vs. 25 mio cubic meters). Another reason for this decrease, point out private sector representatives, is the **lack of forest roads**. Industry also points out the lack of an accepted and reliable methodology for calculating the CO₂ harvested by forests, which might lead to "excessive protection" even if the carbon benefits are not that high, particularly in the case of very mature forests. They believe that **carbon markets will be more tempting for forest owners than promotion of biomass in the energy sector**. Industry representatives point out that the current regulatory system for promoting biomass in the energy sector actually discourages this usage of biomass because of: 1. lack of ability of selling the green certificates. 2. difficulty in certifying the biomass used, esp. for imported pellets/ wood. 3. arbitrary behaviour of the Forest Guard in terms of certification. Under these conditions of policies dissuading the usage of biomass for electricity production, industry representatives believe that the only realistic channel for increasing the role of sustainable biomass in the energy sector is through the replacement of domestic inefficient wood-fired stoves with pellets-based heating systems, which would also lead to a significant reduction of the illegally harvested wood - the illegally harvested wood being largely due to the non-fiscalized usage of firewood in household heating.

The perspective of the **state-owned enterprise** in charge with forest exploitation and administration, Romsilva, was gauged through a deep interview with several of their leaders and specialists. While not a political actor per se, because of the technicalities of the subject matter, Romsilva is a highly important stakeholder when it comes to the potential promotion of biomass in the energy sector, as they are holding a high degree of influence over policy-making in the forestry sector, so we considered an interview with them is very valuable to gauge the political constellation approach as far as biomass is concerned. Romsilva experts and leaders acknowledge the **pro-conservation political approach** in Romania as far as forestry is concerned, a conservative approach compared to the Nordic countries. However, they also acknowledge that climate change has led to higher

temperatures which have led, in turn, to faster rates of forest growth (according to the National Forest Inventory published by National Institute for Research and Development Marin Drăcea). However, due to the political and regulatory pressures at European to increase the land surface, incl. forest, under protection, **policymakers' plans are to increase the forest surface under protection** (protected areas currently occupy 800,000 ha, out of which 580,000 ha are in forest areas), so **national forestry company experts do not believe that the volume of wood harvested by Romsilva can increase above 10-11 million cubic meters per year**. The perspective maintained by Romsilva is that the only source for extra biomass to meet the needs of the energy sector is represented by **energy plants**, which would be cultivated outside the forestry fund.

One of the main reasons why expanding biomass usage towards the energy sector is considered a threat by politicians and non-governmental organisations is the alleged pressure it would put on the forestry fund, threatened for several years by **illegal logging**. According to 2019 National Forestry Inventory, each year approximately 20 million cubic meters are illegally logged, a figure almost equal to the quantity harvested legally. This figure has been confirmed by some politicians (e.g.: Minister of Environment Costel Alexe, National Liberal Party, 2019 press statement¹). On the other hand, the national system for wood traceability (SUMAL) accounts for 100,000 cubic meters loss (verified), while the percentage mentioned as illegally logged in reports is far higher, as mentioned above. Romsilva representatives maintain that illegal logging has massively reduced in recent years. Some politicians representing the minority Hungarian party, UDMR, mention in press statements that this is indeed the case and that in 2020 - 2022 there haven't been any large-scale illegal cutting (Minister of Environment Tanczos Barna, Democratic Union of Hungarians in Romania²). When it comes to biomass, the **political priority of the Social Democrat Party seems to be two-fold: preventing illegal logging and ensuring affordable prices for firewood for the population** (as per the last government programme, they initiated a cap on firewood sold to the population³). Political statements seems to be confirming this positioning - Social Democrat Party president Marcel Ciolacu is quoted by the media in the past years, on the topic of forests, with two general statements: that illegal logging should be prosecuted as heavily as corruption and that under a social-democrat government no forest surface shall be sold to foreigners/ foreign investors.

¹ Source: <https://www.romania-insider.com/minister-confirms-illegal-logging-report> (Last accessed 28 august 2023).

² Source: <https://www.g4media.ro/tanczos-barna-am-cerut-ca-in-cazul-in-care-cineva-a-sesizat-in-ultima-perioada-despa-duriri-ilegale-pe-suprafete-extinse-sa-ni-le-semnaleze-eu-personal-intr-un-an-si-jumatate-aproape-nu.html> (Last accessed 28 august 2023).

³ Source: <https://www.guvernarepsd.ro/?s=paduri> (Last accessed 28 august 2023).

Interviews we undertook with political party representatives/ policy-makers, in addition to online thematic queries on their positioning towards biomass in the energy sector, confirm that biomass is not at all prioritized/ incentivized as a sustainable fuel in the energy sector.

Desk research showed that **a cross-party 2017 legislative initiative to support through a bonus system the usage of biomass in the energy sector (PL-x nr. 44/2017) did not meet the necessary support from the parliamentary parties**, nor the Government's support - the Government issued a negative opinion in 2020 - so was not tabled further. We performed queries with the words "biomass" + "energy" + PSD/ PNL/ UDMR/ USR - the main parliamentary parties in Romania. Typically, the queries were null or resulted in the following conclusions. As per the current social-democrat political programme (available at <https://www.guvernarepsd.ro/angajamente/energie/>) biomass is not among the ten energy priorities of the party. Jointly with the political statements above, it is clear that the tension between environmental safeguards against illegal logging and the potential usage of biomass in the energy sector has dissuaded the further from being pursued at political level.

Things are slightly different in the case of the **National Liberal Party (PNL)**. While a comprehensive positioning on the topic of biomass usage in the energy sector is not adopted and hence publicly communicated at the level of the party, two recent political initiatives seem to be **placing PNL slightly more favourable towards using biomass in the energy sector**. Thus, biomass is explicitly mentioned in the 2023 legislative initiative tabled successfully by PNL to remove obstacles in the field of urban planning legislation, that were preventing the implementation of renewable energy investments (Law 166/ 2023). Additionally, the 2019 government programme initiated by PNL was envisioning subsidies for agricultural producers that supply scrap biomass from agriculture and forestry to the energy sector⁴.

The main opposition party currently, **USR**, seems to support the **usage of biomass, including organic waste, for heating in rural areas**, by proposing an efficient consumption regulation, with adequate support schemes in their Energy & Environment political programme⁵. On the other hand, the legislative initiatives they tailored are oriented towards wind and photovoltaics, not biomass. However, some local elected officials representing USR (e.g.: Dominic Fritz, Mayor of Timișoara) have made concrete steps towards using biomass, more precisely scrap resulting from green spaces maintenance, in the local heating production system⁶.

⁴ Source:

<https://www.profit.ro/stiri/politic/ultima-ora-program-de-guvernare-pnl-subventii-agricole-pentru-deseuri-vegetale-si-forestiere-livrate-centralelor-in-cogenerare-desi-ue-discuta-excluderea-acestora-din-lista-surselor-regenerabile-19151779> (last accessed 30 August 2023)

⁵ Source: <https://usr.ro/program/energia-termica/>

⁶ Source:

https://debanat.ro/2022/10/colterm-trece-la-ars-biomasa-primaria-vrea-sa-foloseasca-10-000-de-tone-din-toaletatul-copacilor-din-oras_379042.html

As the main party supporting the sustainable use of biomass in the energy sector seemed to be, based on desk research, the National Liberal Party, we interviewed one of their representatives who also occupies the position of State Secretary with the Ministry of Environment. He was able to clarify the position behind using biomass in the energy sector, namely that **using it for electricity production alone is unsustainable, but that it can be a very good source of heating**. "The transition to green energy is not possible without biomass", argued State Secretary Banciu. Legally, 3.5 million cubic meters of wood are used by local communities that use wood for heating, but in reality, there is a **big illegal usage of wood for heating**, meaning conversely also a very good opportunity for using sustainable biomass: using pellets for heating is much more efficient than using wood and one can also fuel mini district heating grids (city halls, schools, churches, etc.). The representative of the ministry acknowledges, similarly to Romsilva, that currently **a conservative approach to harvesting biomass is employed in Romania**, due to an outdated Forestry Code, namely only 20 million cubic meters of wood are harvested annually⁷, while forests produce approx. 50 million cubic meters of biomass each year. Still, even so, **biomass is underused in the energy sector** for several reasons: there is a public perception, especially in small communities, against sharing energy infrastructure (e.g.: mini grids based on pellets); there is no focus in the National Energy Strategy on biomass; there is a rivalry between using biomass for electricity production and the usage of biomass by local communities as firewood. Concerning the latter, the **traceability system for biomass in the energy system is very tough and discourages electricity producers from obtaining the green certificates to relief the price/ market pressure from households that use firewood for heating**. This is why "the only way forward for biomass in the energy sector is co-generation, to also produce heat, not just electricity, and thus substitute firewood". On the other hand, even such usage might be discouraged with upcoming European legislation: **RED3** foresees the so-called **scaffolding** principle when using wood. This means, prioritizing the higher value-added usage of wood (e.g.: furniture production), as this stores carbon better throughout the whole lifecycle of the wood product. Romania's positioning here, supported by the official we interviewed, is that **each EU country should be allowed to define its own sustainability criteria considering local peculiarities** - such as, in the case of Romania, the extensive usage of firewood for heating by local communities. Besides potentially reviewing the Forest Code and the principles of *amenajamente silvice* to increase the biomass harvested, other strategies to increase volumes and thus have more biomass in the energy sector would be: building more forest roads (counterintuitively, they would lead to more sustainable forestry practices), prioritizing forestry works in young forests (*rărituri*), afforestation works to support the creation of new forests - that could, potentially, leave quantities to be harvested from old forests.

When it comes to environmental questions, especially forests preservation, a very significant stakeholder in the Romanian policy stakeholders are **NGOs**. Their positioning is very often

⁷ In local inventories it looks like harvestig is higher, namely 38 million cubic meters, but in the National Forests Inventory it appears to be 20 million cubic meters. This difference in the methodologies used for wood harvesting may also be a cause behind the massive figures of illegal logging in Romania, as even environmental NGOs seem to be acknowledging.

congruent, falling however on different sides of the conservation spectrum - approaching forest conservation either very strictly or more loosely. To better understand the positioning of civil society on the matter we interviewed **WWF**, the largest environmental NGO in Romania, with a science-based positioning on matters pertaining to energy and environment. WWF, as all other environmental NGOs, positing themselves against the usage of forest biomass through the switch of fossil fuel plants to biomass. The main reason they are **campaigning against the conversion of power plants from coal to biomass** is not because emissions would not be reduced, because they surely will, but because this will put excessive pressure on forests for providing the raw materials. Furthermore, if biomass usage increases in the energy sector, another source of concern is the social impact at the level of forest-dependent communities, as pellets/ the resulting will most likely be more expensive than firewood. While the **solution of choice** for WWF and other environmental NGOs, particularly for energy poverty and/ or heating in rural areas, is to promote **photovoltaics and heat pumps**, they admit that **as long as biomass has clear traceability and lower emissions than gas, it could be used in the energy sector**, but both traceability and emissions must be clearly demonstrated. At the moment, environmental NGOs argue that both are problematic in Romania. WWF gives arguments why, contrary to what the Government and Romsilva believe, SUMAL (the national system for wood traceability) is not working properly - one can register the same papers twice, trucks are overloaded, etc. The main cause why **traceability is not working**, several environmental NGOs believe, is the methodology for wood measurement and wood sales, namely the foot measurement (*vânzarea lemnului pe picior*). Wood should be measured when sold, not when cut, argue NGOs. Additionally, the **current certification system is weak** because it considers only traceability insofar as origin is concerned and does not include any sustainability criterion. WWF argues there are sustainability criteria for biomass in the energy sector at European level, but they are not properly introduced in Romanian legislation. Consequently, as part of a project funded by the European Climate Foundation, WWF Romania developed **sustainability criteria for biomass**, the gist of the matter being the need to strengthen the principle of scaffolding. Unlike other environmental NGOs that are more radical, WWF tends to take a more nuanced position with respect to forest practices and biomass usage in the energy sector. For instance, they supported the Government when it tried to introduce new forest roads as an investment in Romania's Resilience and Recovery Plan (RRP), and even even investments in cable cars for transporting wood, because this infrastructure would lead to closer to nature forest management. They also investigated intensively, working with the Research Institute Fundulea, to determine the potential of non-forest biomass in Romania. **One of the big tensions, they stress, is between conservation and agriculture objectives/ incentives in place.** There are 500,000 forest hectares outside the National Forestry Fund (e.g.: along the rivers, spontaneous growth on pastures, etc) - contrast this massive figure to the mere 50,000 hectares of new forests (afforestation) planned through RRP - and landowners must harvest them to obtain the pasture subsidy from the Agency for Payments and Investments in Agriculture (APIA). Thus, WWF argues, incentives should be revised to preserve the forest which is outside the national forestry fund.

As part of our efforts to determine the political actor constellation with regards to forest biomass in the energy sector, we also interviewed political decision-makers in the **Ministry of Energy**. Clearly, **focusing on biomass in the energy sector has not been a political priority for the ministry**. As far as implementation is concerned, the traceability of biomass used in the energy sector is ensured by the National Energy Regulatory Agency (ANRE), which monitors the green certificates system for energy production, and by the Ministry of Environment, which offers the sustainability certification to the biomass producers, based on documents verified by the local Environmental Agency. With regards to decarbonization in general, Ministry of Energy representatives believe the energy sector is well on its way to decarbonization, but other sectors (e.g.: agriculture, transport, buildings, etc.) are lagging behind and their ministries legislating over these matters are less aware than the Ministry of Energy on the importance of decarbonization. When it comes to **switching existing coal plants to other sources of energy, the Ministry of Energy considers natural gas to be the alternative of choice**. They don't reject **biomass**, but believe **availability is a big issue**. For instance, although the legislative system in place until recently - e.g.: the green certificates scheme - was technology neutral and supported biomass in as much as it supported other sources of green energy, **biomass turned out not to be attractive for investors**, hence the low installed capacity in electricity production based on biomass. The main reason behind this lack of attractiveness, officials believe, is the **lack of a proper traceability and certification for the biomass used in energy**. No traceability leads to no green certificates being awarded hence it leads to little investment in the sector. A marginal sector where biomass in the energy sector is picking up, without any incentives, is **biomass usage in the industrial sector, in mini units**. These cases of industrial factors using wood scrap and other sources of biomass waste for producing their own heating and, less frequently, heating and power, are nonetheless isolated and not counted typically in energy statistics - e.g.: Prolema Mureş, Comelf, etc. The solution for having more biomass usage in the energy sector, argue high-level political representatives of the ministry, is to **increase biomass availability particularly through agriculture biomass** - either energy plants or biomass residues (e.g.: straws, etc.) resulting from cereal cultivation. The current European Commission position on diversifying energy supply sources, highly critical of gas-based hydrogen, of biomass, etc. is too strict, argue Ministry representatives. They have available resources to potentially support biomass usage in the heating sector through the **Modernization Fund**, but they fear the Commission would not approve such a scheme, despite the massive need to rapidly modernize and decarbonize the heating system in Romania. Another barrier is the **lack of technical capacity and know-how at the level of local municipalities**, which are the owners of the local heating grids/ responsible for providing heating to the local population. A point in case is Motru municipality, located in a coal area, which wanted to develop biomass capacity for local heating, but did not advance with the project preparation primarily due to lack of know-how. A solution might be **the prototyping of standardized biomass-based products for urban heating** (e.g. for 2000 inhabitants, for 3000 inhabitants, etc.) but an obstacle is that many municipalities with greater resources already extend the local gas grid and will not want to jeopardize that investment to resort to centralized biomass heating. In municipalities without grid access, in general small rural communities, the opposition to biomass used for centralized heating will be quite high, as population there tends to favour

individual solutions. However, with the likely tax on individual gas boilers coming up based on European Green Deal policies, **sustainable biomass might become a solution in urban areas/ new neighbourhoods**, where population density makes centralized heating efficient and effective.

While our efforts to map the constellation of political stakeholders concerned biomass usage in the energy sector in general, we also interviewed stakeholders with a very profound knowledge of the local milieu in **coal areas**, to gauge in particular **the positioning of stakeholders on the transition of coal-fired power plants from coal to biomass**. Under protection of anonymity, we understood from local stakeholders there is a strong opposition to changing the status quo (i.e. coal mining plus coal fired electricity production) of any sorts. While there haven't been explorations of the possibility of coal to biomass switching, there is significant know-how on coal to gas switching, a technically and commercially feasible possibility, but plenty of **covert opposition from local stakeholders and decision-makers**. While wood availability is present in Jiu Valley and forestry exploitations are abundant, sourcing biomass for a combination between electricity production and heating is problematic, because all local municipalities in the valley, despite enjoying close proximity and high population density, thus being very adequate for centralized heating, have **renounced centralized heating** and have sold the grid as metal scrap. The state of the pipes in individual apartments is, furthermore, very deteriorated, and the Jiu Valley population is using individual gas boilers, due to relatively high incomes and thus gas affordability.

All in all, the **conclusions** of the political constellation analysis are the following ones:

- the **tension between environmental objectives related to biomass** (e.g.: forest conservation and curbing illegal logging and deforestation) and using biomass in the energy sector is **real**
- **political parties** are prioritizing, at least at the level of policy objectives, statements and legislative initiatives, **pro-conservation** forestry practices and thus dissuading the usage of forestry biomass in the energy sector
- a key **concern** of political stakeholders is **social**, not environmental: diverting biomass usage in a modern form (pellets, mini grids, etc.) towards the energy sector, especially **household heating**, despite being more efficient, effective and environmentally friendly might rise costs for rural population which currently used **firewood** for heating
- there is a tacit acknowledgment that **a lot of the firewood used for household heating is sourced illegally**, with many local actors benefitting economically from these arrangements, thus a **political economy constraint** for incentivizing modern sources of biomass usage for heating, for fear of disturbing local power constellations
- because of society's high prioritization of forest conservation, despite acknowledged evidence that harvestable quantities are increasing, **expanding forest biomass through increased harvesting is not a likely pathway** for increasing biomass in the energy sector
- the **solution of choice** on which political and social consensus seems to be emerging is expanding the usage of **agriculture biomass, especially scrap biomass** (e.g.: straws), but also

of **energy crops**, pelleting resulting quantities and replacing individual inefficient firewood stoves with more efficient household heating installations, or district heating/ CHP at small scale, in densely populated, especially urban areas.

ANNEX 1: List of interviewees

HS Timber: Dan Banacu, General Manager, Cristian Cioran, Sales Manager Pellets

Romsilva: Daniel Nicolaescu, General Manager; Codruț Bîlea, Director Forest Fund; Sabin Bratu, Commercial Director

Ministry of Environment: State Secretary Sorin Banciu

WWF: Orieta Hulea (Director), George Carabaș (PM for Life project on biomass in energy),
Raluca Șerbănică, Diana Cosmoiu (Programme Manager Energy Climate)

Energy Complex Hunedoara: Ex General Manager (wishing to remain anonymous)

Ministry of Energy: State Secretaries Dan Drăgan, George Niculescu

ANNEX 2: Interview Guideline

1. In your opinion, how important is decarbonization for Romania?
2. What obstacles do you see in Romania's decarbonization pathway?
3. What opportunities do you see in Romania's decarbonization pathway?
4. What role does biomass have in this pathway?
5. Romania currently has under 100 MW in biomass-fueled electricity production capacities. Under 2% of total installed capacity for electricity production. Which are the causes of this low percentage?
6. If you believe biomass should play a more significant role in Romania's electricity production mix, what public policy measures do you consider necessary for promoting this energy source?

7. Do you believe there are obstacles (legislative, regulatory, etc.) that prevent the wider usage of biomass in the energy sector? If yes, can you describe them?
8. How can investors be attracted in this sector?
9. What kind of arguments are needed for a wider adoption of biomass in the energy sector?
10. What do you think about the technology of black pellets?
11. For a new technology, such as black pellets, to penetrate the energy sector, what kind of actions are needed?
12. The concept of sustainable biomass is central for EU preoccupations in the field of climate and decarbonization. How is this concept understood in Romania and what are the preoccupations of the institution you represent in this area?
13. How do you perceive the public debate in Romania around forestry, deforestation, biodiversity, etc? What approach should the Romanian government have towards forests?