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for a sustainable future

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authors

Argjenta Veseli, Benjamin Kirchler, Andrea Kollmann

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Contributors

NAME	ORGANISATION
Mehmet Efe Biresselioglu	**IUE**
Muhittin Hakan Demir	**IUE**
Berfu Solak	**IUE**
Ugur Turan	**IUE**
Louise Gallagher	**UNIGE**
Xinyu Zhan	**UNIGE**
Marlyne Sahakian	**UNIGE**
Cecilia Trenti	**CAI**
Miriam Santoro	**CAI**
Karl-Ludwig Schibel	**CAI**
Chiara Massullo	**Roma Tre**
Barbara Cardone	**Roma Tre**
Giuseppe Carrus	**Roma Tre**
Victoria Bogdanova	**CSD**
Lily Yakova	**CSD**
Gergana Tzvetkova	**CSD**
Radostina Primova	**CSD**
Héctor Rodríguez	**PIK**
Julia Epp	**PIK**
Sarah Louis Montgomery	**GenderCC**
Gotelind Alber	**GenderCC**
Petros Markopoulos	**DAFNI**
Christos Zacharias	**DAFNI**
Berit Therese Nilsen	**NTNU**
Lucia Liste	**NTNU**

Peer Reviews

NAME	ORGANISATION
Héctor Rodríguez	**PIK**
Barbara Cardone	**Roma Tre**

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1 Introduction

DIALOGUES supports the Energy Union through operational research on energy citizenship that encourages citizens to take a central role in the low-carbon energy transition. This is mainly achieved through citizen engagement, awareness of the greenhouse gas emissions caused by their individual choices, equity, and justice. To this end, DIALOGUES operationalizes, contextualizes, measures, and supports the framework environments, policies, and institutions, which enable inclusive energy citizenship to emerge. This report assesses the legal and regulatory aspects related to energy citizenship in Austria, Bulgaria, Germany, Greece, Italy, Norway, Switzerland and Türkiye. All these countries have ratified the Paris Agreement, which provides the framework for the developments in European energy and climate strategies for the next decades. A common general framework has emerged from the ongoing implementation of the Clean Energy for all Europeans Package (CEP) which aims to put citizens at the centre of the energy transition. This implementation has affected the national energy and climate policies of EU countries directly and can indirectly influence other non-EU countries such as the DIALOGUES countries, Norway, Switzerland and Türkiye.

The CEP directives provide a framework, but they also give ample leeway for the EU member states in how exactly these directives are translated into national law. Therefore, a comparative assessment of how those aspects of the CEP directives, which directly relate to energy citizenship, are implemented and how these implementations benefit or hamper progress towards energy citizenship in the countries listed above.

Energy citizenship is not a legally defined term, yet. In DIALOGUES, we define it as

> *the degree to which, and the ways in which, the goals of a sustainable energy transition enter into the everyday practices of an individual. Energy citizenship can either be shown through individual and collective actions or felt internally through reflection and concern. Energy citizenship is not a static quality, but evolves over time, waxing or waning due to internal and external factors, making it important to find ways of sustaining engagement.*

In the following, an assessment of how DIALOGUES' countries strive to facilitate participation in the energy transition, how they integrate aspects of inclusiveness, where they put their overall priorities and how they support citizens' agency in the process is provided. An a-priori analysis of the CEP directives showed how the current European legal and regulatory framework aims to provide for strengthening citizens and putting them at the centre of the energy transition. These are the concepts of 'the active consumer', 'the renewables self-consumer, 'citizens energy communities' (CEC) and 'renewable energy communities' (REC). These four concepts aim at reshaping responsibilities and opportunities for citizens in the energy and climate sphere.

This report examines whether the principle of gender mainstreaming has been taken into account in the 'Clean Energy for All Europeans Package' in general and in the provisions on energy citizenship in particular. Furthermore, it is analyzed, to what extent Austria, Bulgaria, Germany, Greece and Italy have implemented these provisions and used possible design leeway to do justice to include gender-sensitive aspects. Corresponding analyses are done for the non-EU countries Norway, Switzerland and Türkiye.

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2 Energy citizenship - citizens at the centre of the energy transition

To reach the climate and energy goals, the energy system has to transform, moving away from fossil fuels to renewables and thus away from a system in which energy is exclusively generated centrally and then distributed to consumers. Through energy citizenship, citizens should (be able to) actively participate in the energy transition in the future and can generate energy themselves as well as exchange it with each other. Citizens can reach energy citizenship through different pathways, expressed in different ways, driven by a combination of their internal processes and their socio-material-political contexts. This approach led to the development of a preliminary definition of energy citizenship within the DIALOGUES consortium, as the degree to which, and the ways in which, the goals of a sustainable energy transition enter into the everyday practices of an individual. Energy citizenship can either be shown through individual and collective actions or felt internally through reflection and concern. Energy citizenship is not a static quality, but evolves over time, waxing or waning due to internal and external factors, making it important to find ways of sustaining engagement.

The **'Clean Energy for All Europeans Package'** puts citizens at the centre of the energy transition. It aims to enable them to actively participate in the energy transition and e.g. to change from consumers to so-called 'prosumers'. Prosumer is a combination of the two terms 'consumer' and 'producer'. Consumers should therefore no longer be 'only' consumers, but also producers. 'Prosumer', however, is not a legal term. Legally the constructs of the Renewable Energy Communities (REC), the Citizens' Energy Communities (CEC), the model of the 'active customer', as well as the ' renewables self-consumer' in particular enable active participation in the energy transition.

Several constructs have been created that enable active participation in the energy transition. The Renewable Energy Communities, the Citizens' Energy Communities and the model of the 'active customer', as well as the 'renewables self-consumer' are to be highlighted. The respective participation methods are briefly outlined, whereby the RECs are discussed in more detail with the question of whether aspects of inclusivity were taken into account.

Active participation in the energy system must take place in an orderly manner and interact with the existing energy system. This requires a suitable legal framework, which is outlined in the following chapters.

Note: Energy law comprises those standards that regulate the various energy sources and their use as well as non-use, whereby use is a broad term and, in addition to consumption, also includes the extraction, generation, storage, distribution and transport of energy. Behind the provisions on the non-use of energy is the idea of climate protection, to which a contribution is made by saving energy.[1] Energy law is scattered across many provisions at both European and national levels, which mostly contain different core aspects but often also regulate overlapping topics and thus

[1] Hauer, A., (2004). Stand und Entwicklung des Energierechts in der europäischen Gemeinschaft und in Österreich, in Nowotny/Parak/Scheucher (eds.), Handbuch der österreichischen Energiewirtschaft, p. 59; Pirstner- Ebner, R. (2020). Energierecht, pp. 19.

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complement each other. We will follow a 'top-down approach', where first the energy law provisions are considered on a meta-level and in the next step selected specific provisions are subjected to analysis. The focus of the analysis is on the 'Clean Energy for All Europeans Package' and the national legal provisions. The 'Clean Energy for All Europeans Package' comprises four regulations and four directives:

- Energy Performance in Buildings Directive[2],
- Renewable Energy Directive (hereinafter RED II)[3],
- Energy Efficiency Directive[4],
- Electricity Directive (hereinafter ED 2019)[5],
- Electricity Regulation[6],
- Risk Preparedness Regulation[7],
- ACER Regulation[8],
- Governance of the Energy Union Regulation[9].

2.1 The 'Active customer'

An active customer is a final customer (or a group of jointly acting final customers) who consumes or stores electricity, which is produced within its premises located within confined boundaries, or who sells self-produced electricity or participates in flexibility or energy efficiency schemes, provided those activities are not its primary commercial or professional activity.[10] When operating as active customers, end customers shall not be subject to disproportionate or discriminatory technical requirements, administrative requirements, procedures, surcharges and levies, and network charges that are not cost-reflective.[11] Art. 15 (2) ED 2019 grants active customers several rights and specifies them. Particularly noteworthy are also the rights enshrined in Art. 15 (5) ED 2019 for active customers in whose ownership a storage facility is located.

[2] Directive (EU) 2018/844 of the European Parliament and of the Council of 30.05.2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency, OJ 2018 L 156/75.
[3] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11.12.2018 on the promotion of the use of energy from renewable sources, OJ 2018 L 328/82.
[4] Directive (EU) 2018/2002 of the European Parliament and of the Council of 11.12.2018 amending Directive 2012/27/EU on energy efficiency, OJ 2018 L 328/210.
[5] Directive (EU) 2019/944 of the European Parliament and of the Council of 05.06.2019 concerning common rules for the internal market in electricity and amending Directive 2012/27/EU, OJ 2019 L 158/125.
[6] Regulation (EU) 2019/943 of the European Parliament and of the Council of 05.06.2019 on the internal market in electricity, OJ 2019 L 158/54.
[7] Regulation (EU) 2019/941 of the European Parliament and of the Council of 05.06.2019 on risk provisioning in the electricity sector and repealing Directive 2005/89/EC, OJ 2019 L 158/1.
[8] Regulation (EU) 2019/942 of the European Parliament and of the Council of 05.06.2019 establishing a European Union Agency for the Cooperation of Energy Regulators, OJ 2019, L 158/22.
[9] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11.12.2018 on the governance system for the Energy Union and climate change, amending Regulations (EC) No. 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, 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, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council, OJ 2018 L 328/1.
[10] Art. 2 (8) ED 2019.
[11] Art. 15 (1) ED 2019.

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2.2 The renewables self-consumer

A renewables self-consumer is an end-user who generates renewable electricity within its premises located within confined boundaries for their consumption and can also store and sell this electricity provided that, for a non-household renewables self-consumer, these activities are not their primary commercial or professional activity.[12] Several rights are also envisaged for them in Article 21 RED II, which should enable active participation as a self-consumer in the field of renewable electricity while retaining the rights as an end customer. More renewables self-consumers (at least two) acting together as such in the same building or multi-apartment block are referred to as jointly acting renewables self-consumers.[13]

2.3 Citizen energy communities

A CEC can produce, distribute and consume electricity, it can engage in supply, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders.[14] Participation in a CEC is voluntary and open. The effective control, however, lies with members or shareholders that are natural persons, local authorities, municipalities, or small enterprises.[15] Its primary objective is to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than the generation of financial profits.[16] Art. 16 ED 2019 provides several additional requirements for member states to comply with or consider when enacting the regulatory framework for CECs. The CEC is limited to electricity and allows electricity from renewable and fossil sources. In contrast, there is no restriction concerning the energy carrier in the REC, but there is a restriction concerning the source. Only renewable energies may be the subject of a REC.

2.4 Renewable energy communities

A renewable energy community enables its members to

- produce, consume, store and sell renewable energy[17]
- share the renewable energy that is produced by the production units owned by the REC within the RED[18] and
- non-discriminatory access to all appropriate energy markets.[19]

Art. 2 (16) RED II defines renewable energy communities with criteria to be fulfilled. According to this, a REC is a legal entity based on open and voluntary participation. It must be independent and under the effective control of shareholders or members who are in close proximity to the renewable energy projects.[20] The RED II does not further

[12] Art. 2 (14) ED 2019.
[13] Art. 2 (15) RED II.
[14] Art. 2 (11) (c) ED 2019.
[15] Art. 2 (11) (a) ED 2019.
[16] Art. 2 (11) (b) ED 2019.
[17] Art. 22 (2) (a) RED II.
[18] Art. 22 (2) (b) RED II.
[19] Art. 22 (2) (c) RED II.
[20] Art. 2 (16) (a) RED II.

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specify what is meant by this 'proximity criterion' and leaves it up to the Member States to determine the criteria under which the criterion is fulfilled. These parameters can, for example, be of a geographical, technical or economic nature.

Shareholders or members of a REC can be natural persons, local authorities (including municipalities) and small and medium-sized enterprises (hereinafter SME).[21] It is also important to note that the primary objective of the REC must not be financial gain, but rather to provide the members/shareholders/territories in the locality in which it operates environmental, economic or social community benefits.[22] The Member States shall ensure that final customers, and in particular, households may participate in a REC without being subject to unjustified or discriminatory conditions or procedures that would prevent their participation in a REC, while maintaining their rights and obligations as final customers[23]

Member States shall also establish a regulatory framework that ensures the removal of unjustified legal and administrative barriers to REC and that participation in them is also open to consumers living in low-income or vulnerable households.[24] Furthermore, this regulatory framework must ensure that rules are in place in the respective Member States to ensure that consumers and members participating in REC are treated equally and in a non-discriminatory manner.[25]

The European provisions outlined above set targets and leave Member States room for manoeuvre in their implementation. The RED II specifies a large number of provisions to be complied with and targets to be achieved in terms of energy law, but also to take into account and protect consumers in general and low-income and vulnerable households in particular. At the same time, the individual member states are given room for manoeuvre in the concrete implementation.

The following chapter outlines the history and definition of gender mainstreaming and assesses the relevance of gender mainstreaming in energy law. Gender mainstreaming

[21] Art. 2 (16) (b) RED II.
[22] Art. 2 (16) (c) RED II.
[23] Art. 22 (1) RED II.
[24] Art 22 (4) (f) RED II.
[25] Art 22 (4) (i) RED II.

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3 Gender Mainstreaming

3.1 Definition and history

There is no uniform legal definition of gender mainstreaming. However, two central definitions are predominately used in the literature.[26] These are the definition of the Economic and Social Council of the United Nations[27], and that of the Council of Europe[28]. The former defines gender mainstreaming as the assessment of the impact of planned policies, legislation, strategies or programmes on women and men in all areas and at all levels to achieve gender equality. The concerns and experiences of women and men should thus become an integral part of the creation and evaluation of regulations and strategies in all political, economic and social areas.[29]

The Council of Europe's definition is as follows: 'the (re)organisation, improvement, development and evaluation of policy processes, so that a gender equality perspective is incorporated in all policies at all levels and at all stages, by the actors normally involved in policy- making'.

Gender mainstreaming is not about exclusively addressing women or blaming them for existing inequalities[30], but rather, as *Krell* et al. argue, to create gender-equitable conditions, or to not treat any person disadvantageously based on gender.[31]

In its Communication 'Incorporating equal opportunities for women and men into all Community policies and activities' of 21 February 1996, the European Commission committed itself to the principle of gender mainstreaming. All general political concepts and measures are to be explicitly integrated into the conception phase to realize equal rights by actively and recognisably integrating any effects on the situation of women or men.[32]

Gender mainstreaming found its way into the legal order of the European Union (not by explicit mention, but) as an objective with the Treaty of Amsterdam[33]. In this treaty, equality between men and women was defined as a task of the community. Article 8 of the Treaty on the Functioning of the European Union (hereinafter TFEU)[34] declares that the Union shall aim to eliminate inequalities and promote equality between men and women in all its activities. The Union also aims, in defining and implementing its policies and activities, to 'combat discrimination based on sex, racial or ethnic origin, religion or

[26] Alston, M. (2014). Gender mainstreaming and climate change. In Women's Studies International Forum (Vol. 47, pp. 287-294). Pergamon.
[27] UN Economic and Social Council (1999). Report of the economic and social council for 1997, p. 24. Available online: http://digitallibrary.un.org/record/271316.
[28] Council of Europe (1998). Gender Mainstreaming: Conceptual framework, methodology and presentation of good practice, p. 15.
[29] UN Economic and Social Council (1999). Report of the economic and social council for 1997. p. 24.
[30] European Commission (2004). Equal Guide on Gender Mainstreaming, p.9.
[31] Krell, G. et al. (2011). Gender Mainstreaming: Chancengleichheit (nicht nur) für Politik und Verwaltung. Chancengleichheit Durch Personalpolitik, p. 86.
[32] European Commission (1996). Communication COM(1996) 67 final on incorporating equal opportunieites for women and men into all community policies and activities, p. 2.
[33] Treaty of Amsterdam amending the Treaty on European Union, the Treaties establishing the European Communities and certain related acts of 10.11.1997 OJ 1997 C 340/1.
[34] Treaty on the Functioning of the European Union OJ 2012 C 326/1.

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belief, disability, age or sexual orientation.'[35] Most recently, the European Commission adopted the Gender Equality Strategy 2020-2025[36], which enshrines the policy objectives and key actions on gender equality for the period 2020-2025.

3.1.1 Gender Equality Index

Since 2013, the European Institute for Gender Equality (EIGE) has published an annual Gender Equality Index for 27 European countries to measure the equal treatment of women in different areas such as work, money, knowledge, time, power, health and violence.

Since 2010, Germany has shown substantial growth in almost all areas of the Gender Equality Index with the highest score in the domain 'health', whereas the lowest is in the domain 'knowledge'. The biggest improvement has been seen in the domain 'power' and the lowest in the domain 'time'. Austria has a similar overall ranking (68 points) and scores highest in the domain 'health' (91.9 points) and lowest in the domain 'power' (48.2 points). However, since 2013 all core domains have seen positive increases towards more gender equality (see Figure 1). Italy has an overall score of 64 points and scores highest in the domain 'health' 88.4 points and lowest in 'power' (52 points) as most countries. Over time Italy has mostly gained in the dimension 'power' and increased the score by 27% from 2013 to 2021.

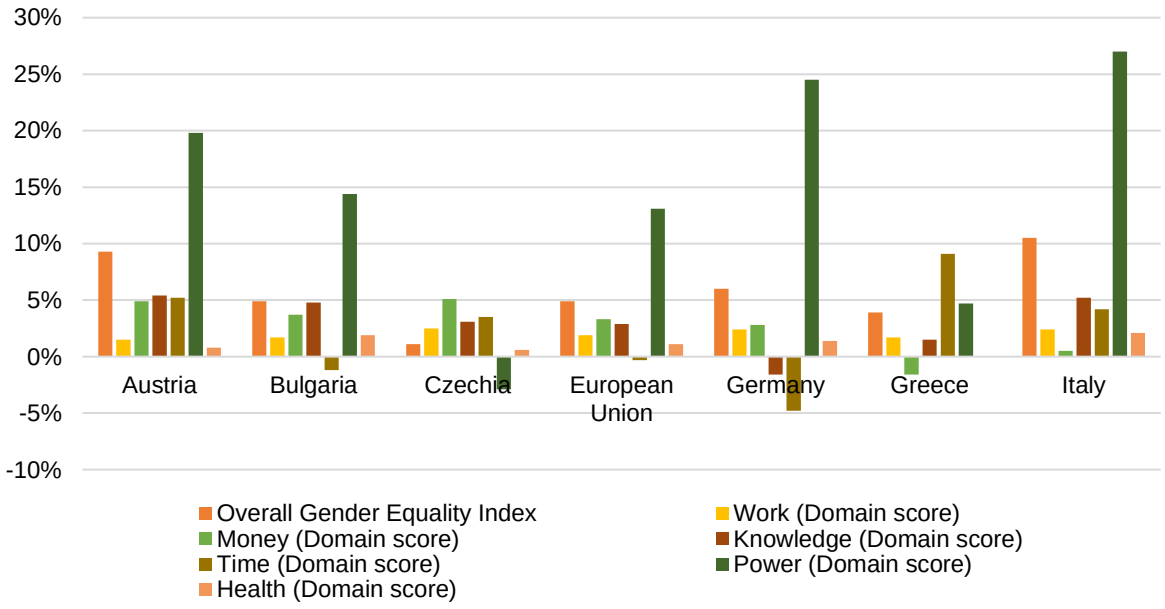

Figure 1:Change in Gender Equality and Core Scores between 2013 and 2021, Source: European Institute for Gender Equality (EIGE)

Bulgaria has a relatively lower score (59 points) and ranks below the European average (68). Over time Bulgaria has increased the overall score by 5% and lost only slightly in the 'time' domain. The largest gain occurred in the 'power' domain 14%. Greece scores

[35] Art. 10 TFEU.

[36] European Commission (2020). COM(2020) 152 final on a Union of Equality: Gender Equality Strategy 2020-2025.

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the lowest in the country comparison with 53 points) and has a very low score in the 'power' domain (27 points) compared to the EU average (55 points). For all the other countries this specific gender inequality index is missing. However, there is also a similar measure provided by the UN, that allows to assess gender inequality.

The Gender Inequality Index (GII) assesses gender disadvantage in three dimensions - health, empowerment, and labour market. It shows the loss of potential human development due to inequality between female and male performance in these dimensions. The value ranges from 0 when women and men perform equally well to 1 when one gender performs as poorly as possible in all measured dimensions (see Figure 2).

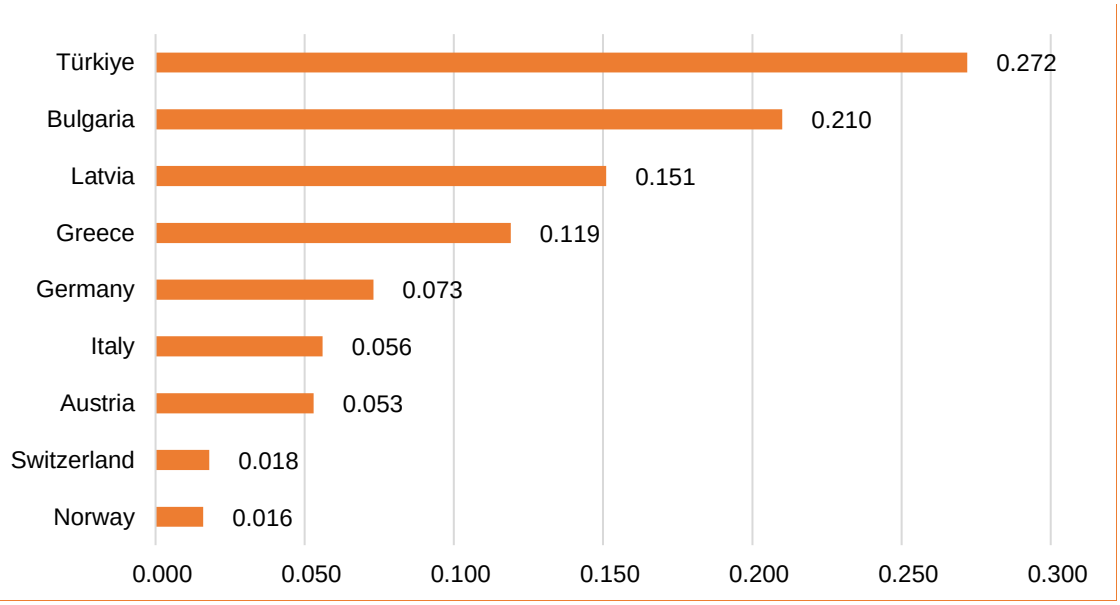

Figure 2: Gender Inequality Index (GII) Note: The Index varies from 0-1, whereby 0 means no gender-specific differences and 1 means that one gender performs the poorest.

The GII shows that Norway (0.016) and Switzerland (0.018) have the smallest gender-specific differences in the dimension of health, empowerment and labour market, while Türkiye scores the relatively highest index of inequality (0.27). Surprisingly, when not taking into account the other dimension from above Germany performs slightly worse than Italy and Austria and gender differences are smaller in Greece than in Bulgaria.

Building on the findings outlined above, the following chapter will assess the how energy citizenship constructs, like energy communities, enter the national laws of the DIALOGUES' countries, how the CEP has been translated into national law and how gender mainstreaming enters the national (energy) debates.

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3.2 The relevance of gender mainstreaming in energy law

'The climate is the same for males and females, so far as I know. When it rains we all get wet.' Marina Yannakoudakis

If one were to believe the quote from the former Member of the European Parliament cited above, the research question of this report would be obsolete and the assessment of whether gender mainstreaming in energy law is relevant would be answered. If the climate is the same for men and women, both men and women would get wet equally when it rains. Sticking with this metaphor, however, it must be countered that those who own an umbrella or can at least take a warm shower and change clothes after getting wet, or are even indoors, are undoubtedly exposed to the rain differently than those who do not have these possibilities. This section explains why gender mainstreaming in energy law is necessary and why the climate is not the same for men and women.

Gender mainstreaming does not require any 'sector-specific' justification (in the sense that a specific need must result from this subject area to implement gender mainstreaming in the energy sector). Women and men are equal and this fact has to be taken into account in all areas, processes, laws, projects, etc. Nevertheless, the climate and energy sector deals with 'sector-specific' (additional) challenges resulting in new necessities and, as will become apparent, additional (as yet unexploited) potential.

Climate change does affect us all, but not everyone equally. Despite the social dimension of climate change, research has only started to look into the gender dimension of global warming in the early 2000s.[37] The identification of gendered causes and impacts of climate change has started the discussion and built the foundation of future research. However, the discourse has remained oversimplified and universalizing about the diverse experiences and capabilities of women and men.[38] Various socio-economic factors, such as culture, race, class, sexuality, age, and ability can lead to differences between gender. Accordingly, the focus has turned to intersectionality to better understand people's context-specific experiences with climate change, which allows analyzing both identity-based experiences and reveals persistent systemic and structural issues.[39] So far, most research has studied the nexus between gender and climate change in the global south and less attention has been drawn to developed countries.

Van der Linden (2015)[40] shows that the risk perception of climate change consequences correlates positively with gender, and being female is associated with increased risk perceptions of climate change. Moreover, Cohen (2017)[41] and

[37] Fletcher, A. J., and Reed, M. G. (ed.) (2022). Gender and the Social Dimensions of Climate Change: Rural and Resource Contexts of the Global North. Taylor & Francis.
[38] Arora-Jonsson, S. (2011). Virtue and vulnerability: Discourses on women, gender and climate change. Global environmental change, 21(2), 744-751.
[39] Fletcher, A. J., and Reed, M. G. (ed.) (2022). Gender and the Social Dimensions of Climate Change: Rural and Resource Contexts of the Global North. Taylor & Francis.
[40] Van der Linden, S. (2015). The social-psychological determinants of climate change risk perceptions: Towards a comprehensive model. Journal of Environmental Psychology, 41, 112-124.
[41] Cohen, M. G. (ed.). (2017). Climate change and gender in rich countries: work, public policy and action. Taylor & Francis.

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Magnusdottir and Kronsel (2021)[42] point out that despite the privileged position of citizens from wealthy countries, power issues also affect the degree of vulnerability.

Power issues affect people in various ways and are often correlated with several socio-demographic factors. Decreasing power issues can also help to mitigate negative climate consequences as higher gender equality is negatively associated with carbon emissions. However, Ergas and York's (2012) [43] analysis does not allow drawing causal conclusions about the relationship between gender and carbon emissions. Similarly, several cross-country studies have shown that a significant number of females in power positions affects decision-making outcomes. For instance, Norgaard and York (2005)[44] found differences in environmental treaty ratification as a function of the proportion of women in parliament, i.e., countries with a higher proportion of women in parliament ratify a greater number of environmental treaties.

Moreover, especially countries with an above-average percentage of women as elected representatives have lowered or stabilized their carbon emissions[45]. Within the energy labour market, there are also gendered power issues. According to the World Bank, only 22.1% of those employed in the energy sector are females and the percentage of senior managers is even lower (14%).[46] Regarding intersectionality, studies point to the difference between rural and urban areas. Rural areas are shaped by more traditional gender roles, expectations and ideologies.[47;48] Taken together, these structural and social factors significantly impact the distribution of negative consequences depending on identity. In traditional gender roles, women tend to be responsible for unpaid work and are thus more dependent on space heating and air quality. Additionally, there is a higher dependency on energy for the use of household appliances. Negative consequences of poor indoor conditions, such as poorly isolated rooms or fuels containing harmful substances, disproportionally affect females. Poor isolation as well as unpaid labour or unemployment are causes of energy poverty.[49] Due to the currently rising energy cost, energy or fuel; poverty have also become major issues in developed countries.

To measure the extent and intensity of energy poverty, several indicators have been developed. The research stream that focuses on energy poverty in Europe mainly relies on the EU-SILC (European Union Statistics on Income and Living Conditions) dataset

[42] Magnusdottir, G. L., and Kronsell, A. (2021). Gender, intersectionality and climate institutions in industrialised states (p. 278). Taylor & Francis.
[43] Ergas, C., and York, R. (2012). Women's status and carbon dioxide emissions: A quantitative cross-national analysis. Social Science Research, 41(4), 965-976.
[44] Norgaard, K., and York, R. (2005). Gender equality and state environmentalism. Gender & Society, 19(4), 506-522.
[45] Buckingham, S. (2010). Call in the women. Nature, 468(7323), 502-502.
[46] 'Orlando, M. B., et a.l (2018). Getting to gender equality in energy infrastructure: lessons from electricity generation, transmission, and distribution projects. World Bank.
[47] Buchanan, A., et al. (2016). What's counted as a reindeer herder? Gender and the adaptive capacity of Sami reindeer herding communities in Sweden. Ambio, 45(S3), 352–362. https://doi.org/10.1007/s13280-016-0834-1.
[48] Fletcher, A. J., and Knuttila, E. (2016). Gendering change: Canadian farm women respond to drought. Vulnerability and adaptation to drought: The Canadian prairies and South America, 159-177.
[49] Igawa, M., and Managi, S. (2022). Energy poverty and income inequality: An economic analysis of 37 countries. Applied Energy, 306, 118076.

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and uses subjective measures to quantify the level of (fuel) poverty.[50] The measures typically consist of the ability to keep homes adequately warm, leaks/dumps or rot in the dwelling, and arrears on utility bills.[51] These indicators are also able to capture, at least to a certain extent, the three key causes of fuel poverty (poor energy efficiency, low income, and high energy bills; as noted by Boardman (1991)[52]. Although these key dimensions remain important, research on the issue has gained additional insights and expanded to include other political and spatial aspects of the problem[53]. In this context, research also shows that being responsible for care work or being a single parent increases the risk of energy poverty[54,55] and thus energy poverty has also a gender dimension[56,57]. Various factors contribute to the higher vulnerability of females, such as the gender pay gap, labour market participation and unequal distribution of car work.[58] However, there is a lack of data and studies that examine this relationship using large and reliable data sources, such as the EU-SILC.[59] *Clancy* et al (2017) [60] stated critically: 'No data - no visibility; no visibility - no interest; no interest - no action; no action - no accountability'. Despite the lack of studies that draw causal conclusions about the influence of gender on the risk of being, becoming and escaping energy poverty, the analysis of key factors of energy poverty and their distribution among genders can be analyzed. Figure 3 shows the median gender pay gap for 2002, 2010 and 2021 or later.

[50] Herrero, S. T. (2017). Energy poverty indicators: A critical review of methods. Indoor and Built Environment, 26(7), 1018-1031.
[51] Healy, J. D., & Clinch, J. P. (2002). Clinch: Fuel Poverty in Europe: A Cross Country Analysis Using A New Composite Measurement. In Environmental studies research series working papers.
[52] Boardman, B. (1991). Fuel poverty: From cold homes to affordable warmth. Pinter Pub Limited.
[53] Middlemiss, L. (2022). Who is vulnerable to energy poverty in the Global North, and what is their experience?. Wiley Interdisciplinary Reviews: Energy and Environment, e455.
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[55] Sunikka-Blank, M., & Galvin, R. (2021). Single parents in cold homes in Europe: How intersecting personal and national characteristics drive up the numbers of these vulnerable households. Energy Policy, 150, 112134.
[56] Feenstra, M., & Clancy, J. (2020). A view from the north: Gender and energy poverty in the European Union. In Engendering the energy transition (163-187). Palgrave Macmillan, Cham.
[57] Petrova, S., & Simcock, N. (2021). Gender and energy: domestic inequities reconsidered. Social & Cultural Geography, 22(6), 849-867.
[58] Boll, C., & Lagemann, A. (2018). Gender pay gap in EU countries based on SES (2014). Luxembourg, Publication Office of the European Union, 10.
[59] Allwood, G. (2020). Mainstreaming Gender and Climate Change to Achieve a Just Transition to a Climate-Neutral Europe. JCMS: Journal of Common Market Studies, 58(S1), p. 179. https://doi.org/10.1111/jcms.13082; Clancy, J. et al. (2017) Gender perspective on access to energy in the EU (2017), pp. 37.
[60] Clancy, J. et al. (2017) Gender perspective on access to energy in the EU (2017), p. 8.

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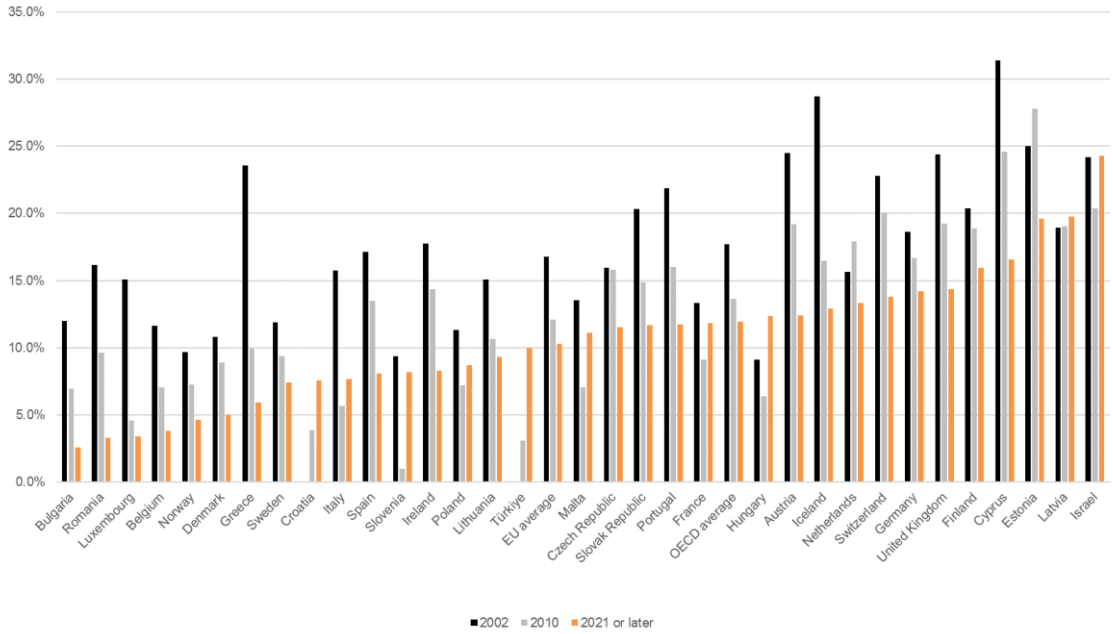

Figure 3: Median gender pay gap for 2002, 2010 and 2021 or later, Source: OECD Employment Database, https://bit.ly/3rVEaRC (14/10/2022)

One of the main determinants of energy poverty is income. The gender pay gap (in median earnings for full-time employees) has decreased in most OECD countries. From 2002 to 2021 (or the latest between 2002 and 2021, the gender pay gap declined in 29 of the 33 OECD countries for which complete data are provided. Austria, Greece, Iceland, and Luxembourg experienced the largest declines, with the gap falling by more than 11 percentage points. However, some countries recorded an increase over the same period: Hungary, in particular, has seen its wage gap increase by more than three percentage points since 2002. Overall, the OECD average gender pay gap has fallen by 5.7 percentage points since 2002, though progress has slowed slightly in recent years.

However, there is also a difference in part-time and full-time employment rates among genders. Over the past two decades, the gender gap in employment rates has almost halved: it fell from 18% in 2000 to 10.5% in 2021 on average across OECD countries[61]. The measure has declined in all OECD countries except for Poland and Sweden; the decline was most significant in Luxembourg and Spain, with a drop of around 20 percentage points. The still-existing differences, however, also increase the risk of females ending up in energy poverty.

In some countries, part-time employment rates for women are roughly four times larger than for men (e.g. Austria, Germany, Italy and Switzerland). Working part-time is often associated with a larger responsibility for unpaid work. The OECD Family database[62] reveals that females spend more time on unpaid work, and car work and have still less leisure time, even though the time spent on paid work is higher for men (see Table 1). The fact that females spent more time at home on average, can also mean that they

[61] OECD (2022), OECD Employment Outlook 2022.
[62] OECD Employment database, via www.oecd.org/employment/database.

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suffer more from negative health consequences associated with energy poverty.

Table 1: Comparison of time use for daily activities in percentage differences between women and men

	Paid work or study	Unpaid work	Care work	Personal care	Leisure	Unspecified
Austria	-8%	8%	2%	1%	-2%	0%
Belgium	-5%	6%	1%	2%	-3%	0%
Bulgaria	-4%	9%	1%	-1%	-5%	0%
Estonia	-6%	8%	2%	0%	-3%	0%
Finland	-3%	4%	2%	1%	-4%	0%
France	-4%	5%	1%	1%	-3%	0%
Germany	-6%	6%	0%	3%	-2%	-1%
Italy	-7%	13%	1%	-1%	-7%	0%
Japan	-11%	11%	1%	1%	-2%	0%
Latvia	-7%	8%	1%	0%	-3%	0%
Lithuania	-6%	9%	1%	0%	-4%	0%
Mexico	-18%	18%	5%	-2%	-4%	0%
New Zealand	-8%	6%	2%	1%	-1%	0%
Norway	-5%	2%	1%	2%	0%	0%
Poland	-10%	13%	2%	0%	-4%	0%
Slovenia	-5%	8%	1%	0%	-4%	0%
Spain	-5%	9%	2%	-1%	-5%	0%
Sweden	-5%	4%	1%	2%	-1%	0%
Türkiye	-14%	1%	18%	0%	-2%	-3%
United Kingdom	-8%	7%	2%	1%	-2%	0%
United States	-5%	5%	2%	2%	-3%	0%

Note: Distribution (%) of time spent in each activity over 24 hours, age 15 and over; a) 1999: New Zealand; 2000: Estonia, Hungary; 2001: Slovenia, Sweden, United Kingdom; 2002: Latvia, Lithuania, Mexico; 2004: Poland; 2006: Australia, Belgium, Turkey; 2008: Italy; 2008/2009: Austria; 2009: Finland, Korea; 2009/2010: France, Spain; 2010: Canada, Norway, United States; 2011: Japan; 2012/2013: Germany. b) Covers the total population from age 15 onwards, except for European countries where samples include adults from 20 to 74 years of age and Germany and Japan where the population aged 10 years or older is covered. Source: For European countries, National Time Use Surveys as reported in the Harmonised European Time Use Surveys dataset (HETUS) dataset except for Austria, Canada, Finland, France, Spain, Norway; results from National Time Use surveys for Australia, Canada, Japan, Korea and Mexico.

The perception of unpaid work also results in a different energy consumption behaviour and a corresponding dependency.[63] A particular problem arises from the fact that gender-specific barriers and obstacles arise, but are not taken into account in legislation.[64] The fact, noted above, that in many countries, due to the performance of household-related duties, women are the main ones responsible for dealing with energy can be used in the implementation of gender mainstreaming for the benefit of the energy transition. For it is they whose actions can have an influence in terms of energy efficiency measures, for example.[65] The inclusion of women's perspectives and life

[63] EEB, (2021). Why the European Green Deal needs ecofeminism. Moving from gender-blind to gender-transformative environmental policies. Report.
[64] Großmann, K. (2017). Energiearmut als multiple Deprivation vor dem Hintergrund diskriminierender Systeme. In Energie und soziale Ungleichheit (55-78). Springer VS, Wiesbaden.
[65] Allwood, G. (2020). Mainstreaming Gender and Climate Change to Achieve a Just Transition to a Climate-Neutral Europe. JCMS: Journal of Common Market Studies, 58(S1), p. 175. https://doi.org/10.1111/jcms.13082.

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realities can thus improve the efforts toward energy system transformation.

However, this argumentation and in particular the resulting legal implementations must be handled with caution and it is questionable how far this influence reaches. Just because they tend to be the ones who cook in the household or carry out other household activities, it is certainly questionable whether this fact also extends so far that in these cases it is up to women to make decisions about the choice of (e.g. more efficient) appliances used or the way heating is done (e.g. with a heat pump instead of fossil gas). Nevertheless, it is worth mentioning that young women in particular are very motivated to bring about change in terms of climate change[66], so it would be a boost for climate protection and the energy transition if they were brought on board.

Participation in the energy transition is often linked to financial expenditure or property ownership, which is why corresponding activities tend to be more difficult for women.[67] This fact, too, must be taken into consideration when enacting standards.

We can thus conclude that strengthening women in climate and energy law strengthens climate protection and the energy transition. It can first be stated that the integration of women's perspectives, experiences and life realities in climate and energy law, but also in corresponding strategies, campaigns, etc., holds considerable potential for strengthening measures in the field of climate change and energy system transformation. This is therefore not ‘only’ a necessity for the sake of gender equality, but also a matter of exploiting previously unconsidered potentials for achieving climate and energy policy goals.

Furthermore, we find that isolated consideration of legal matters does not make sense or lead to the desired results. Energy law can compensate for certain existing imbalances and that is also necessary. However, it is not enough. Further work must be done at the same time to abolish any form of discrimination. To give an example: The energy law provides financial relief for low-income households. As explained above, women earn less than men on average, which is why such regulations are very important for women. Nevertheless, the gender pay gap is an independent problem (detached from energy law) that must be eliminated by other legal provisions/measures/strategies that deal with this issue primarily or as the main subject (‘primary provisions, such as labour law, civil law, tax law), so that these imbalances do not have to be compensated for by other ‘secondary provisions’ (in this case energy law). It is clear that not all financial imbalances result from a worse position for women and that there can/will continue to be financial difficulties despite corresponding compensation. But for those who get into this situation precisely because of unequal treatment, the problem must be tackled at its root, which is why an isolated consideration of gender mainstreaming in energy law is not sufficient.

And finally, intersectionality deals with the issue that disadvantageous differentiation often cannot be traced back to a single personal characteristic, but results from a multi-layered linkage of different social status characteristics. The term has established itself

[66] European Commission (2020). COM(2020) 152 final on a Union of Equality: Gender Equality Strategy 2020-2025, p 15.
[67] Fraune, C. (2015). Gender matters: Women, renewable energy, and citizen participation in Germany.Energy Research & Social Science, 7, 55-65.

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internationally as a linguistic and analytical version of the multidimensionality or interconnectedness of personal characteristics. In the enactment of many norms, the aspect of gender is not taken into account at all. Even if it is taken into account, it often remains with this one component. It is neglected that women are not a homogeneous group, but that there are differences and that these differences or different circumstances (race, ethnicity, sexual orientation, age, health, social status) can result in mutually reinforcing discrimination and thus aggravating circumstances. The consideration of this multidimensionality is of central importance for the establishment of appropriate regulations.

3.3 Gender mainstreaming in the Clean Energy for All Europeans Package

When assessing the Clean Energy for All Europeans Package one aspect becomes very noticeable: The use of inclusive language seems to have been forgotten.[68] The only reference to 'gender' or 'gender equality' in the whole CEP is found in recital 45 of the Governance Regulation. The Governance Regulation aims to ensure that the Energy Union Strategy[69] is implemented in a coordinated and coherent manner across its five dimensions[70]. One of the cornerstones of the Governance Regulation is the obligation for Member States to develop integrated national energy and climate plans (hereinafter NECP) for the period 2021-2030.[71] In addition to describing the current situation concerning the five dimensions, the NECP must contain national targets for each of the dimensions as well as the measures to implement these targets and an impact assessment on the achievement of the targets based on these measures.[72] According to recital 45 of the Governance Regulation Member States should integrate human rights and gender aspects in the integrated national energy and climate plans (as well as the long-term strategies). In addition, the biennial progress reports must provide information on how the implementation of the NECP contributes to the promotion of gender equality and human rights. These requirements have not found their way into the Governance Regulation beyond the recital.

Several recent literature reviews on gender, energy and climate change[73] have shown that addressing and systematically including gender dimension is crucial. Gender is a

[68] European Commission (2016). Communication COM(2016) 860 final on a Clean Energy for All Europeans.
[69] European Commission (2015). Communication COM(2015) 80 final on Energy Union Package: A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy.
[70] Security of energy supply, solidarity and trust; fully integrated European energy market; energy efficiency; reduction of CO_2 emissions; research, innovation and competitiveness, see European Commission (2016). Communication COM(2016) 860 final on a Clean Energy for All Europeans.
[71] Art. 3 Governance Regulation.
[72] Pirstner- Ebner, R. (2020). Energierecht, p. 45.
[73] EIGE, 'Review of the Implementation in the EU of Area K of the Beijing Platform for Action: Women and the Environment. Gender Equality and Climate Change', Luxemburg, European Institute for Gender Equality, 2012. Röhr et al. (2018) 'Gendergerechtigkeit als Beitrag zu einer erfolgreichen Klimapolitik. Forschungsreview, Analyse internationaler Vereinbarungen, Portfolioanalyse', conducted by GenderCC' for Umweltbundesamt, Berlin, UBA-Texte No. 23/2018. Rückert-John et al. (forthcoming), 'Interdependente Genderaspekte der Bedürfnisfelder Mobilität, Konsum, Ernährung und Wohnen als Grundlage des urbanen Umweltschutzes', conducted by ISIConsult, GenderCC and Artec for Umweltbundesamt, Berlin.

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vital dimension of action in household energy, and thus for energy citizenship. Some key findings of the reviewed research include:

- Women, on average, are more concerned about climate change and air pollution than men, and have a higher motivation to change their lifestyles accordingly;
- There are significant gender differentials in attitudes and preferences on energy and environment, as well as on the role of technological solutions and change of behaviour;
- In energy efficiency, a higher propensity of women to save energy and purchase green power has been observed. Yet, 'gender scripts' related to technologies, a lack of perceived knowledge of energy, a lack of confidence in new technologies such as 'smart homes', and concerns about potential adverse health effects, can limit their options for action;
- In the transport sector, there is abundant evidence of gender-specific mobility needs and patterns as well as preferred or affordable modes of transport, resulting in higher carbon footprints of men, including research findings on the dynamics of changing gender roles and the resulting mobility patterns during the life course, as well as mobility arrangements in partnerships and families.
- Geographical levels say much about what formal status, rights, regulations, duties, and roles citizens have but also influence to what degree individuals and groups identify with place, and how places produce attachment.[74] This includes not only gender aspects, but also how gender intersects with other socio-cultural categories[75] , including urban and rural dimensions[76].
- Women have very different perceptions and views on acceptance of the energy transition than men.[77]

These findings show the necessity of applying gender-sensitive approaches and taking into account societal conditions and structural inequalities and their dynamics over time. Thus, gender is a particularly relevant analytical category in all aspects and phases of the DIALOGUES project and the analysis of inclusivity in gender is built into the core of the research ambition. It is expected that the context, perceptions and likely actions related to energy citizenship vary across genders. Therefore, in the legal and regulatory analysis of the CEP, we put an emphasis on assessing gender mainstreaming.

The following chapters examine the respective definitions of gender mainstreaming in the DIALOGUES' countries and to what extent the perspective of women has been taken into account in energy legislation in general as well as specifically in the provisions implementing energy communities.

[74] Relph, E. (1976). Place and placelessness. London: Pion.
[75] McDowell, L. (1999). Gender, identity and place. Cambridge: Polity Press.
[76] Little, J. (2017). Gender and rural geography. Routledge.
[77] Vzbv (2013). 'Verbraucherinteressen in der Energiewende. Ergebnisse einer repräsentativen Befragung'.

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4 Country Comparisons

4.1 Austria

4.1.1 Gender Mainstreaming

In Austria,[78] the Federal Government committed itself to the national implementation of the gender mainstreaming strategy with the resolution of the Council of Ministers of 11 July 2000.[79] With this, the Interministerial Working Group on Gender Mainstreaming was established. This body is chaired by the government member responsible for women's affairs and serves to support the implementation of gender mainstreaming and budgeting (see below) in all departments and political levels.[80] In the following years, several other Council of Ministers resolutions were passed[81], with which gender mainstreaming was implemented on an ongoing basis. Particularly noteworthy is gender mainstreaming in the budget process, which is commonly referred to as 'gender budgeting'[82,83] This is anchored as a state objective in Art. 13 para. 3 Federal Constitution Act (Bundes-Verfassungsgesetz F.L.G. No. 1/1930 as amended by F.L.G. I No. 141/2022), which obliges the Federation, the federal states and the municipalities to strive for the actual equality of women and men in budget management.

4.1.2 National energy laws and the Clean Energy Package

Austrian energy law is subject to many laws and ordinances. Within the scope of this analysis, particularly relevant legal bases[84] were assessed and it is apparent that the situation in Austria is similar to that at the European level. In the analyzed legal norms, there is no explicit mention of gender-specific references, except for the provision (partly worded differently but in the same sense) that person-related terms do not have a gender-specific meaning and that they are to be applied to certain persons in the respective gender-specific form.[85]

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[78] The legal bases, which include the general principle of equality and other general provisions on equality, will not be discussed here, as the focus will be on gender mainstreaming.

[79] See https://www.imag-gmb.at/gender-mainstreaming/implementierung-in-oesterreich/umsetzung-auf-bundesebene.html (accessed 14.02.2022) and https://www.bundeskanzleramt.gv.at/agenda/frauen-und-equality/gender-mainstreaming-and-budgeting.html (accessed 14.02.2022).

[80] See https://www.imag-gmb.at/arbeitsgruppe/interministerielle-arbeitsgruppe.html (accessed 14.02.2022).

[81] Council of Ministers decisions of 03.04.2002, 09.03.2004, 05.03.2008, 06.09.2011, 04.03.2020; see in more detail https://www.bundeskanzleramt.gv.at/agenda/frauen-und-gleichstellung/gender-mainstreaming-und- budgeting.html (accessed 14.02.2022).

[82] The Council of Europe defines gender budgeting as '...gender-based assessment of budgets, incorporating a gender perspective at all levels of the budgetary process and restructuring revenues and expenditures in order to promote gender equality'; see Council of Europe (2005). Gender budgeting: Final report of the Group of specialists on gender budgeting, p. 10.

[83] Austrian Federal Chancellery (2018). Erfolgsfaktor Gleichstellung - Ein Leitfaden für die geschlechtergerechte Öffentlichkeitsarbeit in der Praxis, p. 4.

[84] Electricity Act 2010 (ElWOG 2010), Natural Gas Sector Act 2011 (GWG 2011), Federal Energy Efficiency Act (EEffG), Green Electricity Act 2012 (ÖSG 2012), Renewable Energy Expansion Act (EAG), E-Control Act (E-ControlG), Electricity Tax Act (Elektrizitätsabgabegesetz).

[85] § 7 (3) EA 2010, § 5 (4) REEA, § 41 E-Control Act, § 7 (3) NGSA 2011, § 5 (3) FEEA, § 5 (4) GEA 2012.

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In the Austrian NECP, reference is first made to the Sustainable Development Goals[86] in the context of the subject of this study and it is stated, among other things, that actual gender equality is anchored in these goals as one of the basic prerequisites for sustainable development as a cross-cutting issue. From the Austrian perspective, it is then stated that the federation, the federal states and the municipalities are committed in the Austrian constitution to actual gender equality, which is to be implemented through gender mainstreaming.[87]

Interesting results on the integration of the gender perspective into the Austrian national climate and energy strategy #mission2030[88] are contained in the study by *Friedl (2020)*[89], which was commissioned by the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology. Due to its relevance to this work, the subject matter and results of this study will be presented very briefly. The #mission2030[90] forms the framework and roadmap of Austria's climate and energy policy for the period up to 2030. Among other things, the lighthouse projects envisaged in the #mission2030 are intended to take concrete steps towards achieving the 2030 climate and energy targets.[91] *Friedl (2020)*[92] subjected these lighthouse projects to an analysis and assessed their contribution to the empowerment of women in environmental and climate protection, as well as in the field of energy and mining, and, depending on the results, developed proposals for the integration of gender aspects. According to the study, initiatives to expand public transport and innovative logistics services, as well as measures to combat energy poverty and to bring financial products from the field of sustainable investments onto the market that are attractive for women, have a positive influence on the reality of women's lives. The proposals developed mainly relate to the introduction of gender criteria in procurement and award guidelines, the increased use of a gender-sensitive approach in accompanying communication, and the implementation of gender mainstreaming when enacting or amending laws.[93]

4.1.3 Energy Communities

In Austria, the models of renewable energy communities, citizen energy communities and community generation installations are legally implemented for energy citizenship. Renewable energy communities will be discussed in more detail in the following. The

[86] See https://sdgs.un.org/goals (accessed 20.02.2022).
[87] Austrian Federal Ministry for Sustainability and Tourism (2019). Integrated National Energy and Climate Plan for Austria pp. 7.
[88] The title says #mission 2020, but since the current Austrian climate and energy strategy contains the title #mission2030, no other strategy with this title is known and the author also refers to #mission2030 when describing the subject of the analysis, it is assumed that this is a typing error and that #mission2030 is meant.
[89] Friedl, M.A. (2020). Frauenensache Umwelt- und Klimaschutz - Analyse zur Integration der Genderperspektive in die Nationale Klima- und Energiestrategie (#mission 2020).
[90] Austrian Federal Ministry for Sustainability and Tourism/ Austrian Federal Ministry for Transport, Innovation and Technology (2018). #mission2030 - Die österreichische Klima- und Energiestrategie.
[91] Austrian Federal Ministry for Sustainability and Tourism/ Austrian Federal Ministry for Transport, Innovation and Technology (2018). #mission2030 - Die österreichische Klima- und Energiestrategie, 5.
[92] Friedl, M.A. (2020). Frauenensache Umwelt- und Klimaschutz - Analyse zur Integration der Genderperspektive in die Nationale Klima- und Energiestrategie (#mission 2020) pp. 3.
[93] Friedl, M.A. (2020). Frauenensache Umwelt- und Klimaschutz - Analyse zur Integration der Genderperspektive in die Nationale Klima- und Energiestrategie (#mission 2020) 4.

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provisions on REC were implemented in particular in the Electricity Act 2010 (in the following EA 2010, Elektrizitätswirtschafts- und -organisationsgesetz 2010 F.L.G. I No. 110/2010 as amended by F.L.G. I No. 7/2022) and the Renewable Energy Expansion Act (in the following REEA Erneuerbaren-Ausbau-Gesetz F.L.G. I No. 150/2021 as amended by F.L.G I No. 13/2022). § 7(1) (15a) EA 2010 defines a REC as a legal entity that enables the joint use of energy generated within the community. Following the requirements of the RED II, § 79 (1) of the REEA lists the activities that may be carried out by a REC (production of energy from renewable sources, consumption, storage, sale of such energy, aggregation, energy services). The REEA also explicitly states that the rights and obligations of the participating network users, in particular the voluntary choice of supplier, remain unaffected.[94]

Concerning the members and general partners a REC can consist of, it is stipulated that they may be natural persons, municipalities, local authorities or other legal persons governed by public law, or SMEs. The REC must be organized as an association with a legal personality and its main purpose must not be financial gain. Participation in a REC is open and voluntary. Participation by private businesses must not be their primary commercial or professional activity. Furthermore, REC activities must result primarily in environmental, economic, or social community benefits for its members or the areas in which it operates.[95]

The RED II requires that in a REC, the members or shareholders must be in proximity to each other.[96] However, it is not further specified in the European provision which criteria are to be used in determining 'proximity'. It is therefore up to the Member States to determine whether technical, economic, legal or other criteria are to be applied.[97] In Austria, the proximity is defined in § 16c (2) EA 2010. According to this, within a REC, the consumption facilities of the members or general partners must be connected to the generation facilities via a low-voltage distribution system and the low-voltage part of the transformer substation or via the medium-voltage system and the medium-voltage busbar in the transformer substation in the concession area of a system operator. The former is referred to as the local area and the latter as the regional area. A producer in a REC that feeds electricity into a grid in the local or regional area may participate only if he is not controlled by a supplier or electricity trader as defined in the 2010 EA.[98] The local or regional use of the grid within the community results in the determination of a separate reduced system utilization charge (electricity) for participating system users of a REC.[99] In addition, the following financial benefits are provided for participants of RECs:

[94] § 79 (1) sentence 4 REEA.
[95] § 79 (2) REEA.
[96] Art. 2 (16) (a) RED II, § 7 (1) (15a) EA 2010; the proximity must be complied with in accordance with § 16c par. 2 EA 2010.
[97] Kubeczko, K. et al. (2020). F.R.E.SCH Freiraum für Regulatorisches Experimentieren Schaffen Final project report, Available under: https://www.bmk.gv.at/dam/jcr:91b6958e-5787-4baf-9207-186803528ee9/FRESCH_Endbericht.pdf.
[98] § 16c (1) EA 2010.
[99] § 52 (2a) EA 2010 and § 5 (1a) System Charges Ordinance 2018 (Systemnutzungsentgelte-Verordnung 2018 F.L.G II No. 398/2017 as amended by F.L.G. II No. 558/2021).

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- Exemption from the renewable electricity contribution[100],
- Exemption from the electricity tax[101],
- Exemption from the renewable gas contribution[102],
- Subsidies for facilities of RECs[103] and
- Feed-in premium for electricity produced but not consumed by a REC up to a maximum of 50% of the total electricity produced by that community (applicable to the amount of electricity sold by the REC and fed into the public electricity grid).[104]

Independent of the participation in the REC, but still relevant for this analysis, is the anchoring of cost exemptions for low-income households[105], as well as a cost cap at a certain household net income in the REEA.[106]

We thus see, that participation of low-income and vulnerable households is made possible and facilitated through financial relief and subsidies. However, the specific design of the REC is decisive. As members of the REC benefit from plenty of financial facilitation, incentives for participation in a REC are set and the requirement of the RED II that the REC must also be open to consumers living in low-income or vulnerable households is taken into account. The Austrian legislator has therefore used the scope granted by the RED II in favour of consumers by implementing low-threshold criteria and financial incentives for participation in RECs. Financial issues (e.g. financing of the facility within a REC, investment subsidy and the market premium) concern the internal relationship of the energy community. Here, the contractual agreement of the members as well as the legal form of the REC are decisive. However, it should be pointed out that joint financing of an EEG facility is not mandatory. How good or bad (accessible) a REC is for low-income households and to what extent it endorses aspects of inclusion depends on the specific design of the REC, in terms of the constellation of members, as well as the legal form chosen and the contractual agreement. In any case, the legal framework gives (in addition to the financial facilitation granted) the freedom to establish appropriate RECs that take such aspects into account. However, since these specifications can be crucial in detail, appropriate involvement of the affected groups is necessary, and this in turn requires access to information, knowledge, time, and possibly money (to professionally obtain the processing and application of this knowledge). A lack of these capacities could be a barrier to the participation of, for example, low-income households in a REC. This makes it even more important to prepare information in a way that is easily accessible and understandable. Nevertheless, it seems that low-income households are dependent on other members agreeing contractually (and also on the choice of legal form) in a way that does not result in significant financial burdens (possibly at least for those members who are low-income households). Furthermore, it must be considered that in a REC the proximity must be given. Thus, it is not possible to

[100] § 75 (5) REEA.
[101] § 2 (1) (4) Electricity Tax Act (Elektrizitätsabgabegesetz F.L.G. No. 201/1996 as amended by F.L.G. I Nr. 108/2022); see however § 7 (10) Electricity Tax Act.
[102] § 76 (5) REEA.
[103] § 80 (1) REEA.
[104] § 80 (2) REEA.
[105] § 72 REEA.
[106] § 72a REEA.

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participate in any REC that reaches this particular contractually advantageous agreement; rather, such a REC must be formed in the respective local or regional area. If this is not the case, participation will be difficult for some groups.

4.2 Bulgaria

4.2.1 Gender Mainstreaming

Bulgaria's ratification of nearly all key international treaties related to the promotion of gender equality[107], including the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), has provided a major impetus for the establishment of gender mainstreaming in the country. In the context of the process of accession of Bulgaria to the EU in the 2000s, significant domestic legal transformations took place which further developed and strengthened the legal basis for achieving equality between women and men, including through gender mainstreaming approaches to law- and policy-making.[108] The principles of gender equality and non-discrimination on the grounds of gender are enshrined in the Constitution of the Republic of Bulgaria (1991).[109] The main legal and strategic documents outlining the state's approach to gender mainstreaming are the Law on Equality between Women and Men (of 2016) and the National Strategy for Promoting the Equality of Women and Men (2021-2030).[110]

The Law on Equality Between Women and Men sets out the normative and institutional framework for the formulation and implementation of national policy in the area of gender equality.[111] The Law establishes the principles which are to underpin state policy concerning gender equality promotion, namely equal opportunities, equal access, equal treatment, balanced representation and opposing gender stereotypes.[112] It also stipulates that state institutions, local self-governance authorities, public entities and business organizations must undertake measures to apply those principles.[113] In addition, it is laid down that the principle of gender equality is to be incorporated in legislation as well as all national-, regional- and local-level policies, strategies, programmes and plans.[114] Coordination - when it comes to gender mainstreaming - is the responsibility of the Bulgarian Ministry of Labour and Social Policy (MLSP) and the National Council on Equality between Women and Men (with the Council of Ministers).[115] It ought to be highlighted, however, that the Law contains no provisions providing for enforcement or sanctions.[116]

[107] It is important to note that the country has signed the Istanbul Convention but has not yet ratified it.
[108] https://eige.europa.eu/gender-mainstreaming/countries/bulgaria (accessed 25.10.2022).
[109] Конституция на Република България [Constitution of the Republic of Bulgaria] (1991), Art. 6(2), (accessed 07.09.2022): https://www.parliament.bg/bg/const.
[110] Other key pieces of legislation for the promotion of gender equality more generally are the Law for Protection against Domestic Violence (of 2009) and the Law on Protection from Discrimination (of 2004).
[111] Закон за равнопоставеност на жените и мъжете [Law on Equality Between Women and Men] (2016), (accessed 07.09.2022): https://www.lex.bg/bg/laws/ldoc/2136803101.
[112] Ibid, art. 2.
[113] Ibid, art. 3.
[114] Ibid, art. 4.
[115] Ibid, art. 6.
[116] See note 108 above.

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The National Strategy for Promoting the Equality of Women and Men (2021-2030) identifies the objectives, priority areas of action, responsible entities, and implementation indicators concerning state policy in the area of gender equality promotion.[117] As the most significant policy document concerning gender mainstreaming, the Strategy emphasises the unified, horizontal and long-term character of state policy in that area.[118] It recognises that 'All governance policies and related challenges have a gender dimension. To achieve the goal of equality between women and men in Bulgaria, it is essential to incorporate gender-related aspects in all policies and implement specific measures, when necessary'.[119] The Strategy explicitly mentions 'mainstreaming' – defining it as 'an integrated approach for equal treatment of women and men' – and states that it is to be applied together with 'targeted measures in those areas where there is inequality' ('targeting').[120]

4.2.2 National Energy Laws and the Clean Energy Package

In Bulgaria, gender mainstreaming is yet to be carried out in the field of energy law (see also 4.2.3). No gender-related statements are to be found in the main national energy-related laws and strategic documents - the Energy Act (of 2003)[121], the Energy Efficiency Act (of 2015)[122], the Energy from Renewable Sources Act (of 2011)[123], the Strategy for Sustainable Energy Development Until 2030 With Horizon to 2050[124], the Integrated National Energy and Climate Plan (2021-2030)[125], the latest National Energy Efficiency Action Plan (2014-2020)[126], and the latest National Renewable Energy Action Plan (2010-2020).[127] It is only the National Climate Change Adaptation Strategy and Action Plan 2030 that mentions the word 'gender' – in the context of acknowledging that the

[117] Национална стратегия за насърчаване на равнопоставеността на мъжете и жените 2021-2030 г. [National Strategy for Promoting the Equality of Women and Men (2021-2030)] (2021), (accessed 07.09.2022): https://www.mod.bg/bg/doc/ravnopostavenost/20210119_National_strategy_2021-2030.pdf.
[118] Ibid, p. 7.
[119] Ibid, p. 24.
[120] Ibid, p. 24.
[121] Закон за енергетиката [Energy Act] (2003), (accessed 07.09.2022): https://lex.bg/laws/ldoc/2135475623.
[122] Закон за енергийната ефективност [Energy Efficiency Act] (2015), (accessed 07.09.2022): https://www.dker.bg/uploads/normative_docs/zakon_za_energiinata_efektivnost.pdf.
[123] Закон за енергията от възобновяеми източници [Energy from Renewable Sources Act] (2011), (accessed 07.09.2022): https://www.dker.bg/uploads/normative_docs/zakon_za_energiata_ot_vi.pdf.
[124] Стратегия за устойчиво енергийно развитие на Република България до 2030 г. с хоризонт до 2050 г. [Strategy for Sustainable Energy Development Until 2030 With Horizon to 2050] (2021), (accessed 07.09.2022): https://www.strategy.bg/PublicConsultations/View.aspx?lang=bg-BG&Id=5872.
[125] Интегриран план в областта на енергетиката и климата на Република България 2021-2030 г. [Integrated National Energy and Climate Plan (2021-2030)] (2020), (accessed 07.09.2022): https://www.me.government.bg/files/useruploads/files/national_energy_and_climate_plan_bulgaria_clear_22.02.20.pdf.
[126] Национален план за действие по енергийна ефективност 2014-2020 г. [National Energy Efficiency Action Plan (2014-2020)] (2014), (accessed 07.09.2022): http://www.seea.government.bg/documents/NPDEE_2017.pdf.
[127] Национален план за действие за енергията от възобновяеми източници 2010 – 2020 г. [National Renewable Energy Action Plan (2010-2020)] (2013), (accessed 07.09.2022): https://www.me.government.bg/bg/themes/nacionalen-plan-za-deistvie-za-energiyata-ot-vazobnovyaemi-iztochnici-1187-0.html.

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effects climate change has on citizens may vary depending on individual social characteristics, such as gender.[128]

4.2.3 Energy Communities

The role of energy citizens – acting either individually as prosumers or collectively in energy communities - is barely supported by the existing legislative and strategic policy documents.[129] For example, the Integrated National Energy and Climate Plan (2021-2030) proposes no specific measures through which the state provides support to prosumers and energy communities and lifts the legal and administrative barriers to their operation.[130] To this day, there are no renewable energy communities in Bulgaria.[131] While national law does not restrict the possibilities for citizens to set up such associations,[132] there is no legal definition of renewable energy communities and prosumers and no legal framework for their establishment.[133] One of the main reasons for this legal situation has been the considerable delay[134] in the national transposition of the RED II.[135] The implementation of the RED II Directive would be an all-important first step towards setting up a comprehensive legal and policy framework for renewable energy communities in the country. National transposition measures would need to include legal reforms which would bring energy-related laws, bylaws and ordinances in line with the provisions of the RED II Directive. The challenges and critical loopholes that need to be addressed include: formulating a legal definition of prosumers and energy communities; laying down clear rules and procedures regarding how individual prosumers and energy communities may join the grid; and establishing one-stop shops to provide administrative support.[136]

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[128] Национална стратегия за адаптация към изменението на климата и План за действие до 2030 г. [National Climate Change Adaptation Strategy and Action Plan 2030] (2019), p. 20, (accessed 07.09.2022): https://www.strategy.bg/StrategicDocuments/View.aspx?lang=bg-BG&Id=1294.

[129] Benov, M. (Speaker), Енергийна бедност и енергийна ефективност – възможна ли е промяна? [Energy Poverty and Energy Efficiency – Is Change Possible?] (Audio podcast) (Nov 2021), Bulgarian National Radio (BNR) news, (accessed 07.09.2022): https://bnr.bg/post/101551645/mincho-benov.

[130] Center for the Study of Democracy (CSD), (2018). 'Development of Small-Scale Renewable Energy Sources in Bulgaria: Legislative and Administrative Challenges', (accessed 07.09.2022): https://csd.bg/publications/publication/development-of-small-scale-renewable-energy-sources-in-bulgaria-legislative-and-administrative-chal/.

[131] Maneva, R. (2022). 'Legal Analysis of Renewable Energy Communities and Opportunities for Their Development in Bulgaria', Greenpeace, (accessed 07.09.2022): https://www.greenpeace.org/static/planet4-bulgaria-stateless/f7322930-praven-analiz-energiini-obshtonsti-2020.pdf.

[132] Ibid, p. 4.

[133] T. Couture, T. Stoyanova, and T. Pavlov, (2021). 'Scaling-up Energy Communities in Bulgaria' (2021), E3 Analytics, (accessed 07.09.2022): https://www.e3analytics.eu/project/scaling-up-energy-communities-in-bulgaria/.

[134] The transposition deadline was June 30, 2021. As of 2021, the European Commission had sent a letter of formal notice to the Bulgarian authorities but had not yet referred the case to the Court of Justice of the European Union. Source: Renewables Now, 'EC Urges Bulgaria to Transpose Revised EU Rules on Renewable Energy' (2021), (accessed 07.09.2022): https://renewablesnow.com/news/ec-urges-bulgaria-to-transpose-revised-eu-rules-on-renewable-energy-764039/.

[135] See note 130 above.

[136] Center for the Study of Democracy (CSD) (2020). 'Mapping Policy Options for Renewable Energy Communities in Europe', Policy Brief No. 93, (accessed 07.09.2022):

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Meanwhile, one of the previous interim governments included in the National Recovery and Resilience Plan some short-term green solutions, such as stand-alone house energy efficiency measures, the decentralisation of the energy system through the introduction of net-metering, possibilities for energy sharing between neighbouring buildings and properties, investments in grid-connected energy storage systems, as well as the support of small-scale RES projects by allocating 25% of the budget of each tender to installations below 5 MW.[137] The previous Bulgarian parliament also passed this summer legislation simplifying the rules for the generation of solar electricity for own use. The legislation foresees the installation of solar panels on the rooftops or facades of buildings or properties in urban areas, increasing the cap for total potential installed capacity to 5 MW from 1 MW.[138]

These are all steps towards the decentralization and democratization of the energy system in Bulgaria, however, the changes are insufficient and at a very low pace to keep up with the energy developments in the other EU Member States.

4.3 Germany

4.3.1 Gender Mainstreaming

In Germany, the influence of policy-making that was initiated in the EU arena is evident if one understands the history behind the institutionalization of gender equality in the country. The Basic Law of the Federal Republic of Germany of 1949 (Grundgesetz, GG) entails the German constitution and ensures the principle of gender equality by Article 3 II GG. Since 1990 and the reunification of the state, the Basic Law guarantees the right to equality for all citizens and Article 3 II GG specifically refers to gender equality between men and women which requires Germany as a state to promote and ensure gender equality. This can be seen in the most recent addition to the mandate of gender equality in 1994 which states: 'The state promotes the effective implementation of equal rights for women and men and works to eliminate existing disadvantages'. A more diverse approach beyond the male-female binary on Gender has not been developed yet.

German constitutional law states the commitment of the state to implement efficient and effective policy following the principle of gender equality. As aforementioned, the Basic Law which ensures gender equality states that 'men and women are equal however, in Article 3, section (2) in the Basic Law, the state is obligated to work towards the elimination of existing gender inequalities and disadvantages. The principle of gender mainstreaming in Germany is a tool that has been enshrined in official laws and policies in all ministries at federal and regional/local levels according to the European Institute for Gender Equality (EIGE).

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https://csd.bg/publications/publication/mapping-policy-options-for-renewable-energy-communities-in-europe/. https://3e-news.net/bg/a/view/27558/georgi-samandov-predizvikatelstvo-pred-bylgarija-e-organiziraneto-na-energijni-obshtnosti (accessed 07.09.2022).

[137] Национален план за възстановяване и устойчивост на Република България [National Recovery and Resilience Plan] (2022), https://www.nextgeneration.bg/14 (accessed 13.09.2022).

[138] https://www.capital.bg/biznes/energetika/2022/05/26/4342703_kakvi_sa_stupkite_za_izgrajdane_na_fotovoltaichna/ (accessed 13.09.2022).

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It is important to highlight at this point that gender mainstreaming is not always implemented. As a strategy, it is regulated by Article 2 of the Joint Rules of Procedure of the Federal Ministries (Gemeinsame Geschäftsordnung der Bundesministerien - GGO), which states that: 'Equality between men and women is a consistent guiding principle and should be promoted by all political, legislative and administrative actions of the Federal Ministries in their respective areas (gender mainstreaming)'. Therefore, what is mentioned above implies that gender mainstreaming should be ensured, valued, and respected at all levels (national and regional) and in all political activities (e.g., agenda-setting and administrative settings). The gap in implementation is therefore linked to the policymakers themselves, who often disregard gender as they seem to not recognize the linkage between their field of policy and the principles of gender equality. It is unfortunate to mention that there is no actual plan for gender mainstreaming within the German context and the state seems to have failed to meet its obligations. However, the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) has recently (2020) published a gender equality strategy and a gender assessment for policy making (only German available: gleichstellungsstrategie.de and the so-called 'Arbeitshilfe gleichstellungsorientierte Gesetzesfolgenabschätzung'- meaning a 'working aid on gender impact assessment of policies. It is supposed to be used by all governmental bodies; however, it is not clear whether this is currently mandatory.

Gender mainstreaming history in the German context

In Germany, the gender equality policy is based on the Basic Law, and more specifically on Article 3 (section 2) which creates the preconditions of equal gender treatment in the country. In addition to the Basic Law which is explained in the section above, the gender equality principle is enshrined in many other laws, which are as listed below:

- the General Equal Treatment Act of 2006 (Allgemeines Gleichbehandlungsgesetz – AGG) focusing on discrimination in employment,
- the Federal Body Composition Act of 2015 (Bundesgremienbesetzungsgesetz – BGremBG),
- the Act to enforce equality between women and men in the federal administration of 2001 (Gesetz zur Durchsetzung der Gleichstellung von Frauen und Männern in der Bundesverwaltung – DGleiG) and
- the Federal Equality Law of 2015 (Bundesgleichstellungsgesetz – BGleiG).
- In addition, Germany conducted its first Gender Equality Report in 2011 entitled 'New pathways - Equal opportunities. Gender equality over women's and men's life course[139] (*Neue Wege - Gleiche Chancen. Expertisen zum Ersten Gleichstellungsbericht der Bundesregierung*) and the second one in 2017 entitled 'New ways of restructuring paid work and (unpaid) care work'[140]. Both reports underline the importance of gender mainstreaming as a tool and strategy for gender equality and they show progress, yet they highlight some structural

[139] https://www.gleichstellungsbericht.de/kontext/controllers/document.php/60.3/0/882dd1.pdf (accessed 20.10.2022).
[140] https://www.gleichstellungsbericht.de/kontext/controllers/document.php/61.6/1/c88f13.pdf (accessed 20.10.2022).

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problems with the implementation of gender mainstreaming. More specifically, the report conducted in 2017 presents new challenges that should guide gender equality policymaking (e.g., gender equality in digital work, intimate partner violence, the effects of the increased rate of refugees and migrants since 2015, etc.). In July 2020, the first German Gender Equality Strategy[141] was published which aligns thematically with the two gender equality reports from 2011 and 2017. The aim of the Federal Government, with the publication of the German Gender Equality Strategy in 2020, was to enlist nine goals to address gender inequality in-depth and its issues everywhere, starting with different social sectors with specific measures that need to be taken for Germany's path towards gender equality to be reached.

4.3.2 National energy laws and the Clean Energy Package

It is essential to consider two important domains in the energy sector in Germany. The first one refers to power and decision making and the second one concerns public resources and infrastructure. Regarding the first domain, in the case of Germany, women are undoubtedly underrepresented. The energy sector is widely male-dominated, as women hold 41% of the ministries and 33% of the seats in the federal parliament according to a study presented by EIGE (2021)[142]. In another recently conducted study by PwC (2022), the share of female executives in the energy sector is 15.5% and 6% of CEOs in Germany. Therefore, it becomes clear that there are gendered differences in the energy sector and there is a significant underrepresentation of women in economic power and decision-making positions.

In regards to the second domain which refers to public resources and infrastructure, women in Germany account for 8.4% of agricultural holders which has an impact on their participation in the energy transition, since they are most often excluded. Power imbalances in decision processes reflect the negligence of the needs of women in projects. In addition, the gender pay gap in the country is the highest within the EU, however, it decreased in 2020[143]. Similarly, the gender care gap in Germany puts a burden on women.

Germany is well known for its bottom-up movement which is called 'Bürger*innenenergie' (citizen energy). This movement was initiated by another one, the so-called anti-nuclear movement in the country. Citizen energy is mainly based on the commitment of citizens in terms of their voluntary and professional engagement. It is essential to highlight that energy poverty has a strong economic dimension, and as aforementioned, the gender pay, and care gap creates challenges for women and can prevent them and members of the LGBTQIA+ community and all affected to escape from violent environments due to lack of economic independence[144].

[141] https://www.gleichstellungsstrategie.de/rgs-en.
[142] EIGE (2021). Gender Equality Index - Germany. Retrieved from European Institue for Gender Equality: https://eige.europa.eu/gender-equality-index/2021/domain/power/DE.
[143] "Gender pay gap 2020: women earned 18% less than men," DESTATIS Statistiches Bundesamt, Press release from March 09, 2021 (accessed 19.10.2022).
[144] Shreeves, R. and Prpic, M. (2020). Violence against women in the EU: State of play, 2.

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This makes it clear that there are significant gendered differences, energy intersects with other dimensions as gender is a cross-cutting concept. Regarding gender mainstreaming in the field of Energy Law, Germany appears to lack a gender-responsive energy policy at any level and there is no sex-disaggregated data on energy poverty yet.[145] All German policies fail to address the specific needs and challenges that women are facing in the context of energy poverty, although this was a priority highlighted in the German Gender Equality Strategy in 2020. The German National Energy and Climate Plan (NECP) does not refer to a gendered approach or gender equality, therefore no gender-transformative measures are presented in the national plan.

Energy and national climate change mitigation policies are now in the hands of the Ministry of Economy and Climate Protection (BMWK), and the Foreign office is in charge of international climate policy (both Green Party). As the latter is engaging in feminist foreign policy, chances are good that they support gender in international negotiations. The Ministry of Environment, formerly in the hands of SPD, had developed a gender strategy and learned a lot about gender during the last years, but in terms of climate change, they are now only in charge of adaptation. The BMWK that is in charge of mitigation does not have – to our knowledge – a gender strategy and does not apply gender mainstreaming so far. This issue creates additional problems as the gender and energy nexus should be approached in an intersectional manner.

The integration of gender into energy policy could potentially be achieved by the implementation of a tool called 'Gender Impact Assessment' (GIA) which was developed to strengthen a gender-just perspective within the German Climate Protection Programs[146]. In addition to the GIA developed by the BMFSFJ, it offers an approach that has been adapted specifically to gender just climate policy making.

4.3.3 Energy Communities

Over the past 20 years, renewable energy communities have been founded in numerous communities in Germany. Citizens participate as co-owners in the renewable generation plants and directly contribute to the development of renewable energies locally. In general, citizens receive interest in their investments, which used to be profitable under the previous feed-in tariff system, but those have been amended several times, which now results in less favourable conditions. With Energy Sharing, a new market framework is being created, with which members of renewable energy communities can sell their generated electricity jointly under certain conditions in the community through the regional distribution grid at a reduced price[147].

The ED 2019 and the RED II, two directives of this legislative package address central regulations on collective energy supply and energy communities and explicitly call for decentralized energy generation and consumption by private actors to be enabled and promoted. So far, Germany has not transposed these EU requirements into national law,

[145] Habersbrunner, K. and Martschew, E-C. (2020). Report on gender aspects of existing financial schemes.
[146] Gotelind, A. et al. (2021). How to make Germany's climate policy gender-responsive. 10.4324/9781003052821-5.
[147] Bündnis Bürgerenergie (2021). Konzeptpapier Energy Sharing: Partizipation vor Ort stärken & Flexibilität aktivieren.

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thus putting the brakes on new business models and innovations. In particular, the required energy sharing - the joint consumption of self-generated electricity in one's communal facilities using the public power grid - is virtually impossible in Germany. The current individual self-supply and the tenant electricity model do not offer nearly enough incentives to consume renewable electricity on-site, and they are also not sufficient as incentives for new producer-consumer communities[148].

The concept of Energy Sharing is a promising approach to support the further spread of renewable energies through increased acceptance: Citizens can co-finance wind or solar power plants in their neighbourhood and purchase the produced electricity themselves at a reduced price. On a small scale, this already works with photovoltaic systems in single-family homes. If more people are given this opportunity and join communities, they can also achieve more on a large scale. However, the existing structures and legal framework for promoting renewable energies do not currently provide for this.

The German Citizen Energy Alliance (BBEn) describes a possible design of Energy Sharing. On this basis, the Institute for Ecological Economy Research (IÖW) has now compiled this potential study for Energy Sharing on behalf of BBEn[149].

It shows that the potential for Energy Sharing is enormous: More than 90% of all households in Germany could benefit from electricity from their own power plants. Assuming that members of the renewable energy communities contribute a large part of the equity capital, as proposed in the BBEn concept, this would result in investments of 6.5 billion to 12.8 billion euros. Each member would thus contribute an average of about 100 to 200 euros to the plants.

It also was shown that energy sharing is economically feasible for renewable energy communities. In addition, the general public benefits, if the legal framework stimulates the system-serving expansion and system-serving consumption, this can reduce grid expansion costs in the future and reduce the dependence on raw material imports. In the proposed concept, it becomes clear that the type of renewable energy generation technology within the renewable energy community has a major impact on economic efficiency. This should be taken into account when designing the regulatory framework.

The European Union has already enshrined energy sharing in the Renewable Energy Directive (Article 22) in 2019 with an implementation deadline of mid-2021. Even if belatedly, it is only logical that at least the new German government has stipulated the implementation of energy sharing in the coalition agreement. The regulatory framework must now be created so that renewable energy communities can form and operate economically. Moreover, renewable energy communities should be able to use the power

[148] Deutsche Energie-Agentur (2022). Energy Communities: Beschleuniger der dezentralen Energiewende.

[149] Wiesenthal, J. (2022). Energy Sharing - Eine Potenzialanalyse. Gemeinschaftlich Strom im Verteilnetz erzeugen und nutzen: Eine Studie zum Umsetzungsvorschlag im Rahmen von Artikel 22 der Erneuerbare-Energien-Richtlinie der EU. Online available: https://www.ioew.de/projekt/energy_sharing_eine_potenzialanalyse.

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grid and receive a financial advantage if they consume self-generated electricity from 'their' plant simultaneously and regionally.

4.4 Greece

4.4.1 Gender Mainstreaming

In Greece, the principle of equal treatment and gender equality was established by the 1975 National Constitution. In particular, Article 4, para. 1 (Greek Constitution, 1975) establishes a general principle of equality 'Greeks are equal before the law'. This constitutional principle is supplemented concerning gender relations as follows: 'Greeks men and women have equal rights and obligations'. With the country's entry into the EEC, however, and especially during the period 1981-1989, laws were enacted to eliminate discrimination against women[150] (Law 1286/1982, Law 1329/1983, Law 1558/1985, Law 1835/1989). In the 2001 revision of the Constitution a new wording was introduced, Article 116 par. 2, which states 'The adoption of positive measures to promote equality between men and women shall not constitute discrimination on grounds of sex'. The State shall ensure the elimination of inequalities, which exist in practice, particularly to the detriment of women' (Greek Constitution 2001).

In the first part of Law 4604/2019, 'Promotion of substantive gender equality, prevention and combating gender-based violence', article 2 defines gender mainstreaming as 'Gender mainstreaming: the strategy for achieving substantive gender equality, which involves integrating a gender perspective into the preparation, design, implementation, monitoring and evaluation of policies, regulatory measures and spending programmes with a view to promoting equality between women and men and combating discrimination'.

For the first time, an independent institutional framework for gender equality and the elimination of discrimination against women is enacted, which is governed by a comprehensive view of gender relations and without treating the female gender as a 'special category', as is currently the case with the provisions and regulations of family and labour law, social security law, Community directives and international agreements. This law identifies the institutions and mechanisms for the implementation of the principle of equal treatment between the sexes, which is incorporated into public policies and private life and provides for the creation and organisation of a network of permanent structures for the prevention and treatment of violence against women.[151] Although the law under consideration attempts to approach the issue holistically, including all possible aspects of the lives of people affected by their gender, it is also criticised on the basis that most of the provisions are vague and while most of the measures proposed are important and necessary, neither the way nor the timeframe in which this is to be enacted is specified.[152]

In addition, the National Action Plan 2021-2025 for Gender Equality has been created, which includes a series of horizontal interventions across the whole range of public policy

[150] Law 1286/1982, Law 1329/1983, Law1558/1985, Law 1835/1989.
[151] Mousi, E. (2021). The promotion of the essential gender equality in the Greek Public Administration under current legislative developments.
[152] Natsi, D., and Papa, T. (2019). Legislative Approach of Gender Discrimination in Greece.

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and specific vertical policies targeting women and men in the areas where inequalities are identified. The combination of the two strands of interventions follows the strategy for promoting gender equality as established in the 1995 UN Beijing Platform for Action and the European Commission's Notice on Gender mainstreaming (Ministry of Labour and Social Affairs, 2021).

4.4.2 National energy laws and the Clean Energy Package

In the Greek National Action Plan for Gender Equality 2021-2025 (NAP-GE)[153], in the chapter on the participation of government agencies in the formulation of sectoral policies for gender mainstreaming, the text related to the Ministry of Environment and Energy does not present specific actions but mainly general words concerning the promotion and support of women. More specific examples given relate to the mandatory participation of women in the Boards of Directors of its regulated entities and energy communities. However, as it is a more general document, the objectives relating to the public sector are equally relevant to this ministry and in terms of gender mainstreaming in the plan, there is priority axis 4: Gender mainstreaming in sectoral policies and objective 4.1, which contains several actions.

As regards the NECP that Greece has adopted, it sets targets on the renewable energy share, energy savings etc., however, no reference is made to gender mainstreaming issues or targets addressing specific issues in energy relevant to gender. NECP is a technical document which does not deal with gender equality issues yet the total lack of reference to gender issues and perspective is streaking. All references are made to the male person, and this is a point on which there could have been some provision (NECP, 2019).

Respectively, when looking at the National Plan for alleviating energy poverty, which is part of the NECP, there are no mentions of gender per se. In addition, the plan in general does not approach the matter through a 'gender' lens. What is important to observe, however, is that the plan refers to households and therefore refrains from specific mentions of any gender (YPEN, 2021)[154]. As a result, the text itself is not favouring any gender or prioritizing but includes all by referring to the general households which are essentially the direct target group of the plan.

As it was mentioned above, the Greek NAP-GE entails specific provisions pertaining to inclusion and gender equality in governmental and non-governmental texts. What is more, the European Parliament issued in 2018 guidelines pertaining to gender-neutral language i.e. language that does not refer to any gender norms therefore not promoting men or women but including the total LGBTQI+ community which has been adopted by many countries (European Parliament-GNL, 2018)[155].

Therefore, gender mainstreaming as such carries certain flaws as it promotes the equality of the two genders but is problematic in incorporating differentiation between the

[153] Kefi-Chatzichamperi, E., & Kamberidou, I. The National Action Plan for Gender Equality: Women, Sports and Military Institutions. European Journal of Physical Education and Sport Science. (accessed 25.10.2022), from http://dx.doi.org/10.46827/ejpe.v7i3.3959.
[154] YPEN. (2021). National Action Plan for the Alleviation of Energy Poverty. Ministry of Environment and Energy.
[155] European Parliament (2018). Gender-neutral language in the European Parliament.

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two. In summary, the Greek legislation does not insist on referring to genders but promotes inclusion by referring to 'households' and 'consumers' and hence adopts an approach free from discriminatory norms.

4.4.3 Energy Communities

Following the transposition of the RED II, Greece defined 'Energy Communities' under law 4513 in 2018. An 'Energy Community' is a cooperative aiming to promote the social and solidarity economy and innovation in the energy sector, to address energy poverty and promote sustainable energy production, storage, energy management, self-consumption, distribution and energy supply, as well as to enhance energy self-sufficiency and security.

Central elements of the law include:

- Locality is a necessary condition for the creation of synergies and partnerships for the implementation of energy projects to respond to local needs, utilise local renewable sources, disseminate benefits to energy communities' members and generate added value for the greater local communities.
- Insularity, in which special arrangements and privileges are introduced for the case of very small islands with a population below 3 100 people, to address issues such as the high cost per kWh as well as the environmental, economic and social issues raised by the use of conventional forms of potential production.
- The activation and enhancement of technological tools such as energy offsetting and virtual energy offsetting in particular to shield vulnerable consumers.
- Financial incentives and support measures mainly concern the development of renewable power plants, to exploit domestic potential with the involvement of local communities as defined in national energy targets. The criterion of locality translates into the obligation of at least 50% plus one of the members to relate to the place where the registered office is located. Financial incentives include an exemption from bidding procedures for projects up to 6 MW for wind farms and 1 MW for photovoltaics (PV). There is also an exemption from the obligation to pay the annual fee for the right to hold a power generation license and a reduced guarantee payment of 50% for participation in the auction-based subsidy scheme.

Problems spotted relevant to the energy communities' law:

- There is a lack of a package of measures, for financial support, particularly for the ECs with non-profit character and the ECs of collective energy offset. Even though RED II defines the necessity of the MS to establish mechanisms that will help ECs to access funding and information.
- Expensive and complicated administrative procedures continue to apply, despite their requirement guidelines for the introduction of simplified procedures for energy communities' RES projects.
- According to RED II, MS should carry out an assessment pointing out the barriers to the development of RECs in their territories. That assessment has not yet been utilized to map the challenges and difficulties and built a better legislative framework.
- Due to the issues phased by the ECs, the following phenomenon was observed in the Greek market: private investors, who had the know-how and/or access to the

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required funds, took advantage of the legislation for the energy communities to the detriment of authentic initiatives by local communities.

- As a reaction to the above phenomenon comes the new regulation that from 1/1/2022 each EC that has more than 60 members with 50 citizens, or a Local Government Organization as a member should participate in bidding procedures. The only exemption is for small ECs that can develop a maximum number of 2 PV projects and that the total capacity won't exceed 1MW and for the Special Program for the Development of Photovoltaic Systems in building installations. That means that in many cases the community projects will have to compete with private investors to secure subsidies and as seen above the inclusion of ECs in bidding processes has led many ECs out of the market.
- Looking at the geographical concentration of the energy communities in Greece, it is striking that out of the 409 ECs that have developed, no ECs are in the regions of North and South Aegean and the Ionian islands (ELECTRA ENERGY, 2020)[156]. That means that islands are facing some extra challenges compared to the mainland regions in the development of ECs. Such challenges could be the higher set-up costs of any project because of the difficulty in logistics etc. Another limitation might be the lack of space to develop a project that won't also impact the islands' geomorphology and nature, as the islands' main economic activity is in most cases tourism. Also, communities often don't have the technical capacity to develop renewable energy projects. Furthermore, there might be a lack of communication about the ECs potential, especially in the islands.
- Gender balance in energy communities: There is a dearth in regard to the presence of women in energy communities. According to ELECTRA ENERGY, 2020[157], 42% of the Energy Communities do not have a female member. Furthermore, only 34% and 17% of the Energy Communities have 1 and 2 female members respectively in their BoD, just 5% have 3 and only 1% of the total Energy Communities have 4 or 5 women in their BoD.

4.5 Italy

4.5.1 Gender Mainstreaming

As regards gender mainstreaming in Italy, it should be noted that there seems to not be an openly declared strategy but, several changes have occurred at the legal and political levels over the years. Historically, the development of gender politics in Italy began in the late 1950s with women's access to the right to vote in 1946. Moreover, gender equality is enshrined in one of the fundamental articles of the Italian Constitution (Article 3[158] and in Articles 37 and 51).[159] Other significant steps in the field of gender equality have been taken since the 1990s in relation to the need to implement EU directives (such

[156] ELECTRA ENERGY. (2020). Mapping of Energy Communities in Greece.
[157] ELECTRA ENERGY. (2020). Mapping of Energy Communities in Greece. http://electraenergy.coop/observatory (accessed 25.10.2022).
[158] Constitution of the Italian Republic, Fundamental Principles, Art. 3: Costituzione della Repubblica Italiana, Principi Fondamentali, Art. 3.
[159] Constitution of the Italian Republic, Part I, Rights and Duties of the Citizens, Art. 37: Costituzione della Repubblica Italiana, Parte I, Diritti e Doveri dei Cittadini, Titolo III, Rapporti Economici, Art. 37.
Constitution of the Italian Republic, Part I, Rights and Duties of the Citizens, Art. 51: Costituzione della Repubblica Italiana, Parte I, Diritti e Doveri dei Cittadini, Titolo IV, Rapporti Politici, Art. 51.

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as Directive 97/80/ EC on discrimination and Directive 2002/73/ EC on equal treatment in employment). In 2013, following numerous initiatives by women's organizations, measures were introduced for women's participation in the decision-making bodies of companies and administrations, the so-called '*quote rosa*' (literally '*pink quotas*', which means female quotas in Italian popular language) and leading politicians have committed themselves to greater participation by women in their governments.

To address the multiple dimensions of discrimination, the government announced in the PNRR (*Piano Nazionale di Ripresa e Resilienza*, National Recovery and Resilience Plan) the adoption of a National Strategy for Gender Equality 2021-2026, in line with the Strategy for Gender Equality 2020-2025 adopted by the European Commission. The strategy aims to improve the Gender Equality Index (see chapter 3.1.1) developed by the European Institute for Gender Equality (EIGE) by five points by 2026[160].

In addition, the 2022 Budget Law (Article 1, paragraphs 139-148, L. No. 234/2021) and the adoption of a National Strategic Plan for Gender Equality established an Interagency Steering Committee and a National Observatory for the Integration of Gender Equality Policies in the Department of Equal Opportunities.

More specifically, regarding the legal framework, the Italian legislation on gender equality is represented by the National Code for Equal Opportunities between Women and Men, adopted in 2006 (DL 198/2006). It organizes and harmonizes 11 laws on equal opportunities into a single text to regulate the promotion of equal opportunities for women and men in all areas of society. This code and the subsequent laws implemented the European Union directives on equal opportunities and equal treatment in employment: direct and indirect discrimination are defined and prohibited, and a network of equality advisors provides legal assistance to those who are subject to discrimination. However, effective actions to support motherhood in working women are still quite scarce and barriers to this are still present. For example, no effective actions seem to have been taken against the so-called 'blank resignation', which is the practice of employers hiring young women on the condition that they sign an undated letter of resignation that serves as justification for dismissal in the event of pregnancy.

As regards Italian institutional structures, the government agency responsible for gender equality is the Ministry of Equal Opportunities (MPO), which was established in 1997 under the chairmanship of the Council of Ministers. A National Commission for Gender Equality (established in 2006, Law 198), consisting of 26 members representing women's organizations and civil society organizations, works with the minister. At the local level, Equal Opportunities Committees (CPOs) have existed since 1988 in all public institutions (i.e., regional, provincial, municipal, universities, local units of the national health system, etc.). Their tasks vary widely. Some are limited to solving minor personnel problems, while others work for gender equality in society as a whole. The CPOs have been transformed (by Law 183/2010) into Unified Guarantee Committees (CUGs), which combine the old equality committees with committees for protection against bullying. Equality officers were created in 1991 at the regional and provincial levels to deal with cases of discrimination in the workplace, and since 2006 have been coordinated in a

[160] Italy currently ranks 14th in the EU-27. See: Institute for Gender Equality (EIGE): https://eur-lex.europa.eu/legal-content/IT/TXT/?uri=CELEX%3A52020DC0152.

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network led by the national equality officer. They work with labour offices and equality bodies to monitor the practical implementation of equality principles and can assist victims of discrimination in legal proceedings.

4.5.2 National energy laws and the Clean Energy Package

Energy laws in Italy do not contain specific aspects or explicit references to gender equality. However, as highlighted in the previous paragraph, among the major investments foreseen in the PNRR it is possible to identify some policies whose welfare effects could be particularly beneficial for women to restore gender balance. As mentioned earlier, the PNRR is a plan that, among other objectives, aims to facilitate the country's energy transition. In particular, the plan includes some policies that have a direct impact on the creation of jobs for women, as well as several policies that can be defined as 'enabling' in the sense that they provide for the creation of instruments or services that can have a direct or indirect impact on reducing gender inequalities in different areas of welfare, with a medium-term impact.

4.5.3 Energy Communities

Currently, Italian legislation on renewable energy communities consists of Article 42-bis of Decreto Milleproroghe (Literally 'Decree Thousands Extensions': it is the popular expression among Italian journalists to label a yearly legislative initiative granting deadline extensions on many administrative duties to all the citizens; it became a praxis in Italian legislation since the early 2000s), 162/2019 (converted by Law No. 8/2020 of February 28, 2020), the related implementing measures (the Resolution 318/2020/R/eel of ARERA and the DM September 16, 2020, of MiSE) and Legislative Decree 199/2021, which implements the European Directive RED II on the promotion of the use of energy from renewable sources.

In summary, in the Italian context, renewable energy communities are legal entities that: (i) are based on open and voluntary participation; (ii) are composed of natural persons or SMEs, local authorities, or local governments, including municipalities; (iii) are autonomous and effectively controlled by shareholders or members located in the vicinity of the renewable energy community's production facilities; (iv) the main objective is to bring environmental, economic or social benefits, and not financial profits to its shareholders, members or to the local areas in which they operate, at the community level. In addition, affiliates retain their rights as end users, including the right to choose their electricity supplier, and may leave the community at any time. Regarding the size, age and connection of the plants, the Legislative Decree No. 199/2021, which entered into force in June 2022, made less compelling the requirements for RECs by establishing the following guidelines:

- Renewable energy plants may have a total capacity not exceeding 1 MW and must be connected to the electricity grid through the same primary cabin (territorially equivalent to about 3-4 municipalities or 2-3 districts of a large city), on which all members of the energy community also insist;
- Renewable energy plants already existing at the time of the entry into force of Legislative Decree No. 199/2021 may also join the Energy Community, provided that they do not exceed 30% of the total power of the Community.

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The law does not explicitly mention the renewable energy technology to be used, but the one that is most suitable to take advantage of the measure is undoubtedly photovoltaic. To reward energy sharing in multiple-use configurations such as energy communities, the on-site exchange mechanism will be eliminated (temporarily) starting September 15, 2022, for new facilities outside of communities, and starting January 1, 2025, for facilities already in operation. The law does not explicitly mention gender or inclusion aspects.

4.6 Norway

4.6.1 Gender Mainstreaming

In Norway, women were given the right to vote in municipal elections in 1910 and national elections in 1913. The first law on citizenship in Norway from 1888 assumed marriage to be a communion between man and woman, where the man was the main person, and the citizenship, therefore, followed the man. A new law came in 1950, giving women the right to choose citizenship. Gender mainstreaming is included in the country's overall strategy for gender equality by the Act no 45 of June 9th, 1978, on Gender Equality. It has as its objective to promote equal status between the sexes and aims in particular at improving the position of women.[161] The act has a general clause about not treating women and men differently, and additional clauses addressing recruitment, equal pay, education, teaching aids, and access to associations. It further states that the King is to appoint a Gender Equality Council, a Gender Equality Ombud and a Gender Equality Board of Appeals that to a large extent are responsible for ensuring that the before-described Act is followed.

The Act on Gender Equality is one result of the women's movement in the 1970s, which became more organized and more specific in its demands for a more equal society. These demands were specifically directed towards topics related to childcare, equal pay for equal work, the right to safe and legal abortion, and political influence, to mention some.

4.6.2 National energy laws and their relation to EU energy policies

Energy is an important policy area for the EU, and many of the directives and regulations in this field have been integrated into the EEA Agreement[162]. Norway closely cooperates with the EU on energy issues and has incorporated EU energy legislation as part of the internal energy market through the EEA agreement (Energifakta Norge 2022[163]). In recent years, the scope of the legislation for the EU's internal energy market has widened. It has also been made more detailed, and more of a supranational legal framework has developed. The legislation influences Norway directly through the EEA Agreement. In addition, it indirectly influences Norwegian conditions through its effects on the European energy market, which is Norway's most important export market for oil, gas, and electricity.

[161] Norway. Act on Gender Equality, 1978. (accessed 25.10.2022) from http://www.ilo.org/dyn/natlex/docs/WEBTEXT/12790/64813/E78NOR01.htm.
[162] EEA Agreement | European Free Trade Association (accessed 25.10.2022) from https://www.efta.int/eea/eea-agreement.
[163] Energifakta Norge (2022) https://energifaktanorge.no (accessed on September 13th, 2022).

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The EEA cooperation now includes around 96 legal acts in the energy field (Energifakta Norge 2022). Most of the original directives and regulations have been replaced by new ones, and a number of recent legal acts are considered for incorporation into the EEA Agreement.

The Ministry of Petroleum and Energy is responsible for collaboration with the EU in the energy realm and is in regular contact with EU authorities through the EU-Norway Energy Dialogue. The Energy Dialogue was launched in 2002 and aims to foster cooperation with Norway on a broad range of energy issues, such as international energy, global energy supply and demand, policy developments in Norway and the EU, implementation of EU energy rules in Norway, cooperation on technology and carbon capture and storage.

Once a decision in the EEA Joint Committee has entered into force, Norwegian legislation must be brought into line with the EU legislation and the EEA Joint Committee decision. To do this, any necessary amendments to Norwegian legislation must be identified and a consultation must be held on the proposals. After this, the amendments and/or new regulations can be adopted. The intention to strengthen the EU-Norway energy cooperation has been recently stated in a joint statement in June 2022

To sum up, there is an agreement on the applicability of most of the European Energy Law, but not on the Clean Energy Package yet.

The Norwegian Law on production, transforming, transferring, turnover, distribution and use etc. of energy or The Energy Law[164] for short, has no specific mention of gender and there is no apparent gender mainstreaming carried out specifically in the field of energy law. The closest to a gender-related statement in the law is the use of the term 'non-discriminatory', which is applied on a couple of occasions. This does not necessarily imply that Norwegian legislation is gender inconsiderate. According to rankings[165] Norway together with the rest of the Nordic countries, is placed on top of the list for the 12th year in a row having closed more than 90% of its gender gap.

4.6.3 Energy Communities

The Renewable Energy Directive II has not been implemented in Norway yet.

In Norway, several real estate developers and grid companies want to let customers join together in local energy communities that own power production facilities, such as solar power plants and batteries. Developing infrastructure for electricity production and transmission or district heating plants and distribution networks can result in conflicts between the user and environmental interests during planning, construction, or operation. Conflicts may also arise in connection with water resource management, as it may impact biodiversity, landscapes, outdoor recreation, fishing, tourism, cultural heritage, local communities, reindeer husbandry and so on. In the legislation, these are often referred to generically as 'public interests'. Energy and river system projects may also affect private economic interests.

[164] Lov om produksjon, omforming, overføring, omsetning, fordeling og bruk av energi m.m. (energiloven) - Lovdata (no english version available).
[165] https://www.weforum.org/agenda/2022/07/gender-equal-countries-gender-gap/ (accessed 23.09.2022).

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On behalf of The Norwegian Water and Energy Agency (NVE), which is the authority regulating the power grid, the THEMA Consulting Group prepared a report that mapped planned local energy communities in Norway, as well as the potential, and barriers to development (THEMA 2018). According to the report, there is no need for immediate regulatory changes.

Norwegian energy legislation is intended to ensure that all stakeholders are heard and considered and that projects are subject to government control and conditions that safeguard different interests. Another important objective is to ensure effective management of resources. Security of energy supply and a well-functioning power market are key considerations here (Energifakta Norge 2022)[166].

There are private ownership interests in all parts of the power sector: production, grid operations and trading. Foreign ownership interests are relatively limited but increasing. Some foreign companies have been granted trading licences in Norway and there is a growing number of foreign stakeholders that have invested in Norwegian wind and small-scale power production. The establishment and operation of Local Energy Communities (LEC) are regulated by the legislation listed below. This is not a comprehensive list, but rather a summary of regulations that are most likely to pose a barrier to LECs and/or secure the rights of consumers (THEMA 2018)[167].

- Area licence
- Trading licence
- Market place licence
- Consumer protection legislation will also apply

Case Study: Small hydropower plants in Norway

Small hydropower plans are the most widespread type of local energy community. Licensing authority for small-scale hydropower projects has been delegated to the Norwegian Water Resources and Energy Directorate. Small-scale projects are defined as power plants that require a licence under the Water Resources Act and have an installed capacity of less than 10 MW, but that do not involve regulation of the rate of flow in a river exceeding the limit that triggers licensing requirements under the Watercourse Regulation Act. The procedures are simpler than those for large-scale projects, which also means that they can be processed more quickly.

In June 2007, the Ministry published guidelines for small hydropower plants. They describe how to draw up regional plans for small hydropower plants and how to ensure a comprehensive assessment of applications and make licensing procedures more efficient and predictable.

In 2008, the water resources legislation was amended to strengthen public ownership of Norway's hydropower resources. New licences for the ownership of waterfalls and licences to transfer already licensed waterfalls may now only be granted to public developers such as state-owned enterprises, municipalities, and county authorities. Licences may also be awarded to companies that are partly owned by state-owned enterprises or one or more municipalities or county authorities, provided that the public

[166] Energifakta Norge (2022) https://energifaktanorge.no (accessed 13.09.2022).
[167] THEMA (2018). THEMA-Report 2018-20 Descriptive study of Local Energy Communities (available on THEMA-Reort-2018-20-Local-Energy-Communities-Report-Final.pdf, accessed on September 13th 2022).

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sector holds at least two-thirds of the capital and the votes in the company, and the organisation clearly indicates genuine public ownership. In other words, private actors may own up to one-third of a company. Private actors may also own power production facilities that do not require a licence under the Industrial Licensing Act, such as wind and solar power installations and some small-scale hydropower installations.

On 1 January 2010, the licensing authority for power plants below 1 MW (mini and micro power plants) was delegated to the county authorities, except for projects in protected river systems. For power plants of between 1 and 10 MW, a study of biodiversity that may be affected by the development is required. Pursuant to the rules of the Planning and Building Act, public notice of the application is given in the local media, it is made available public inspection, and authorities, organisations and landowners that will be affected are consulted. After this, an on-site inspection of the area is held before a decision is made.

Decisions by the Directorate may be appealed. If the Directorate upholds its decision, the appeal is sent to the Ministry, which deals with it under the normal rules of the Public Administration Act. The Ministry's decision is final and cannot be appealed.

4.7 Switzerland

4.7.1 Gender Mainstreaming

Gender issues came late to Swiss law: women only obtained the right to vote at the federal level in 1971[168] and the principle of gender equality was written into law in 1981[169]. In 1988, the Federal Office for Gender Equality was created to compensate for the lack of constitutional resources on gender relations. This office is part of the Federal Department of Home Affairs and is responsible for promoting gender mainstreaming. In 2000, the Constitution was amended to formally prohibit gender-based discrimination[170]. National stakeholders like the Federal Office for Gender Equality, political and business leaders, voting citizens and citizen movements[171] have spearheaded gender mainstreaming in Switzerland, influenced by international organizations such as the United Nations (with its headquarters in Geneva), the Council of Europe, and the European Union.[172] Nevertheless, Switzerland still lags behind other European

[168] Thommen, M. (ed.) (2022). Introduction to Swiss Law. https://doi.org/10.38107/026, Zurich, Switzerland:sui generis Verlag.
[169] Swiss Federal Constitution of 18 April 1999 (a1981), Art 8. Equality before the law. Karin Gottschall, Brigitte Liebig, et Birgit Sauer, éd., Gender Equality in Context: Policies and Practices in Switzerland (Opladen, Germany ; Toronto: Barbara Budrich Publishers, 2016).
[170] Giraud, O., and Lucas, B. (2009). Le renouveau des régimes de genre en Allemagne et en Suisse: Bonjour 'néo maternalisme' ?: Cahiers Du Genre, n° 46(1), 17–46. https://doi.org/10.3917/cdge.046.0017.
[171] https://www.helvetia-vous-appelle.ch/fr (accessed 25.10.2022).
[172] Gottschall, Liebig, et Sauer, Gender Equality in Context; Durrer, Sylvie. Exchange with the Special Rapporteur on the Right to Development Bern, 24 September 2019, Office of the High Commissioner on Human Rights, available at https://www.ohchr.org/sites/default/files/Documents/Issues/Development/SR/visit-to-switzerland/foge_GE.pdf , last accessed 19 September 2022. World Economic Forum, Global Gender Gap Report 2021, Insight Report, March 2021: 34. Available at https://www.weforum.org/agenda/2021/03/switzerland-global-gender-gap-parity/, last accessed 19 September 2022.

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countries. Gender gaps in education, pay and political and private sector leadership remain considerable.[173]

4.7.2 National energy laws and their relation to EU policies

Gender mainstreaming is not written into energy law, nor the key strategy and policy documents. The Office for Gender Equality reports on Switzerland advocating for recognition that women are most often affected by the adverse effects of climate change in international development circles[174], but domestically the mainstreaming of gender is not explicit. It may be that the system of direct democracy - so core to the Swiss national identity and important for energy policy and transition actions in the country - leads to assumptions being made that gender mainstreaming is unnecessary or happening as part of the overall political process. The connection between gender and energy law remains poorly defined, and past research and policy on energy and energy transitions have been seen as gender-neutral in industrialised countries, including Switzerland.[175] However, this assumption is not holding up some suggestions of a potential gender divide in private investment in renewable energy in Switzerland[176]. Data gaps remain an obstacle to investigating the role played, if any, by gender in energy equity.

In Switzerland, public policy decisions are taken by the electorate both at the top and bottom levels of the political system, including financial management and large public investments. Decisions taken by legislators must be approved by the electorate through referenda; and the electorate can also generate decisions to be voted upon (through popular initiatives and optional referendum, Article 141 Constitution). It is also worth noting that while Switzerland is a model for deliberative democracy, there are challenging aspects to current procedures for equity and inclusion. A major focus in Swiss gender equality includes achieving equality in political decision-making and political representation. Moreover, the emphasis on direct voting is insufficient in a country where resident tax-paying foreigners can not partake in most political processes: 25%[177] of the national population cannot express themselves directly at the Federal ballot box on the subject of the energy transition. Finally, many initiatives more often do not reach beyond the consultation rung of the ladder (Arnstein, 1969[178]); and where citizen input is sought and encouraged, reflections are considered and then accepted or rejected by state councils (Forum Citoyen procedures).

A legal framework for Swiss-EU electricity cooperation does not currently exist, though one has been under negotiation since 2007. The Swiss transmission network connects

[173] Gottschall, Liebig, et Sauer, Gender Equality in Context.
[174] UN Commission on Status of Women: Switzerland calls for greater involvement of women in combating climate change. (accessed 25.10.2022) from https://www.ebg.admin.ch/ebg/en/home/the-foge/nsb-news_list.msg-id-87590.html.
[175] Clancy, J., and Roehr, U. (2003). Gender and energy: Is there a Northern perspective? Energy for Sustainable Development, 7(3), 44–49. https://doi.org/10.1016/S0973-0826(08)60364-6.
[176] Ebers Broughel, A., Hampl, N. (2018). Community Financing of Renewable Energy Projects in Austria and Switzerland: Profiles of Potential Investors., Energy Policy 123, 722-36, https://doi.org/10.1016/j.enpol.2018.08.054.
[177] Thommen, M. (ed.) (2022). Introduction to Swiss Law. Zurich, Switzerland: sui generis Verlag. https://doi.org/10.38107/026.
[178] Arnstein, S. R. (1969). A Ladder Of Citizen Participation. Journal of the American Institute of Planners, 35(4), 216–224. https://doi.org/10.1080/01944366908977225.

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Switzerland to the power markets in Germany, France, Italy and Austria. These countries are currently seeking to increase solar and wind generation in their respective power systems. As these renewables are non-dispatchable, there is a substantial opportunity to leverage Switzerland's hydro-storage potential to compensate for the variability of renewable-generated electricity.[179] There is considerable uncertainty to be managed if this potential is to be realized, however, including geopolitical events impacting energy sourcing and policy, unpredictability in energy markets undergoing transitions, and new climate trends. An agreement would grant Switzerland full access to the EU electricity market. It would also require implementing some elements of the EU acquis, the body of common rights and obligations that is binding on EU member states. The adoption of an overarching institutional framework agreement related to energy governance as a precondition for an electricity agreement is the major barrier to progress. Swiss lawmakers are hesitant because this is considered a highly controversial ceding of authority, which risks being rejected by the Swiss public.

The particularity of the Swiss political system is the decentralisation of decision-making at sub-national (cantonal) levels[180] and procedures that allow citizens to both propose and oppose policies and projects by cantonal or federal authorities directly.[181] Domestic energy topics were not on the voting agenda for more than a decade, but since 2015 there have been 3 federal referenda[182] (including 2 popular initiatives). The Fukushima nuclear disaster also led to a wave of anti-nuclear sentiment in the country, leading to the Swiss energy strategy 2050. The latest Federal energy strategy was decided in 2017, following which the confederation and the cantons coordinate to take decisions in accordance with the framework of the energy transition (article 4. LEen)[183]. The current war in Ukraine and a particularly dry summer in 2022 are further game changers, as Switzerland relies on Russia for 40% of its gas and relies on hydropower for electricity.

Case study: A dispute over Genilac[184], the largest ecological thermal network in Geneva and the commune of Cologny - one of the wealthiest communes in the canton of Geneva[185], illustrates the scales at which decisions regarding energy transitions are made and unmade in Switzerland. The canton of Geneva had granted a construction

[179] Eser, P. et al. (2018). Trade-offs between integration and isolation in Switzerland's energy policy. Energy, 150, 19–27. https://doi.org/10.1016/j.energy.2018.02.139.

[180] For energy, Article 89 of the Federal Constitution assigns responsibility for measures concerning energy consumption in buildings to the cantons. from https://www.bfe.admin.ch/bfe/fr/home/politique/cantons-et-communes.html, last accessed 19 September 2022.

[181] Thommen, M. (ed.) (2022). Introduction to Swiss Law. Zurich, Switzerland: sui generis Verlag. https://doi.org/10.38107/026.

[182] Information available here: https://www.bfe.admin.ch/bfe/fr/home/politique/votations-federales-concernant-energie.html (accessed 19.09.2022).

[183] Loi sur l'énergie, § Chapitre 1 But, valeurs indicatives et principes (2016), https://www.fedlex.admin.ch/eli/cc/2017/762/fr.

[184] https://ww2.sig-ge.ch/actualites/genilac-le-plus-grand-reseau-thermique-ecologique (accessed 25.10.2022).

[185] https://statistique.ge.ch/atlas/#c=home.

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derogation for a project in accordance with the objectives set by the Confederation, yet the commune and its citizens were able to delay the project[186].

Despite not being an EU member, Switzerland has had an influence on European electricity governance, including the Clean Energy Package, primarily through technical policies related to grid interdependencies and stability and technical expertise of Swiss energy actors. Without an electricity agreement, Switzerland's influence will likely wane.

4.7.3 Energy Communities

The concept of auto-consumption was written into Swiss law in 2014[187] allowing small producers to consume and/or sell all or part of the energy generated (article 16 LEne)[188]. If several owners share the same production site, they can create a consumption pool called an RCP (*regroupement dans le cadre de la consommation propre*). The aim is for consumers to join and share self-generated electricity without having to go through the national grid. This provision is laid down in the Energy Act (article 16 LEne)[189], as well as in the Energy Ordinance (article 14 OEne)[190]. From a legal point of view, the RCP represents an end-consumer (article 18 LEne)[191]. However, the law and the ordinance do not stipulate the legal form that an RCP should take. It could be a legal person under contract or regulation or a contractual solution. All the regulations concerning RCPs are contained in the Energy Act in Chapter 3 and in particular in Article 17[192], which governs the relationship between landowners, and in the Energy Ordinance in Article 16[193].

Furthermore, the Energy Act regulates that when energy is self-consumed, it is not subject to additional charges such as network charges or taxes on electricity consumption. The absence of taxes is also a positive feature of network membership and confirms the results of some studies highlighting the economic considerations of RCPs.[194] In addition, according to the Electricity Supply Act (article 13, al. 1, LApEl)[195], it is important to note that the Swiss electricity market is partially liberalized. Large consumers with an annual consumption of more than 100 MWh can join the market, but the smallest consumers, alone, do not have access to the liberalized market. Full

[186] Olivier Ejderyan, Franziska Ruef, et Michael Stauffacher, Entanglement of Top-Down and Bottom-Up: Sociotechnical Innovation Pathways of Geothermal Energy in Switzerland , 2020, 24.
[187] Swissolar, Guide pratique de la consommation propre Version 2.2, juillet 2021 (Suisse énergie, Office fédéral de l'énergie OFEN, juillet 2021).
[188] Loi sur l'énergie, § Chapitre 3 Injection d'énergie de réseau et consommation propre (2016).
[189] Loi sur l'énergie.
[190] Ordonnance sur l'énergie, 730.01 § Section 2 Consommation propre: Art. 1525 Condition du regroupement dans le cadre de la consommation propre (2017).
[191] Loi sur l'énergie
[192] Loi sur l'énergie
[193] Ordonnance sur l'énergie
[194] Zapata Riveros, J., Kubli, M., & Ulli-Beer, S. (2019). Prosumer communities as strategic allies for electric utilities: Exploring future decentralization trends in Switzerland. Energy Research & Social Science, 57, 101219. https://doi.org/10.1016/j.erss.2019.101219
[195] Loi sur l'approvisionnement en électricité , § Section 2 Accès au réseau et rémunération pour l'utilisation du réseau (2007), https://www.fedlex.admin.ch/eli/cc/2007/418/fr.

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liberalization was supposed to take place in 2014 but has been postponed to a later date. The RCP system thus allows the community to access the network.[196]

Citizen participation is integral to the Swiss political system and seems to be viewed as a cornerstone in the transition by public policy strategies and initiatives.[197] RCPs are one way of encouraging private participation in the Swiss energy transition[198], though it should be noted that regional public-private utility companies that operate as quasi-monopolies[199] are expected to drive the transition.[200]

RCP schemes have emerged essentially because of a willingness and need to decentralize electricity production to meet renewable energy objectives in the 2050 Energy Strategy 2050.[201] RCPs are growing rapidly in part because citizens often do not have the freedom to install solar photovoltaic, heat pumps or other renewable production technologies where they live. The Swiss real estate market is exclusive and the proportion of tenants in Switzerland is high (approx. 60% of the Swiss population). Moreover, three-quarters of the population live in apartment buildings, often making the choice of auto consumption a collective one with the need for structures like RCPs.[202,203]

The RCP law does not appear to have any particular gender or other equity and inclusion component. Provisions in chapter 5 of the Energy Act allow for subsidies provided by the Confederation depending on the size of the installation. For example, 30% of the costs are covered for the smallest installations (<100kW). These do not seem to be framed with the goal of equity and inclusion, however. Gender is not mentioned.

[196] Swissolar, Guide pratique de la consommation propre Version 2.2, juillet 2021.
[197] ge.ch. https://www.ge.ch/teaser/geneve-transition (accessed 10.10.2022).
[198] Zapata Riveros, Kubli, et Ulli-Beer, Prosumer Communities as Strategic Allies for Electric Utilities.
[199] For example, the Services industriels de Genève (SIG) will be granted the management of the new cantonal heating network, making it the most important provider of electricity, gas and district heating in the region: Haeberli, David. 2 February 2022. Le futur monopole des SIG sur l'énergie thermique crée des inquiétudes. Available at: https://www.letemps.ch/suisse/futur-monopole-sig-lenergie-thermique-cree-inquietudes, (accessed 25.10.2022). Aumeunier, Christophe. 2 February 2022. Non au monopole des SIG pour le développement des réseaux thermiques structurants. Available at: https://immoscope-ge.ch/energie/non-au-monopole-des-sig-pour-le-developpement-des-reseaux-thermiques-structurants/ (accessed 19.10.2022).
[200] A side note: new large-scale infrastructure for renewable production through wind, solar and geothermal sources pursued by these types of firms are raising long-standing justice, equity and NIMBY discourses in Switzerland.
[201] Ebers Broughel, A., Hampl, N. (2018). Community Financing of Renewable Energy Projects in Austria and Switzerland: Profiles of Potential Investors., Energy Policy 123, 722-36, https://doi.org/10.1016/j.enpol.2018.08.054.
[202] https://autoconsommation.ch/collectifs/ (accessed 19.10.2022).
[203] Ebers Broughel, A., Hampl, N. (2018). Community Financing of Renewable Energy Projects in Austria and Switzerland: Profiles of Potential Investors., Energy Policy 123, 722-36, https://doi.org/10.1016/j.enpol.2018.08.054.

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4.8 Türkiye

4.8.1 Gender Mainstreaming

Even though there is no standard definition of gender mainstreaming in Turkish legislation, there have been numerous efforts to pursue gender mainstreaming policies, both at the civil and institutional levels. Türkiye's efforts concerning gender mainstreaming policies started with the approval of CEDAW (the Convention on the Elimination of All Forms of Discrimination Against Women) in 1985.[204] In line with CEDAW, the Directorate General on the Status and Problems of Women (KSGM) was founded in 1990 and had an organisational structure in 2004.[205]

Türkiye's status as a candidate country for EU membership has also influenced its gender mainstreaming policies. In this regard, the Turkish Constitution's Article 10, named 'Equality before the Law', was revised in 2004 in favour of gender equality via the addition of the following sentence: '*Men and women have equal rights, and the State is responsible for implementing these rights*'.[206]

Furthermore, with the guidance and financial support of the European Commission, KSGM presented the National Action Plan (NAP) Gender Equality 2008-2013. The NAP covered a variety of significant issues such as 'Women and Education', 'Women and Economy', 'Women and Health', 'Women and Power and Decision-making Processes' and 'Women Environment'.[207]

In another effort toward gender mainstreaming policies, the Parliamentary Committee on Equal Opportunities for Women and Men (KEFEK) was established in 2009. KEFEK held its first meeting in 2011.[208]

In 2015, the Turkish Parliament and civil society organisations cooperated with UN Women and the Inter-Parliamentary Union (IPU) on the 'Gender Equality in Political Leadership and Participation in Turkey' project.[209]

On the local level, several municipalities in Türkiye have also taken steps for gender mainstreaming. For instance, advocating for gender equality is regarded among the core values in Izmir Metropolitan Municipality's 2020-2024 Strategic Plan.[210]

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[204] Özkaleli, U. (2018) 'Intersectionality in gender mainstreaming: Equity organizing in Turkey', Journal of Women, Politics & Policy 39, no. 2: 127-150.
[205] https://www.resmigazete.gov.tr/arsiv/20498_1.pdf (accessed 14.09.2022); Koray, M. (2011) 'Avrupa Birliği ve Türkiye'de 'Cinsiyet Eşitliği' Politikaları: Sol-Feminist Bir Eleştiri', Çalışma ve Toplum no.2: 13-54.
[206] https://www.ab.gov.tr/files/pub/prt.pdf (accessed 14.09.2022).
[207] The Republic of Türkiye, Prime Ministry General Directorate on the Status of Women (2008) . National Action Plan Gender Equality 2008-2013. Available online: https://tandis.odihr.pl/bitstream/20.500.12389/20919/1/06469.pdf (accessed 13.09.2022).
[208] Türkiye Büyük Millet Meclisi, 2015. Kadın Erkek Fırsat Eşitliği Komisyonu Faaliyet Raporu. Available online: http://ceidizleme.org/ekutuphaneresim/dosya/749_1.pdf (accessed 14.09.2022).
[209] UN Women, 2016. UN Women, IPU and Turkish Parliament to enhance women's political participation. Available online: ,https://eca.unwomen.org/en/news/stories/2016/01/turkish-parliament-to-enhance-women-s-political-participation (accessed 13.09.2022) .
[210] İzmir Büyükşehir Belediyesi, 2020. İzmir Büyükşehir Belediyesi 2020-2024 Stratejik Planı. Available online: https://www.izmir.bel.tr/CKYuklenen/Dokumanlar_2020/Stratejik%20Plan2024.pdf (accessed 13.09.2022).

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4.8.2 National energy laws and their relation to EU policies

Currently, there are no specific regulations or guidelines regarding gender mainstreaming in Türkiye's energy legislation. However, there are references to gender mainstreaming in the Report on the Implementation of the 2030 Agenda for Sustainable Development prepared by the Turkish Ministry of Development. According to this report, promoting gender equality and empowering women are among Türkiye's Millennium Development Goals (MDG) targets.[211] Furthermore, events are organised at the ministry level, to raise awareness about the role of women and gender equality in the energy sector. For instance, the Turkish Ministry of Energy and Natural Resources organises the 'Women Energizing Türkiye' Award Program to draw attention to Türkiye's women energy leaders who continue their activities in the energy sector.[212] Apart from that, there have been efforts related to women's participation in the labour force, contributing to women's mainstreaming in the energy field.

Türkiye has also been involved in the EU Gender Equality Program and directed its Employment Strategies, as a candidate country.[213] Furthermore, within the context of Türkiye's National Action Plan for the EU Accession (2021-2023), national policy documents related to women's empowerment in different domains, including the labour market, are prepared.[214] Similarly, the Turkish Ministry of Family, Labor and Social Services' Strategy Paper and Action Plan on Women's Empowerment (2018-2023) provides a roadmap for women's empowerment in various fields such as the economy, decision-making process, and access to resources and opportunities. In this sense, there have been significant endeavours at the institutional level for gender equality in employment, with the energy sector no exception.

European Energy Law and the provisions of the Clean Energy Package are not in force in Türkiye; however, Türkiye aims to design and implement its clean energy policy in line with these provisions. These policies are supported by respective Action Plans. In this respect, there are two focal aspects that Türkiye prioritizes. The European Union (EU) has envisioned a carbon-free economy model, which requires Türkiye to adapt the EU's international trade system in line with the zero-carbon policy. At this point, the Green Deal process is critical regarding its impacts on the trade between Türkiye and the EU. The Green Deal was declared at the end of 2019 by the European Commission, as a plan to move to make the 'EU economy sustainable by turning climate and environmental challenges into opportunities across all policy areas'.[215] In this framework, the Green

[211] Republic of Türkiye Ministry of Development, 2016. Report On Turkey's Initial Steps Towards the Implementation of the 2030 Agenda for Sustainable Development. Available online: https://sustainabledevelopment.un.org/content/documents/107102030%20Agenda%20Turkey%20Report.pdf (accessed 03.09.2022).

[212] Republic of Türkiye Ministry of Energy and Natural Resources, 2022. Türkiye'ye Enerji Veren Kadınlar. Available online: https://www.turkiyeyeenerjiverenkadinlar.org/ (accessed 14.09.2022).

[213] Ozkaleli, U. (2018) Intersectionality in Gender Mainstreaming:Equity Organizing in Turkey; Delegation of the European Union to Turkey, 2022. Promoting gender equality in working life. Available online: https://www.avrupa.info.tr/en/promoting-gender-equality-working-life-186 (accessed 09.09.2022).

[214] Republic of Türkiye Ministry of Foreign Affairs Directorate for EU Affairs, 2021. Turkey's National Action Plan for the EU Accession. Available online: https://www.ab.gov.tr/siteimages/birimler/kpb/uep/21_23_UEP_EN.pdf (accessed 09.09.2022).

[215] European Commission, 2019. The European Green Deal sets out how to make Europe the first climate-neutral continent by 2050, boosting the economy, improving people's health and quality of life, caring for

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Deal aims to make Europe a 'climate-neutral continent' by 2050, necessitating a fundamental economic transformation. The green and circular economy policy on which the Green Deal has based covers particularly the sectors of 'transport, energy, agriculture, construction and industries such as steel, cement, textiles and chemicals'.[216] For this reason, the Green Deal covers not only EU members but also countries that are trading partners with the EU and imposes a set of trade rules on the EU's trading partners. The most essential issue in this framework is the 'Carbon Border Adjustment Mechanism' (CBAM).[217] Türkiye has become one of the most important trading partners of the EU with the Customs Union, which entered into force on January 1, 1996.[218] Thus, having significant interaction with the EU due to its Customs Union partnership and candidate country status, Türkiye will inevitably be affected by the Green Deal regulations.[219] Therefore, Türkiye's harmonisation with the regulations under the Green Deal is of utmost importance in deepening its trade with the EU and maintaining its competitiveness in exports.

In 2021, Türkiye's Ministry of Trade announced the Green Deal Action Plan. Through the action plan, the Ministry acknowledged the significance of the Green Deal for Türkiye. Since Türkiye has adopted an export-led growth policy, it has to adapt to the green transformation strategies in the global economy to maintain its competitiveness in exports.[220] Türkiye's Green Deal Action Plan is framed around nine main topics, including carbon regulations at the border, 'green and circular economy, green financing, clean, affordable and secure energy supply, sustainable agriculture, sustainable smart transportation, combating climate change, diplomacy, and information and awareness-raising activities pertaining to the European Green Deal'[221].

4.8.3 Energy Communities

In Türkiye, energy legislation is mainly based on Act No. 6446 of 2013 on the Electricity Market.[222] In conformity with the EU Directive RED II[223], this legislation was underpinned by the following laws: the Regulation on Unlicensed Electricity Generation in Electricity

nature and leaving no one behind. Available online: https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6691 (accessed 05.09.2022).

[216] Ibid.

[217] European Commission, 2021. Carbon Border Adjustment Mechanism: Questions and Answers. Available online: https://ec.europa.eu/commission/presscorner/detail/en/qanda_21_3661 (accessed 07.09.2022).

[218] Republic of Türkiye Ministry of Trade, 2021. Yeşil Mutabakat Eylem Planı 2021. Available online: https://ticaret.gov.tr/data/60f1200013b876eb28421b23/MUTABAKAT%20YE%C5%9E%C4%B0L.pdf (accessed 09.09.2022).

[219] Republic of Türkiye Ministry of Trade, 2021. Gümrük Birliği. Available online: https://ticaret.gov.tr/dis-iliskiler/avrupa-birligi/gumruk-birligi (accessed 12.09.2022).

[220] Ibid.

[221] Republic of Türkiye Ministry of Trade, 2021. Yeşil Mutabakat Eylem Planı 2021. Available online: https://ticaret.gov.tr/data/60f1200013b876eb28421b23/MUTABAKAT%20YE%C5%9E%C4%B0L.pdf (accessed 06.09.2022).

[222] Cumhurbaskanligi Mevzuat Bilgi Sistemi, 2022. Elektrik Piyasasi Kanunu.

[223] Eur-Lex. 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. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018L2001 (accessed on 14.09.2022)

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Market of 2019 [224] and Act No. 5346 of 2005 on Utilization of Renewable Energy Sources to generate Electrical Energy.[225]

In Türkiye, electricity generation and distribution are limited to stock companies, limited liability companies or organised industrial zones.[226] It is obligatory to obtain a license from the Energy Market Regulatory Board to generate electricity. However, according to Article 14 of the Act, two market activities are exempt from this regulation. Accordingly, consumers can generate their electricity from plants with a maximum one-megawatt power generation capacity based on renewable energy sources and plants based on renewable energy resources, restricted by the connection agreement.[227]

Article 23 of the Regulation on Unlicensed Electricity Generation in the Electricity Market of 2019 paves the way for unlicensed electricity generation activity by real persons and legal persons to meet their own needs. However, the Regulation also allows the transfer of electricity surplus to the same person's other facilities in the same distribution district. More importantly, Article 29 of the Regulation enables the consumption aggregation method, which means that one or more real persons and/or legal persons can set up electricity generation facilities on the condition that they belong to the same tariff group by benefiting from the same connection point or using a common meter. Hence, collective self-consumption is legally possible in Türkiye. In other words, as legal persons, cooperatives can be established to generate electricity based on the consumption aggregation method. However, establishing Renewable Energy Communities in Türkiye is only possible if its members are involved in the same tariff group and the same connection point or if their electricity consumption is calculated with a single common meter.

According to the Regulation on Unlicensed Electricity Generation in the Electricity Market of 2019, cooperatives have unique legal responsibilities. Therefore, the legal obligations from the legislation directly belong to the cooperatives, not their members.[228] However, a significant limitation of disseminating the cooperatives in Türkiye is that the cooperatives can only be formed by persons 'whose connection point is the same or consumption level can be measured from a single common meter'.[229]

The concepts of Renewable Energy Communities (RECs) and Citizen Energy Communities (CECs) are not yet specified in Turkish law because an update on the energy legislation has not yet been completed following the ratification of respective EU Directives, RED II and ED 2019. This constitutes a significant gap in integrating inclusiveness to the energy transition in the Turkish electricity market since the community-oriented collective energy generation in a community or a cooperative is only

[224] Resmi Gazete, 2021. Elektrik Piyasasında Lisanssız Elektrik Üretimi Yönetmeliği.

[225] Cumhurbaskanligi Mevzuat Bilgi Sistemi, Yenilenebilir Enerji Kaynaklarının Elektrik Enerjisi Üretim Amaçlı Kullanıma İlişkin Kanun, 2021.

[226] Cumhurbaskanligi Mevzuat Bilgi Sistemi, 2021. Elektrik Piyasasi Kanunu. Available online: https://www.mevzuat.gov.tr/ MevzuatMetin/1.5.6446.pdf (accessed on 14.09.2022).

[227] Biresselioglu, M.E.; Limoncuoglu, S.A.; Demir, M.H.; Reichl, J.; Burgstaller, K.; Sciullo, A.; Ferrero, E. Legal. 2021. Provisions and Market Conditions for Energy Communities in Austria, Germany, Greece, Italy, Spain, and Turkey: A Comparative Assessment. Sustainability 13 (20): 1-25.

[228] Coşkun, M. 2019. Kooperatifler Hukuku; Seçkin Yayınevi: Ankara, Türkiye.

[229] Resmi Gazete, Elektrik Piyasasında Lisanssız Elektrik Üretimi Yönetmeliği. Available online: https://www.resmigazete.gov.tr/eskiler/2019/05/20190512-1.htm (accessed on 14.09.2022).

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allowed to natural or legal persons that share the same tariff group and connection point. While individual electricity generation from renewable energy resources for consumption purposes is permitted in Türkiye, the legislation restricts the collective and community generation in RECs and CECs, which poses significant barriers to participation in the energy transition.

5 Conclusion

All of the DIALOGUES countries have ratified the Paris Agreement, which provides the framework for legal and regulatory developments in the next decades. For DIALOGUES' EU countries, a common general framework emerges from the ongoing implementation of the Clean Energy for all Europeans Package (CEP), while also influencing the energy debates in the non-EU countries involved in DIALOGUES. Yet, the CEP directives provide ample leeway for the MS in how exactly these directives are translated into national law. This report set out to undertake a systematic assessment of how those aspects of the CEP directives, which directly relate to energy citizenship, are implemented and how these implementations benefit or hamper progress towards energy citizenship. These are all provisions that strive at facilitating participation in the energy transition, focus on inclusiveness and support citizens' agency in the process. Currently, these are the concepts of the 'active customer', the 'renewables self-consumer as well as citizens and renewable energy communities, which are discussed in general in chapter 2 and more specifically in chapter 4. This assessment shows the differences in the implementation process of the CEP in the analysed countries, the emphasis put on specific topics and the progress made so far. It also showed the lack of inclusivity topics in the legal provisions and specifically pointed out the long road still ahead for gender mainstreaming.

Since the mid-1990s, gender mainstreaming has become an important tool in the social policy agenda of the European Union and since the formation of the European Commission in 1996, it has also been met with considerable confusion and controversy. Nevertheless, and despite the challenges, gender mainstreaming is of high importance as it acknowledges that governments (re)produce gender roles and relations that re-enforce inequalities. It can be observed in policies that appear to be gender neutral, yet in fact, they have the opposite (negative) effect on citizens.

The equal participation of women and men at all levels of society plays an essential role in ensuring development and democracy and demonstrates the degree of political maturity achieved. Gender mainstreaming is a process that aims at understanding the causes of inequalities between women and men in our societies and identifying strategies to address them. Although there are formal definitions of this concept at the global and European levels, no formal explanation or clear legal definition has yet been developed in Italy. The main available definitions are the one proposed by the ONU in 1997 and the one proposed by the Council of Europe (1998) (as previously mentioned, see Introduction). As the European Commission notes in its Communication on the Gender Equality Strategy 2020-2025, no Member State has yet achieved gender equality. Globally, gender equality and the empowerment of all women and girls is one of the 17 Sustainable Development Goals that countries aim to achieve by 2030.

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Gender mainstreaming in energy law is a necessity. This arises due to the endeavour to achieve gender equality in all areas. Beyond this, however, there are special (additional) necessities for the energy sector, as well as opportunities to use previously unexploited potentials for the benefit of achieving the climate and energy goals by integrating the perspective and experiences of women. A contribution to gender mainstreaming in the energy sector is a contribution towards the energy transition and climate protection.

Nevertheless, caution is required when implementing gender mainstreaming. For as purposeful as it can be, it can be harmful if implemented in the wrong way. This risk arises specifically from the analysis of differences between women and men or reference to such differences in the context of gender mainstreaming. The endeavour to include the perspective of women and the reality of women's lives and the specificities of women in various processes creates the impression that women and men are fundamentally different beings. Gender mainstreaming bears the danger that it seems as if the differences between women and men have to be (sought and) emphasised to include their perspective appropriately and 'he who seeks, finds'. This can even lead to differences being justified in the first place. A legal inclusion of these differences could, at worst, lead to a consolidation of gender stereotypes or even bring about a kind of justification for certain circumstances. The above argumentation (in chapter 3.) with the possibilities of women contributing to the energy transition, since they are the main responsible persons for the handling of energy due to the perception of household-related obligations, illustrates this problem very well. If a legal implementation were to result from this consideration, however, it might be developed, it would solidify the conservative distribution of roles and weaken the position of women.

Therefore, the consideration and inclusion of experiences, perspectives and lived realities are essential, but the inclusion of these differences in strategies, laws, etc. should be treated with caution. Nevertheless, advantageous provisions for women must not be an 'accidental' side effect, or rather, it must not be enough, but rather gender equality must be actively strived for. The analysis of the European provisions on the REC shows that they give the member states a lot of leeways, but still provide a consumer-friendly framework, conditions and targets.

The process of gender mainstreaming does not necessarily have to result in a legal distinction between women and men or an explicit reference to women. Nevertheless, it is not enough that certain measures happen to be positive for women. This leads to the fact that the result obtained above (almost no reference to women) must be put into perspective insofar as it is possible that these provisions have been taken into account or that these aspects have found their way into individual provisions. Just not by explicitly referring to women or gender. At first glance, it could appear that in this case, the intensity of consideration or inclusion would not be as strong or that the 'indirect' recording may have missed the target. In fact, it is the other way around.

Even if the explicit reference to women or gender is often not appropriate or purposeful, it is important to note that it is not enough if certain provisions happen to be favourable to women and that is enough to achieve gender equality. Gender equality must not be limited to being a pleasant side effect.

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