Youth for Energy Futures 2025 Report

Youth for Energy Futures Programme

Heinrich Böll Stiftung Paris | Virage Énergie

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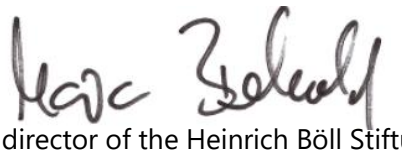
Preamble

With the Youth for Energy Futures programme, Virage Énergie and the Heinrich Böll Foundation give young adults from France, Germany and Italy the opportunity to discover the challenges of the ecological and energy transition in Europe. The aim of the programme is to build a network of future decision-makers and public opinion influencers and to offer them opportunities to foster their expertise so that they can become ambassadors for a society that respects people and the environment.

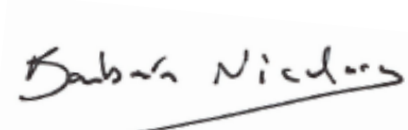
The first edition of the Youth for Energy Futures programme took place between May 2022 and October 2023, on the theme of energy transition in the industrial sector. The second edition in 2024 focused on the theme of mobility. In order to continue training young adults and to create a French, German and Italian network of young pioneers of the ecological and energy transition, we continued in 2025 with a third edition of the programme focusing on the gender dimension of the energy transition.

Through a study tour to Freiburg im Breisgau (Germany) and Strasbourg (France), this year's edition aimed at exploring how poor policy design can exacerbate gender inequalities and how reproducing existing structural inequalities increase the risk of energy and transport poverty. Finally, this third edition sought out inspiring examples of how the energy transition can fight social inequalities, including gender discrimination (such as feminist city planning, green gender budgeting, etc.).

The following report was written by the participants of the Youth for Energy Futures Programme 2025 and sets out the issues and possible solutions for a gender sensitive energy transition they identified thank the study trip.



Marc Berthold, director of the Heinrich Böll Stiftung Paris



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Introduction

As outlined by Benedetta Scuderi, Member of the European Parliament for the Greens/EFA, energy should not be a privilege, but a "shared foundation of well-being and equality" (Purcell & Nanu, 2025). This is the key theme of this report and the work of civil society organisations such as Virage Energie: we need a clear vision on where we would like this energy transition to go and ensure this is a positive structural change in which everyone can participate.

As progressives' voices interested in a successful transition, it is both normatively and practically clear that the energy transition needs to be socially just to be successful. This means that there needs to be a strong transversal focus that takes into account new vulnerabilities created by the transition but also making sure not to widen existing inequalities. Ensuring a broad participation in the energy transition means factoring in these potential risks and the opposition and backlash that they can cause.

Despite the widely shared vision of a socially just energy transition, inequalities are insufficiently taken into consideration when designing and implementing policies. More specifically, gender considerations and resulting power dynamics have largely remained a blind spot in the debate around energy policies. Policymakers treat the energy transition and gender inequality as two distinctive issues, ignoring the fact that gendered perspectives shape our environment and the way public policies are conceived in all spheres of society.

What is at stake is a successful energy transition towards renewable energy systems. If not equitable and accessible, this energy transition will fail, and we risk being locked into fossil-fuel energy systems. It is therefore imperative that policymakers ensure that benefits are shared equally and participation is open to all.

With the Youth for Energy Futures (YEF) programme, Virage Énergie and the Heinrich Böll Foundation are giving a select group of young adults from France, Germany and Italy the opportunity to discover the challenges of the ecological and energy transition in Europe. The aim of this programme is to train and network future decision-makers and influencers of public opinion so that they can become ambassadors for a fairer and more environmentally friendly society.

The 2025 cohort of the Youth for Energy Futures was invited by the Heinrich Böll Stiftung Paris and Virage Energie to focus on the gender dimension of the energy transition: how poor policy design can exacerbate gender inequalities, by reproducing or deepening existing problems caused by structural inequalities, such as energy and transport poverty. We had the opportunity to meet with political and economic decision-makers, researchers, civil society players, etc. in Freiburg im Breissgau (Germany) and Strasbourg (France) (see annex for full overview of visits).

By putting the spotlight on the links between gender inequalities and the energy transition, we however fall in one of the pitfalls one should avoid when talking about inclusive policies: a binary vision of society. Since the data we base our analysis on is collected in a binary form, it is difficult to break out

of the binary and essentialist opposition between men and women. This must however not overshadow the following:

1. Gender inequality coexists with other structural inequalities such as social class, ethnicity, nationality, health, sexual orientation, age and place of residence.
2. Gender is a spectrum encompassing different forms of non-binary identities that are not represented in the data.
3. The examples in this report mainly focus on combating energy poverty, building renovation, mobility, as these are the main topics that have been analysed from a gender perspective. Many other areas could also be highlighted from a gender perspective.

This report will apply and discuss the lessons learned during the programme, analysing the interactions between gender and energy policy, and the importance of adopting a more inclusive perspective in the design and implementation of the energy transition. In the first part, we will discuss the weak link between energy and gender, focusing on framing and the necessity to connect the two dimensions. Secondly, the state of play will outline the current policy framework at European, national (focusing on France, Germany and Italy) and local level. Thirdly, we explore how to mainstream gender and energy transition, looking at the facets of energy poverty, skills, mobility and public spaces. Lastly, the limitations of our results will be touched upon before diving into our policy recommendations.

Overview of key concepts used in the report

- Gender inequality: "Gender inequality refers to all the social, economic and legal disparities that place one sex at a disadvantage compared to another. It coexists with other structural inequalities, including social class, ethnic origin, nationality, health, sexual orientation, age and place of residence. Some people may be affected by an accumulation of inequalities, and this is known as intersectionality" (Nicoloso, 2025).
- Gender mainstreaming: "It involves the integration of 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" (European Institute for Gender Equality, n.d.).
- Energy poverty: "Situation where a household cannot meet its domestic energy needs" (European Commission, 2020b).
- Energy sufficiency: "Sufficiency policies are described by the Intergovernmental Panel on Climate Change (IPCC) as a 'set of measures and daily practices that avoid demand for energy, materials, land, and water while delivering human well-being for all within planetary boundaries. Sufficiency is a way of reimagining our relationship with energy, space, time, wealth, and wellbeing – delivering greater equality in a context of limited resources" (Nicoloso & Van Melkebeke, 2025).

I. The weak link between energy and gender

The framing of the gender-energy nexus

From a European perspective, since the 2010s, Energy Transition and Gender Equality seem to have been placed on the political agenda in an independent manner. As we will develop later in this report, gender considerations are rarely integrated into the implementation of the clean energy transition, being instead largely relegated to internal human resources policies aimed at gender balance.

There are few examples of policies that have been developed and implemented with a fully cross-cutting approach. It was therefore interesting to discover examples of projects carried out in Freiburg and Strasbourg, as they represent inspiring and "pioneering initiatives". However, even in cities that are pioneers in gender-sensitive approaches, obstacles seem to remain, particularly due to the lack of gender-specific data. For policies to be developed with a gender sensitive approach, the inequalities must first be characterized: consequently, data collection is critical. At the European level, the European Institute for Gender Equality (EIGE) was created in 2006, but there are no observatories at the Member State level. This shows that there is still some way to go before local authorities can rely on cross-referenced data produced at the national level to inform their policies.

For example, there is a lack of data on the health impacts of energy poverty, which disproportionately affects women due to structural inequalities, such as lower average income, lower asset ownership, and increased time at home. While data on the differentiated health impact of energy poverty lacks, existing research shows that the impacts of heat waves are clearly differentiated by gender. A study highlighted a much higher mortality rate among women during the 2003 heat wave. In fact, at the same age, women were 15% more likely to die than men (Fouillet, 2006).

The case for linking the energy transition and gender equality

Gender is a cross-cutting dimension because it is an inherently social construct around which our societies are structured. Gendered perspectives and power dynamics shape our environment and the way public policies are conceived in all spheres of society. Gender stereotypes are omnipresent in all areas (Sporenda, 2025): advertising, cinema, media, cultural beliefs, professional cultures, etc. Standards considered "universal" are in fact most of the time masculine (ideal temperature, design of objects and spaces, safety equipment standards, etc.). In the context of the energy transition, this means that gender inequalities interact with several key dimensions of the energy sector, notably the issues of energy poverty, decision-making and policy design, energy jobs, urban planning. These examples have been selected to illustrate key areas that must be addressed to prevent a mutually reinforcing downward spiral between gender inequalities and carbon-intensive energy systems.

First, adopting a gender-sensitive approach is essential for understanding and combating energy poverty. Globally, 70% of the poorest people are women, whose economic vulnerability is further amplified by climate change (FAO, 2023). By 2050, women and marginalized groups are projected to be pushed into even greater poverty. In Europe, gendered economic inequalities deepen women's exposure to energy poverty: women are more likely to work part-time, earn less than men on average,

shoulder most unpaid care and household work, and disproportionately head single-parent households. This leads to increased financial vulnerability and increased likelihood to live in unrenovated homes. This reality is however rarely taken into account in public policies combating energy poverty, that mainly focus on providing renovation aid for tenants.

Second, education and professional pathways are central to understanding women's underrepresentation in the energy sector. Gender stereotypes are instilled from birth and continue throughout a person's life, discouraging many women from pursuing technical fields. And even when they do, hostile workplace cultures, including sexist environments and sexual harassment, increase the likelihood for them to quit. As a result, women are severely underrepresented at job positions where energy policies are decided (decision-makers and industry) and implemented (highly skilled workers). Although women make up 52% of the EU population, only 15% of European mayors are women, just 9 of 27 EU energy ministers in 2025 are women, and over the last 60 years only two women have held the position of European Commissioner for Energy compared to thirteen men (Spain's Loyola de Palacio from 1999 to 2004 and Estonia's Kadri Simson from 2019 to 2024 (Nicoloso, 2025)). This lack of representation affects the entire policy cycle, yielding decisions and outcomes that overlook or even exacerbate gender inequalities.

Third, the absence of gender-sensitive perspectives in public policy often results in a strong bias toward technological solutions in the energy transition. Tech-heavy investments such as wind farms, solar fields, carbon-capture technologies tend to be prioritized because they fit conventional engineering frameworks. By contrast, solutions involving social innovation, community organization, or behavioral change often receive less attention, despite their potential. This tendency is not specific to the energy sector; it reflects a broader systemic issue in the way our societies have been structured throughout history. .

Finally, gender inequality is reflected in urban planning, which tends to encourage more carbon-intensive habits. Traditional urban planning models have centered on the "standard male commuter", traveling by car from a suburban home to a single workplace during peak hours. This approach fails to account for the actual travel patterns and transport constraints faced by other members of society who commute with public transport, combine multiple daily trips and need to be well-connected to public services. Architectures and infrastructures have often been used to project power, reinforcing car-centered designs that fail to address the needs of those who navigate the city differently. Integrating gender considerations from the outset rather than as an afterthought is crucial to designing urban environments that are more inclusive, efficient, and climate friendly. And most of the time fighting for fairness between gender and promoting energy transition go "hand in hand".

II. State of Play: the current legislative framework on gender and energy

Drawing from the meetings we attended with actors from municipalities, industry, and EU institutions, we will analyse how gender and energy policies are intertwined at the European, national and local level.

The gender-energy nexus in EU legislation

Through the European Green Deal (EGD) and the Fit for 55 Package, the European Union is a crucial actor in the energy transition. The EU has positioned itself as a pioneer in gender equality and the just energy transition, presenting both subjects as cornerstones of its social and economic policies in the past few years. Yet the current lack of legislation or policy packages directly linking gender equality and the energy transition makes it necessary to analyse how gender priorities target the energy sector, and most importantly how the EGD integrates gender considerations.

On the gender front, the European Commission appointed its first Commissioner for Equality in 2019 and created a Taskforce on Equality that same year. In its 2020-2025 Gender Equality Strategy, the Commission committed to mainstreaming gender in all its major initiatives. The Strategy acknowledges that green policies can have a gendered impact and mentions that women have a higher risk of energy poverty. In its 2025 Roadmap for Gender Equality, which sets out the main objectives of the next mandate, the Commission further elaborates on the gendered aspect of energy poverty:

> *Furthermore, recent crises such as the COVID-19 pandemic, war in the EU's neighbourhood and rising energy costs had adverse impacts on women. This is because women often have lower incomes, are more likely to be lone parents, take more of the responsibility for the household and care than men, and are more exposed to gender-based and domestic violence. (European Commission, 2025)*

Overall, the EU gender framework clearly outlines the causal relationship between energy poverty and gender inequality, but it does not propose specific legislation to address this link. A second area in which the energy sector is indirectly considered within EU gender priorities concerns the promotion of equal employment opportunities and adequate working conditions, one of the pillars of the 2025 Roadmap. This echoes our analysis of the framing of the gender-energy nexus, as energy poverty and gender segregation in the workforce tend to be considered as the main areas to integrate gender in the energy transition.

Despite the rise of gender mainstreaming in EU institutions, it appears that gender considerations are still very lackluster in the EU energy policy framework. As highlighted in a 2024 report by the European Institute for Gender Equality (EIGE), none of the gender mainstreaming objectives are legally binding or implement monitoring mechanisms. The EIGE further noted that the European Green Deal is particularly gender-blind compared with other EU environmental laws, notably regarding climate (European Institute for Gender Equality, 2024a). These findings are echoed by a report commissioned by the European Economic and Social Committee (EESC), that identified very few content related to gender mainstreaming in the EGD energy policy documents (European Economic and Social

Committee, 2024). When mentioning the need for a just or fair energy transition, these texts use the term "vulnerable groups" to define who should be targeted by just policies, a broad language which raises several issues.

On one hand, the definition of who is considered "vulnerable" is not always clear or complete. For example, the Commission Recommendation on Energy Poverty gives indicators to identify vulnerable groups (for example the share of income going to energy) but does not address the important components of "vulnerability", such as gender or the loneliness of elderly adults. Similarly, the Energy Efficiency Directive refers to "people affected by energy poverty, vulnerable customers, people in low-income households and, where applicable, people living in social housing" without clarifying the difference between people affected by energy poverty and vulnerable customers. Moreover, unlike the EU Gender Roadmap, it makes gender invisible as a component of energy poverty and only mentions that it is caused by "a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes" (European Parliament and Council, 2023). Finally, the Directive acknowledges that the term "vulnerable customers" lacks a EU wide definition, and encourages member states to work on their own, but it still erases gender as an important component:

> *Each Member State should define the concept of vulnerable customers, which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity to such customers in critical times. The concept of vulnerable customers may include income levels, the share of energy expenditure of disposable income, the energy efficiency of homes, critical dependence on electrical equipment for health reasons, age or other criteria. (European Parliament and Council, 2023)*

In general, EU energy policies under the Fit for 55 Package or the European Green Deal overlook gender issues or superficially address them (see Table I.). There is one exception with a recent policy that acts as a bridge between gender and energy: the Social Climate Fund, adopted in 2025. This regulation is designed to alleviate the social and economic impacts of the new Emissions Trading System (ETS2). Each Member State had to submit a Social Climate Plan (SCP) by June 2025, outlining how it would promote emissions reduction for vulnerable groups, specifically targeting the housing and transport sector. In a new Guidance issued in October 2025, the Commission details how gender should be considered in the SCP:

> *SCPs should explain how the measures and investments aim to tackle gender inequality and enhance gender equality (Article 6(1)(q) and Sections 2.1(ii) and 2.2(ii) of Annex V to the SCF Regulation). Women are disproportionately affected by energy poverty and transport poverty. Therefore, to ensure that no one is left behind throughout the process of preparing and implementing their Plans, Member States should uphold and promote gender equality and equal opportunities for all and mainstream these objectives, as well as accessibility rights of people with disabilities, in line with the United Nations Convention on the Rights of Persons with Disabilities. (European Commission, 2025d)*

However, the wording used in this Guidance and in the Regulation leaves considerable discretion to Member States, as references to gender are consistently followed by formulas such as "where relevant", "if possible" or "if applicable". At this stage, it is not possible to know if the Member states have

incorporated the Commission's gender mainstreaming efforts in their SCP's, as only two countries have met the deadline of June 2025 and are currently being assessed.

The meetings we held with EU MEP's highlighted some explanations for this gap between gender and energy policies. Firstly, the Industry, Research and Energy Committee (ITRE), as most Committees of the European Parliament, is male dominated with around 35% of female members (Swedish Institute for European Policy Studies, 2025). This is aligned with a more general regression of women's representation in the Parliament since the 2024 elections, which have led to shifting majorities : a traditional majority composed of the socialist (S&D), liberal (Renew) and conservative (EPP) parties, and an alternative majority when the EPP aligns with far-right groups, which is increasingly frequent on environmental laws. This political configuration complicates gender mainstreaming efforts and redirects consensus towards priorities such as energy security or competitiveness, including phasing-out from Russian gas or the implementation of the Carbon Border Adjustment Mechanism.

Finally, an area highlighted by the MEP's and most EU policies is the potential of energy communities. These are citizen initiatives that go beyond just meeting the energy demand of its members in a sustainable way, and often address unequal social relations, such as gender, through the energy transition. It will be interesting to see whether gender is taken into account in the upcoming Citizen Energy Package, expected to be adopted in early 2026 by the Commission.

Table I. Gender mainstreaming in EU energy policies and laws

Policy (oldest to newest)	**Gender mainstreaming**	**Binding measures on gender**
A Renovation Wave for Europe (COM/2020/662 final)	Mentions that the availability of skills and qualified professionals can be improved by increasing the presence and role of women in the construction sector.	None
REPowerEU Plan (COM/2022/230 final)	None	None
Commission Recommendation on energy poverty (C/2023/4080)	None	None
Renewable Energy Directive (Directive (EU) 2023/2413)	None. Only mentions the importance of targeting "low-income or vulnerable households".	None
Energy Efficiency Directive (Directive (EU) 2023/1791)	States in its preamble that "specific attention should be paid to particular groups which are more at risk of being affected by energy poverty or are more susceptible to the adverse impacts of energy poverty, such as women, persons with disabilities, older people, children, and people with a minority racial or ethnic	None

The energy transition and gender in Germany, France and Italy

We will briefly present the gender-energy nexus in Germany, France and Italy, as the YEF Programme is made up of participants from these three countries. It is interesting to analyse how national specificities influence the inclusion of gender in energy policies and the adoption of the emerging EU gender mainstreaming. Among other sources, we looked at each Member State's National Energy and Climate Plan (NECP), a document required by the EU Regulation on the Governance of the Energy Union and Climate Union of 2018. The NECP's are a good

summary of each state's energy policies, as they have been updated in 2024 to include the objectives of the Fit for 55 Package.

Germany

National Context

The energy transition (or Energiewende) in Germany started during the 1973 and 1979 oil crisis, when West Germany's dependence on oil-producing states became very apparent. This sparked a debate about energy diversification, and scepticism towards fossil fuels and centralized energy sources grew. Soon, the debate also included concerns for ecological degradation due to fossil fuel pollution. This sparked a series of anti-nuclear protests, where women played a significant role in organizing and shaping the discourse (Engels, 2002); this dynamic intimately linked second-wave feminism with the strive for an energy transition.

To phase out nuclear and decrease the reliance on Russian gas, Germany continues to rely on coal for energy production. However, coal is also being phased out, and with it goes the income of many coal-mining communities. This significantly shifts the gender relations in affected communities. Women are more likely to start working and often turn to the service sector to do so. This sector is, however, less stable than traditional mining jobs. Men, on the other hand, are more likely to take care of housework due to losing their coal mining job (Walk et al, 2021).

Until 2030, the German government hopes to have a share of 80% of renewable energies in the electricity mix and a 65% cut in emissions compared to 1990 levels, which makes it one of the most ambitious countries in the EU (German Federal Ministry for Economic Affairs and Climate Action, 2023).

Most recently, the progressive discourse has, however, shifted. Windmills are increasingly denounced as ugly in the landscape and unreliable. A campaign by the German government in 2023 to subsidize heat pumps received significant backlash, largely de-popularizing the technology. The new Minister of Energy, Katharina Reiche, has recently proposed dialling back on essential incentives that drive the German energy transition (Wessollek et al., 2025).

Legal Framework regarding the gender-energy nexus

No major laws in Germany have linked gender and energy, making for an energy policy that is not gender sensitive. Many fundamental laws on German energy poverty, such as the Renewable Energy Sources Act or the Energy Industry Act, lack any mention of gender (European Circular Economy

Stakeholder Platform, 2023), despite official critique from the UN's Committee on the Elimination of Discrimination Against Women. Recently, small-scale initiatives, such as "Women Energize Women", were launched by the Ministry for Economy to help women enter the energy job market through networking and mentoring programs. The scale of their impact, however, is questionable (German Federal Ministry for Economic Affairs and Climate Action, 2023). In 2022, the same ministry also published a report as part of Germany's G7 presidency, highlighting the need for action to eliminate the gender pay gap in the energy sector and ensure women in leadership positions (G7, 2022). Finally, it is interesting to note that within the German federal government, the topic of Energy has shifted between the Ministry of Environment and the Ministry of Economic Affairs. Both ministries have predominantly been staffed by male ministers, with 8 of 11 ministers of environment and 21 of 23 ministers of Economic affairs being male (Bundesministerium für Wirtschaft und Klimaschutz, n.d).

Germany's National Energy and Climate Plan references gender only in the summary of its public consultation, where participants highlighted a lack of gender consideration. Yet the rest of the NECP does not address this absence. The Commission noted in its assessment that "the final plan lacks both a thorough assessment of people in energy poverty and a measurable reduction target, and to that connected share of savings to be achieved in households affected by energy poverty" (European Commission, 2025b).

Challenges and Opportunities

Decentralized, self-managed energy communities are a defining future of the energy transition in Germany, which accounts for nearly half of the energy communities in the EU. However, the community's members and boards are often largely dominated by men. The reasons for this are various, including the women's perceived role in running the household and a lower prominence of a STEM education among women.

Energy poverty remains a large problem in Germany, especially among women, since they tend to earn less and receive lower pensions. Especially single households, many of which are led by women, are at risk of not being able to pay for energy or insulation. Russia's invasion of Ukraine has exacerbated this situation, since energy prices rose on average 31% as compared to the pre-war period (Kyllmann, 2025).

France

National Context

France's energy transition policies are vastly different from the Energiewende in Germany, especially regarding its stance on nuclear power: 68% of the French energy mix comes from its nuclear plants. This makes the country dependent on its nuclear fleet, which is aging and whose lifespan keeps being extended while new reactors are being built (which will take around a decade). The prevalence of nuclear power is partly explained by the centralization of the French political and economic system, which by essence encourages bigger projects such as nuclear (or hydropower).

This led to a late start on renewables compared to other European countries. The nuclear sector is heavily subsidized by the French state (President Macron announced a "nuclear renaissance" in 2022), which also successfully lobbied at the EU level to facilitate nuclear subsidies. However, debates over

energy have long been central within French society. Ecofeminists movements emerged from strong mobilizations against the nuclear program in the 70s, and links between the exploitation of nature and resources for energy consumption and the exploitation of women's bodies for domestic labor have long been established.

In regard to public policies, France lacks a national energy plan, as the Programmation pluriannuelle de l'énergie (PPE3), which is supposed to lay out the next decade of energy policies, has not been adopted yet. This is explained by divisions on the support of renewables, as right-wing parties push for a moratorium on wind and solar.

Legal Framework regarding the gender-energy nexus

As it is the case with Germany, there is a lack of policy directly linking gender equality and the energy transition. This gender blindness reinforces inequalities, as is illustrated by President Macron's Industrial Strategy, which centers on massive electrification. This strategy can be summarized by his declaration, "Plug, baby, plug!" a phrase used during a summit that resonates with the former U.S. energy motto, "Drill baby drill": an aggressive push for industrial energy consumption that is built around sexist undertones. The slogan was used by Macron in the context of the current AI boom, which requires massive amounts of electricity to run artificial intelligence generators, potentially embedding an energy-intensive and socially imbalanced economic model more deeply into the national structure.

Regarding the French NECP, there is no mention of gender and few of vulnerable groups, but none in the part about energy poverty. The EU Commission noted in its assessment of the plan that it "does not provide the analytical basis needed for the preparation of the Social Climate Plan, such as information on the estimated impact of ETS2 and the identification of vulnerable groups" (European Commission, 2025b).

Challenges and Opportunities

The French education system is very locked around gender stereotypes and non-mixity. For example, in "École des Mines" (one of the largest institutions training the energy elite of the country), there are less than 30% female students. This leads to the CAC40 (the most important French listed companies) being almost all led by men, forming a "boy's club".

On the brighter side, France is associated with the concept of *sobriété énergétique* (the closest translation would be energy sufficiency) and is the only EU member state to have implemented such an extensive energy sufficiency programme to reduce energy consumption. This framework is an opportunity to link sufficiency measures to gender equality policies, or at least to create a new narrative that moves away from the values traditionally associated with masculinity such as power or the domination of nature.

Yet, the *sobriété énergétique* approach is not without its limits. For example, one of its policies consists of limiting office heating at 19 degrees Celsius, exemplifying that energy sufficiency was thought from a masculine viewpoint: this temperature is not adapted to women that are more sensitive to cold temperatures. This shows that sufficiency policies also need to be designed through a more sensitive gender-lens.

Italy

National Context

Italy's energy transition policies have been influenced by its low energy production in the past decades. The country phased out nuclear power in 1987 following the Chernobyl disaster and did not significantly replace it by coal exploitation. As a result, it is now one of the most energy import-dependent countries in the EU, making it very vulnerable to external shocks such as the Ukraine War (Clean Energy Wire, 2025). This war, along with the phase out of Russian fossil fuels that followed, accelerated energy diversification measures but did not substantially boost renewable energies deployment. Indeed, the transition to renewables is currently slowing down, despite Italy having been an early champion of solar energy through generous subsidies in the 2010's (International Energy Agency, 2023). Meloni's government has emphasized Italy's potential role as an "energy hub" between North Africa and Europe, meaning strengthening its relationships with gas producers such as Algeria, which became its main gas exporter since the Ukrainian invasion (Kaval, 2024).

It is also noteworthy that Italy was one the major beneficiaries of the EU post-covid recovery plan, with most funds allocated to the energy and building sectors. However, no gender budgeting was implemented, and because these sectors employed more men than women, this allocation primarily benefited men. No measures were introduced to alleviate care work or improve work-life balance, even though 70% of those who lost their jobs during the pandemic were women (European Environmental Bureau & Women Engage for a Common Future, 2021).

Legal Framework regarding energy and gender

As it is the case with Germany and France, a report commissioned by the European Parliament has found the Italian energy policy framework to be generally gender-blind (Clancy et al., 2017). We can use as an example one of the most prevalent schemes in recent years: the Superbonus 110%, a 2020 law offering homeowners up to 110% of their building renovations costs. The programme is mostly based on the ownership status and does not include any socio-demographic component. Moreover, it is now regarded as a budgetary disaster by the Meloni government, as it did not target specific households nor came with a monitoring system, thus its costs went way above planning (Balmer & Fonte, 2024).

The Italian NECP does not mention gender, but highlights that the parliament is working on a definition of energy poverty that could include "specific secondary factors, such as for example, the characteristics of the family unit, health and vulnerability situations, geographic and climatic conditions, specific energy needs." (European Commission, 2024c). It is very interesting to note that the question of gender is reframed as a family issue: the "characteristics of the family unit" (*nucleo familiare* in the original text) are to be taken into account, indirectly referring to single mothers, but not taking into account what makes women more likely to bear childcare responsibilities.

Challenges and Opportunities

Italy lags in workplace gender equality, with lower female employment rates and a significant pay gap, especially in management. Female employment in Italy is among the lowest in the continent, 12,6

percentage points below the EU average, and they are disproportionately represented in part-time and less secure jobs (Consiglio Nazionale dell'Economia e del Lavoro and Istituto Nazionale di Statistica, 2025). The country also has a persistent gender gap in areas like segregation and work quality, as it is noted in the EIGE gender equality index that Italy ranks last among EU Member States in the domain of work (European Institute for Gender Equality, 2024).

Italy faces an additional challenge in decarbonising its industries, specifically its car and chemical sector, which must adapt to comply with the upcoming EU ETS2 regulations. This transition can be an opportunity for structural change, including policies aimed at increasing women participation in the workforce.

The gender-energy nexus at the local level

During our trip, we visited the cities of Freiburg and Strasbourg, both governed by coalitions led by green parties. These two cities are well advanced when it comes to the green transition and have particular focuses on gender policies due to their progressive leanings. Within this section, we are going to take a look at local level examples of initiatives creating links between the energy transition and gender equality.

In the city of Freiburg, we saw multiple initiatives supported by the public sector linking the energy transition and gender equality. The example of the Vauban District is very interesting, as it shows how public pressure and organization can change the urbanistic organisation of public spaces. Originally a military base, a citizens' group called "Forum Vauban" worked with the City Council to make the new coming district greener when the military left in 1992. It advocated for a car-free district, based around transport by foot or bicycle. A major part of the project was to enhance local democracy and neighbours' participation in communal life and organization of public spaces. Subsidized housing was added to the projects and several initiatives developed solar power on the roofs of the district's buildings. This shows how a democratically planned district can change how a city is built. Similarly, we met with one of the leaders of the Rieselfeld project, which built a series of apartments dedicated to shared communal life, with a special focus on social inclusion (which unfortunately weakened throughout the years and the end of subsidized housing) and a particular thought process about shared spaces, utilities and neighbours' relations.

The City Council of Freiburg is also sponsoring "Frau und Beruf", which is an initiative and program to support and empower women working within sectors related to the green transition. It aims to help and reward companies that train women in building renovation, heating systems, and sectors around construction to make the entry barrier to these very masculine sectors easier to cross. In addition to addressing the issue of gender inequalities within the workforce, it also meets the objective of increasing the number of workers in crafts, especially needed to meet the demands of the clean energy transition such as building renovation to save energy. Another initiative by the City of Freiburg is the establishment of an "inter-communal climate assembly" tasked with goals regarding climate planning, energy transition plans, and general policies around the transition. The assembly is intended to fairly represent the population, meaning that a special effort was made to ensure women's participation in the assembly.

In Strasbourg, we were presented the city's Gender Equality Report (a mandatory document for large cities in France), which outlines the main data regarding gender distribution of the municipal personnel, gender-related policies, and commitments from the city. We met with Christelle Wieder, Strasbourg's Vice-Mayor in charge of Women's Rights and Gender Equality, with whom we were able to talk about a series of topics regarding feminist public policies. She highlighted the debate over nighttime lights in Strasbourg's streets: even within the Greens, opinions were split between those advocating to maintain nighttime lights for safety reasons, and those calling for reduced lighting to save energy. This illustrates a clear tension between gender considerations and energy priorities.

Strasbourg also built a gender-sensitive budget, where the City's budget was studied to take into account gendered expenditures to allow better decision-making. The goal was to highlight the quantity of investments made for men and the quantity for women, with the objective of equalizing both over the course of budget debates. Such data-driven initiatives are important to do at the local level because it shows public policies aren't neutral but clearly channel resources toward specific groups and priorities.

Another example of policy linking gender perspective and energy consumption is the existence of a shared car pool for the personnel of the Communal Center for Social Action (a local public service institution managing public care services, such as elderly people care). The workforce is almost entirely composed of women, and having such a pool allows the City to act on energy poverty, allowing these women to not use their personal cars which would cost them money to work. Strasbourg also spearheaded the idea of the "Green Prescriptions", a policy aimed at delivering free organic food baskets during pregnancy in order to guarantee a healthy food supply. Such a policy allows to counter poverty linked to food spending and can be linked to energy transition as the produces are generally more locally produced, so with a lesser carbon impact. This policy also shows how gender roles are sometimes reinforced by policies aiming to be feminist but implicitly reinforce women's role as the ones who should be providing healthy food to the children.

Finally, we visited the "Espace Égalité (Equality Space)" in Strasbourg, a pedagogic, youth-focused and publicly sponsored initiative aiming to raise awareness around discrimination issues, civil rights, sexism and democracy. Such a space is an important policy that is locally driven, allowing to sensibilize people to intersectional issues like class, race and gender inequalities. These kinds of projects could be funded by the EU to push for cultural change across Europe, as it allows to raise a common cultural awareness about discrimination and civil rights.

III. Moving forward: mainstreaming gender in the energy transition

Energy poverty

The European Commission defines energy poverty as a "situation where a household cannot meet its domestic energy needs" (2020b). The causes for this can be very complex but generally result in a lack of affordability for adequate heating and cooling. Those affected by energy poverty might also suffer

from other forms of poverty or can avoid falling under the poverty line by avoiding a healthy, but potentially expensive, level of heating.

The root causes of energy poverty are low levels of income, energy inefficient housing and appliances, as well as a high percentage of available income being spent on energy (European Commission, n.d.). Energy affordability is highly responsive to many variables. At the individual level, personal income or wealth is the main factor, but the level of knowledge can also play a role. The housing situation of the individual, such as the level of energy efficiency in the building stock, their relation to the building (owning or renting), and the implied level of agency over this energy efficiency, is very consequential. In Europe, around 75% of building stock is energy inefficient (European Commission, 2024b). Taking a more granular approach, the Buildings Performance Institute Europe estimates that around 97% of buildings in the EU need to be upgraded to be considered highly energy efficient, and for the building stock to be classified as truly decarbonised by 2050 (Buildings Performance Institute Europe, 2017).

Going a level higher from the immediate lived environment, the specifics of a region's or a country's energy system, particularly its energy mix and reliance on fossil fuel, are consequential for the stability of the energy price and the security and resilience of its energy supply. For example, after the Ukraine invasion, gas prices soared across Europe and caused a peak in energy poverty in many households. As such, energy systems are also responsive to (geo)political measures and larger structural dependencies, which then trickle down and are felt at the household level.

In Europe, between 8% to 16% of the population is energy poor (JRC, 2024). Taking into account that women, on average, rent more often, live in more energy inefficient housing, have a lower income, spend more time at home, but live longer and lead more single-parent households, women are at a higher risk of energy poverty. However, the gender lens in the response to energy poverty is lacking (Feenstra et al., 2024).

This begins with a lack of data on the emerging gender sensitive risks that arise from the energy transition. The goal and outcome of the energy transition should be beneficial across demographics, so a holistic view on emerging risks and possible detrimental impacts is crucial. To feed into the Gender Equality report of the German government, Tanja Kenkmann, Senior Scientist at Oekoinstitut Freiburg, has been developing a gender equitable design for the transition in the housing and mobility sector. This will be the first data basis to assess gender differentiated effects of the energy and climate policies.

One of the many findings has been that there is a gender gap in the energy cost burden across all age groups and regions – even among younger households. She concluded that while this analysis is groundbreaking in its focus on gender differentiated impacts, she recommends that broad measures aimed at low-income households (many of which are women or headed by women) will better the situation of women. The discussion on how to design policy with an eye on maximum impact, however, is a product of an informed, data-driven policymaking. The case might differ with the introduction of different energy systems, energy governance or different research assumptions.

While the solution, or the lowest common denominator, could be found in income, the gendered difference across income groups and regions persists and represents an important hook to ensure that the energy transition leads to improved outcomes for all households. Nonetheless, it needs to be

underlined that the field would benefit from further studies into how this phenomenon plays out at different levels and different member states, research which needs to be part of a funded research agenda.

Gender and the skills transition

The twin transition – digital and energy – is and will require different skills in scale and scope, particularly for digital and STEM skills (CINEA, 2023). To implement and reach the targets of the Fit for 55 package and the RePowerEU plan, it has been estimated that, pending the development of the clean tech industry, between 1 and 2.5 million jobs could be created (European Commission, 2023, for detailed figures across renewable sectors see FES, 2023). Already now, the sectors of the green transition employ more men than women, even more than the industry average, so intentional policy is required to ameliorate this current trend.

The implementation of the energy transition, particularly with an eye on energy infrastructure and housing, will depend on the practical actions on the ground and the skilled labour that leads to this change (European Commission, 2023; Zentralverband des Deutschen Handwerks, 2025). Especially the craft industry will be crucial to actualise this transition, from construction of new energy technology and buildings to public infrastructure systems. Craft jobs are crucial for the energy transition, but the sector has not been welcoming to women for different reasons. Culturally, craftsmen pride themselves on their hard manual labour and toughness. The work schedule and context of very small companies is also often not equipped to deal with part time requests or maternity leave. Retention is another issue, with a sizable portion of women not staying after their vocational training is concluded.

But also, more recently emerging industries are behind on a gender equal workforce. The renewable energy sector itself has a long way to go in employment equality, with women only representing 32% of people working in the sector, which is only marginally higher than the oil and gas sector at 22% (International Renewable Energy Agency, 2019). Here, women are more often employed in lower paid, administrative positions in part time positions (Minkova, 2024).

Taking into account that this skill set is set to be in more demand, with potential impact on income, and that it is already heavily gender segregated, it is yet another aspect of a generally socially beneficial transition that will be setting back gender equality unless informed policy making can respond to these risks.

Mobility and public spaces

Transportation makes up about a quarter of all GHG emissions in the EU and it is the only sector whose CO2 emissions have increased since 1990 (European Parliament, 2019). This makes it an essential sector to tackle in the energy transition: a mainstream approach to gender can help significantly reduce CO2 emissions resulting from transport. To illustrate this, the representative from the city of Umeå, which we talked to during our visit at the ICLEI institute, noted that in their municipality, more CO2 emissions could be saved by men adopting the travel pattern of women than by their decision to switch to electric

buses. Therefore, a gender transition in working and commuting patterns would lead to a reduction of CO2 emissions.

However, one hurdle to a wider adoption of public transport is that many potential users, especially women, report feeling unsafe in public transportation or public spaces. To solve this problem, many cities offer taxi services at the cost of buses during late nighttime hours (SPD-Fraktion im Römer, 2022). While this might be a temporary fix against the feeling of unsafety, it does not promote a true transition in transportation and, therefore, energy transition. Instead, transportation infrastructure must be designed through a gendered lens from the beginning. In discussion with a representative from the municipality of Barcelona during our visit at the ICLEI institute, she emphasized the need for participatory spatial planning, especially on the question of gender, to identify ways to ensure the feeling of safety in public spaces. Examples include rounded corners at buildings or other walls in public spaces. Even the purposeful arrangement of functions in a building so that some windows emit light until the late evening significantly improved the safety perception on the street in front of it.

While the strive for safer public spaces and transportation was sparked by the need to enable women to be in the public sphere during night-time, it makes for a more pleasant city experience for everyone.

IV. Limitations

These various examples highlight certain limits associated with taking gender into account in public policies. There is a risk of viewing certain actions from a "binary" and essentialist perspective (male/female). Since the data is collected in binary form, it is difficult to break out of this "framework." And we must pay attention to not suggest that differences in behaviour, personality, and abilities between men and women are rooted in "innate biological differences." It can be risky to start from assumptions such as: "Women take care of children/the family much more [implying that this will not change], so this public policy must be adapted accordingly." On the other hand, this is the current situation and we cannot ignore it. It therefore seems that it is somewhat difficult to strike a balance between implementing more equitable public policies and avoiding the pitfall of essentialism.

Similarly, a question that arose early in our discussions during the study trip was which would be the most consequential lever for change: culture or policy? More specifically, we wondered how far top-down policies can influence deeply rooted patriarchal norms, for example in the craftspeople sector, and where such policies reach a ceiling. Rather than treating culture and social norms as external to political and policy action, it can be worthwhile to to examine how politics shapes culture and how it enables, funds and sustains alternative spaces: not only in the cultural sector in the narrow sense, but also through support for civil society organisations, training and educational mobility (such as Erasmus+). In our meeting with Scuderi (Greens/EFA), she raised this as a false dichotomy: "You do not do anything without money". With the eye on the ongoing negotiations of the Multiannual Financial Framework, the EU budget allocated for these levers cannot risk being sidelined to focus on skills only. It becomes clear: cultural change is a limitation, but is highly responsive to other EU policy areas that are not connected to the gender / energy nexus per se.

V. Recommendations

To raise the awareness of policy makers to gender inequalities in energy policy, gendered data on Energy must be more systematically collected and harmonized on a European scale. This includes mandatory gender budgeting for member-states. In the data collection, all genders – including non-cis genders – must be recorded. In addition, an intersectional approach must be taken in the data collection, acknowledging that discrimination can take place based on several personal characteristics, such as racial or ethnic origin, social class, religion, disability, age or sexual orientation. The collected data should not only be analysed on the primary effects of energy policy on gender, but in a holistic approach, including secondary effects. High-quality, gender-sensitive, well-interpreted data on energy will make inequalities more visible and inform policy-making.

However, good policy is not only created through high-quality data as input. To mainstream gender in policy-making, the right questions must be asked over the course of the entire policy-making process, as explained by Nicoloso (2025).

- What are the risks of amplifying existing inequalities or creating new ones?
- What secondary knock-on effects will the policy create once it is implemented?
- After the policy is implemented, it needs to be continually monitored and then evaluated. What co-benefits of the policy can be identified? What secondary knock-on effects were initially unaccounted for?

European projects that enable local authorities to learn from each other must continue to be developed, as many stakeholders face fairly similar problems. However, it is also necessary to draw on local specificities to avoid "standardized" approaches. In Strasbourg, for example, environmental health is an approach that has been developed over the last few years. The "Frau und Beruf" seal in Freiburg is another positive example for a naming-and-praising approach for companies which actively promote gender equality. Through improved knowledge sharing, examples like this can be shared with municipalities from across Europe.

To further mainstream gender in policy-making, civil society needs to be involved in policy-making processes. It is therefore important to communicate issues of gender and energy in a simple manner. These issues include energy poverty, mobility and public spaces, and the predominantly male labour-force in the energy-sector. Once sensitised, citizens participation methods should be implemented.

With an eye on political strategy, the political attention on gender, and the rise of inflammatory rhetoric connected to the concept should not be enabled to serve as a distraction away from political energy for a broad energy and green transition that includes all people in Europe. The path for this transition must stay unaffected by the increasing aggression surrounding it. Gender and other intersectional lenses are crucial to consider, but the common denominator of social inequality (certainly also along the lines of gender, ethnicity, income and age, among others) should be a starting point that connects different experiences of a lack of participation and bind support and coalitions for ambitious eco-social policy in Europe.

Conclusion

As highlighted in this report, there is a disconnect between the emerging research on the gender-energy nexus and its integration into policy. Numerous links exist between energy and gender, particularly in sectors such as building renovation and mobility. However, this perspective is hardly reflected in public energy policies: gender mainstreaming within the European Union remains in its early stages, and it is virtually absent in the three countries examined in this report. Overall, energy policies remain gender-blind, which risks reinforcing preexisting discrimination.

However, good practices observed in Freiburg and Strasbourg are interesting and show the importance of adopting gender-sensitive approaches in public policy framing. From policy design to evaluation, adopting an intersectional approach would make the energy transition more effective. This can help in the implementation of ambitious policies or, conversely, contribute to making problems invisible.

Despite the effort of various actors to approach the energy transition through a gender lens, challenges remain. Society is still largely structured by power relations rooted in patriarchy, making a paradigm shift essential to achieving a fair and inclusive energy transition. One key challenge lies in inadequate education, both from an early age and in terms of content disseminated through media. This is further exacerbated by the dominance of private media and the rise of the far right, which often amplify discriminatory narratives.

Therefore, caution is needed to prevent energy policies from reinforcing entrenched inequalities; instead, these policies should be leveraged as an opportunity to tackle both the environmental crisis and the anti-gender democratic crisis we are facing.

Bibliography

Balmer, C., & Fonte, G. (2024, April 9). *Explainer: Why Italy's Superbonus blew a hole in state accounts*. Reuters. https://www.reuters.com/world/europe/why-italys-superbonus-blew-hole-state-accounts-2024-04-09/

Buildings Performance Institute Europe. (2021). *97% of buildings in the EU need to be upgraded*. https://www.bpie.eu/publication/97-of-buildings-in-the-eu-need-to-be-upgraded/

Bundesministerium für Wirtschaft und Klimaschutz. (n.d.). *Ministergalerie*. Retrieved December 6 from https://www.bundeswirtschaftsministerium.de/Navigation/DE/Ministerium/Ministergalerie/ministergalerie.html?utm_source=chatgpt.com

Clancy, J. S., Daskalova, V. I., & Feenstra, M. H. (2017). *Gender perspective on access to energy in the EU*. European Parliament, Policy Department for Citizens' Rights and Constitutional Affairs. https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2017)596816?

Clean Energy Wire. (2025, November 14). *CLEW Guide – Italy moves on green transition, but fossil ties remain tight*. https://www.cleanenergywire.org/factsheets/clew-guide-italy-moves-green-transition-fossil-ties-remain-tight?

Consiglio Nazionale dell'Economia e del Lavoro and Istituto Nazionale di Statistica. (2025). *Il lavoro delle donne tra ostacoli e opportunità*. https://www.istat.it/wp-content/uploads/2025/03/istat-cnel.pdf?utm_source=chatgpt.com

Engels, J. I. (2002). *Gender roles and German anti-nuclear protest: The women of Wyhl*. In C. Bernhardt (Ed.), Le démon moderne : La pollution dans les sociétés urbaines et industrielles d'Europe (pp. 407–424). Presses Universitaires Blaise Pascal. https://freidok.uni-freiburg.de/data/4612

European Climate, Infrastructure and Environment Executive Agency (CINEA). (2023). *Persistent lack of skilled workers could threaten EU clean energy transition*. https://cinea.ec.europa.eu/news-events/news/persistent-lack-skilled-workers-could-threaten-eu-clean-energy-transition-2023-12-06_en

European Commission. (2020). *A Renovation Wave for Europe (COM/2020/662 final)*. *https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A662%3AFIN*

European Commission. (2020a). *Commission communication – A Union of equality: Gender equality strategy 2020–2025 (COM(2020) 152)*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0152

European Commission. (2020b). *Towards an inclusive energy transition in the European Union*. Publications Office of the EU. https://op.europa.eu/en/publication-detail/-/publication/4a440cf0-b5f5-11ea-bb7a-01aa75ed71a1/language-en

European Commission. (2022). *REPowerEU Plan (COM/2022/230 final)*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A230%3AFIN

European Commission. (2023). *Commission Recommendation on energy poverty* (C/2023/4080). https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202302407

European Commission. (2024). *France Final Updated National Energy and Climate Plan 2021–2030*. https://commission.europa.eu/publications/france-final-updated-necp-2021-2030-submitted-2024_en

European Commission. (2024a). *Germany Final Updated National Energy and Climate Plan 2021–2030*. https://commission.europa.eu/publications/germany-final-updated-necp-2021-2030-submitted-2024_en

European Commission. (2024b). *In focus: Energy efficient buildings - delivering energy and cost savings for EU citizens*. https://energy.ec.europa.eu/news/focus-energy-efficient-buildings-2024-04-16_en

European Commission. (2024c). *Italy Final Updated National Energy and Climate Plan 2021–2030*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025SC0140&qid=1749139215310

European Commission. (2025). *A Roadmap for Women's Rights (COM(2025) 97 final)*. https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/gender-equality/gender-equality-strategy_en

European Commission. (2025a). *Action Plan for Affordable Energy: Unlocking the true value of our Energy Union to secure affordable, efficient and clean energy for all Europeans (COM(2025) 79 final)*. https://energy.ec.europa.eu/publications/action-plan-affordable-energy-unlocking-true-value-our-energy-union-secure-affordable-efficient-and_en

European Commission. (2025b). *EU-wide assessment of the final updated national energy and climate plans: Delivering the Union's 2030 energy and climate objectives (COM Staff Working Document SWD/2025/140 final)*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025SC0140&qid=1749139215310

European Commission. (2025c). *Factual summary report of the call for evidence on the Citizens Energy Package, Ares(2025)8499606*. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14737-Citizens-energy-package-protecting-and-empowering-consumers-in-the-just-transition_en

European Commission. (2025d). *Guidance on the Implementation of the Social Climate Fund (C(2025) 6732 final)*. https://employment-social-affairs.ec.europa.eu/document/7f23666f-5556-455a-b0f5-4c150994ce10_en

European Economic and Social Committee. (2024). *Study on gender-disaggregated data on energy poverty*. https://www.eesc.europa.eu/en/our-work/publications-other-work/publications/gender-disaggregated-data-energy-poverty

European Environmental Bureau (EEB), Women Engage for a Common Future (WECF). (2021). *Why the European Green Deal needs ecofeminism.* https://eu.boell.org/en/why-european-green-deal-needs-ecofeminism

European Institute for Gender Equality. (2024). *Gender equality index 2024 — country profile: Italy.* https://eige.europa.eu/gender-equality-index/2025/country/IT

European Institute on Gender Equality. (2024a). *Good practices on gender mainstreaming in the European Green Deal: Towards a more gender-equal and greener Europe*. https://eige.europa.eu/publications-resources/publications/good-practices-gender-mainstreaming-european-green-deal-towards-more-gender-equal-and-greener-europe?

European Institute for Gender Equality. (2025). *Gender mainstreaming.* https://eige.europa.eu/gender-mainstreaming

European Parliament (2019, March 22). *CO2 emissions from cars: Facts and figures (infographics).* https://www.europarl.europa.eu/topics/en/article/20190313STO31218/co2-emissions-from-cars-facts-and-figures-infographics

European Parliament and Council. (2023). *Directive (EU) 2023/1791 of 13 September 2023 on energy efficiency* (recast). https://eur-lex.europa.eu/eli/dir/2023/1791/oj

European Parliament and Council. (2023a). *Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 on the promotion of energy from renewable sources*. https://eur-lex.europa.eu/eli/dir/2023/2413/oj

European Parliament and Council. (2023b). *Regulation (EU) 2023/955 of 10 May 2023 establishing a Social Climate Fund and amending Regulation (EU) 2021/1060.* https://eur-lex.europa.eu/eli/reg/2023/955/oj

European Parliament and Council. (2024). *Directive (EU) 2024/1275 of 24 April 2024 on the energy performance of buildings (recast)*. https://eur-lex.europa.eu/eli/dir/2024/1275/oj

Feenstra, M., Laryea, C., & Stojilovska, A. (2024). *Gender aspects of the rising cost of living and the impact of the energy crisis*. Policy Department for Citizens' Rights and Constitutional Affairs, European Parliament. https://www.europarl.europa.eu/RegData/etudes/STUD/2024/754488/IPOL_STU(2024)754488_EN.pdf

G7. (2022). *G7 Report on Gender Equality and Diversity in the Energy Sector*. German Federal Ministry for Economic Affairs and Climate Action. https://www.bundeswirtschaftsministerium.de/Redaktion/EN/Publikationen/Energie/publikation-g7-report-on-gender-equality-and-diversity-in-the-energy-sector.pdf

German Federal Ministry for Economic Affairs and Climate Action. (2023). *Für mehr Geschlechtergerechtigkeit und Diversität im Energiesektor*. Retrieved 6 December 2025, from https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Schlaglichter-der-

Wirtschaftspolitik/2023/04/05-fuer-mehr-geschlechtergerechtigkeit-und-diversitaet-im-energiesektor.html

Giner-Reichl, I., Van Veldhuizen, M., & Detsch, C. (2023). *Europe's energy transition: Women's power in solving the labour bottleneck employment opportunities and requirements for low-carbon job markets*. Friedrich-Ebert-Stiftung. https://www.globalwomennet.org/wp-content/uploads/2023/06/FES-Study.pdf

International Energy Agency. (2023). *Italy 2023: Energy policy review*. OECD Publishing. https://www.iea.org/reports/italy-2023

International Renewable Energy Agency. (2019). *Renewable energy: A gender perspective*. https://www.irena.org/publications/2019/Jan/Renewable-Energy-A-Gender-Perspective

Joint Research Centre. (2024). *Who's energy poor in the EU? It's more complex than it seems*. European Commission. https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/whos-energy-poor-eu-its-more-complex-it-seems-2024-09-25_en

Kaval, A. (2024, May 2). *L'Italie se rêve en « hub énergétique » méditerranéen.* Le Monde. https://www.lemonde.fr/economie/article/2024/05/02/l-italie-se-reve-en-hub-energetique-mediterraneen_6231116_3234.html?

Kyllmann, C. (2025, February 24). *Household energy prices in Germany almost a third higher than before Ukraine war started – analysis*. Clean Energy Wire. https://www.cleanenergywire.org/news/household-energy-prices-germany-almost-third-higher-ukraine-war-started-verivox

Minkova, M. (2024). *The gender-blind assumptions of the EU's green transition require a reality check*. CEPS. https://www.ceps.eu/the-gender-blind-assumptions-of-the-eus-green-transition-require-a-reality-check/

Nicoloso, B. (2025). *Gender Power*. https://gef.eu/publication/gender-power/

Nicoloso, B., & Van Melkebeke, T. (2025). *Policy Brief: Gender at the heart of the EU energy Transition.* Green European Foundation. https://gef.eu/wp-content/uploads/2025/03/political-brief-gender-energy.pdf

Purcell, C., & Nanu, A. (2025, November 12). *Can the Citizens' Energy Package Deliver for People and Communities?* Green European Journal. https://www.greeneuropeanjournal.eu/can-the-citizens-energy-package-deliver/

SPD-Fraktion im Römer (2022, August 5). *Frauennachttaxi – SPD-Fraktion im Römer*. https://spd-im-roemer.de/frauennachttaxi/

Swedish Institute for European Policy Studies. (2025). *Gender equality at a crossroads: Implications of the 2024 European Parliament elections*. https://sieps.se/en/publications/2025/gender-equality-at-a-crossroads-implications-of-the-2024-european-parliament-elections/

Urban Innovative Actions. (2022). *Gendered Landscape - Umeå*. https://www.uia-initiative.eu/en/pdf/2823

Walk, P., Braunger, I., Semb, J., Brodtmann, C., Oei, P.-Y., & Kemfert, C. (2021). *Strengthening Gender Justice in a Just Transition: A Research Agenda Based on a Systematic Map of Gender in Coal Transitions.* Energies, 14(18), 5985. https://doi.org/10.3390/en14185985

Ferdebar, M. & Groneweg, K. (2023). *Mapping national gender policies in the energy sector – Germany (Deliverable D1.2)*. WECF. https://www.wecf.org/wp-content/uploads/2023/11/WECF-EUWES-D1.2_30.10.2023-1.pdf

Wessollek, M., Reuters, AFP, & dpa. (2025, September 15). *Monitoring-Bericht zur Energiewende: Reiche will fixe Einspeisevergütung für neue Solaranlagen abschaffen.* Die Zeit. https://www.zeit.de/politik/deutschland/2025-09/katherina-reiche-energie-foerderungen-subventionen-kuerzen?

Zentralverband des Deutschen Handwerks. (2025). *Handwerk als Schlüssel zur Transformation 2035*. https://www.zdh.de/presse/veroeffentlichungen/reden-und-namensbeitraege/handwerk-als-schluessel-zur-transformation-2035/

Annex 1: meetings

October 20

Öko-Institut e.V.

Öko-Institut e.V. is an organisation we visited in Freiburg, focused on environmental and energy studies. It's a research institute, founded by anti-nuclear activists in the 1970s. During our fieldtrip, they presented their work on the German Equality Reports, establishing data-driven links between energy poverty, energy policies and gender inequalities in Germany.

Frau und Beruf - City of Freiburg

The contact point Frau und Beruf (Women and Career) is an institution of the City of Freiburg funded by the Baden-Württemberg Ministry of Economic Affairs. Their aim is to promote the equal participation of women in working life. We met with Sandra Pfeifer, project manager of "Klimaheldinnen im Handwerk" (climate heroines in crafts). This initiative supports women in craft professions within the energy transition, building on two key observations: there is a significant shortage of skilled workers needed to implement the energy transition, and women remain markedly underrepresented in craft occupations and often struggle to remain in the sector.

Rieselfeld District

Rieselfeld is a model project in Freiburg, Germany that pioneered housing specifically built with women and families in mind. To counter the lack of institutionalisation of feminist building practice and lack of consideration for women's needs and perspective in mainstream public and urban planning, the collective "Stadt und Frau" (women and city) set out in the early 90s to build housing suited to the daily lives of women and children with explicit eco-social goals in mind. This pioneer project stands out for its groundbreaking approach to the inclusion of future renters and owners in the building process and collective living structures, the embeddedness into the surrounding urban fabric and infrastructure like public transport, schools and shops, centering feelings of community and security in the built environment and resource and energy efficient planning, building and maintenance while also delivering quality housing and adequate space for each family member.

October 21

Fraunhofer Institute

The Fraunhofer Institute for Solar Energy Systems ISE in Freiburg is committed to a sustainable, economical, secure, and socially just energy supply system based on renewable energies. Within its research focus areas of energy supply, energy distribution, energy storage, and energy use, the institute creates the technical prerequisites for an efficient and environmentally friendly energy supply. To this end, the institute develops materials, components, systems, and processes across business areas. Staff from the institute's research pillar presented an overview of the institute's research agenda, but also spoke in detail on their efforts to hire, retrain and promote female scientists within the institute, and the guardrails that allowed her to get a highly ranked position. The institute's external relations manager then gave us a tour and showed examples of innovations in the solar energy field.

The ICLEI Network

The International Council for Local Environmental Initiatives (ICLEI) is a network of local and regional governments that drive sustainability in their municipality. During our visit, we were presented with their plans to implement gender equality within their team, which consisted of four pillars: Organisational Actions, Communication, Training & Capacity, and Monitoring & Evaluation. During the second part of the meeting, we discussed how Barcelona (ES) and Umeå (SE) strive for gender equality and gender mainstreaming in their internal organization and in the city planning.

October 22

Alter Alsace Energies

Alter Alsace Energies is an association founded in the 1980s that supports local authorities and inhabitants in adopting sustainable solutions (solar energy, energy efficiency measures, building renovation, etc.). The association also raises awareness among various organizations (associations, social landlords, etc.) about the challenges of the energy transition. Various measures are taken within the association to ensure that women are integrated and treated on an equal footing with men (in decision-making processes, etc.).

European Parliament

We met with Benedetta Scuderi, Mélissa Camara and Charlotte Izard, deputies and staff of the Greens in the EU Parliament. They explained how the party integrates gender consideration across all its policies and how it is working to replicate that throughout EU institutions. Some key points that were highlighted were the difficulties of advancing gender issues with the current political configuration in the Parliament, and the need to foster broader cultural change, notably through EU funding for relevant projects. The main intersections between gender and the energy transition that were identified as priority areas for future EU policy works were energy poverty, the job transition, and energy communities.

October 23

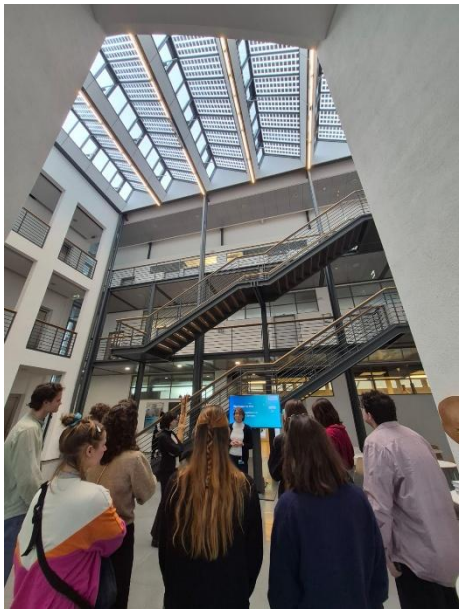
City Council Strasbourg - Meeting with Christelle Wieder

We met Christelle Wieder, Deputy Mayor in charge of Women's rights and gender equality. The city of Strasbourg is committed to gender equality. Its different action plans (regularly updated) call for the development of tools to achieve fairness between genders (gender-responsive budget proposal, training in order to reduce inequalities, green and "gender-neutral" schoolyards, anti-harassment measures…)

Espace Égalité

Espace Égalité is a space supported by the Strasbourg City Council, where a series of activities help participants understand the dynamics of discrimination and injustices. It's dedicated to children and youth and enables staff to address serious topics in a playful, specially-designed environment for the children to feel safe while thinking about diverse topics like gender inequalities, migrants' lives or disabilities.

Annex 2: Photos




KIOSQUE
Au Bon coin
Horlogerie

Annex 3: Presentation of the Heinrich Böll Stiftung and Virage Énergie

The Youth for Energy Futures Programme is organised by…

HEINRICH BÖLL STIFTUNG
PARIS
France | Italie

The Heinrich Böll Stiftung is one of the main German political foundations. As a think tank for green visions and projects, it disposes of a worldwide network with currently 35 international offices and promotes exchange and cooperation on the issue of just ecological transition, especially between civil society actors. The **Heinrich Böll Stiftung Paris** contributes to the strengthening of French-German, Italian-German and European cooperation.

VIRAGE énergie

Focused on energy and societal transition, the French NGO **Virage Énergie** produces practical tools for awareness-building and decision-making since 2006. Virage Énergie supports public actors in the definition of strategies in order to create a sufficient and sustainable society. Based in France, Virage Énergie also contributes to European cooperation projects on energy and climate issues.