

# Energy



## Relevance of gender in the policy area

Energy is a driver of economic development, underpinning all forms of economic activity. It is also a significant aspect of everyday life through its domestic uses and its role in modern communications, transport and technology. Furthermore, energy production and use is closely connected with climate change.

Energy plays an essential role in both women's and men's lives. However, it has been recently acknowledged that energy policy is not gender neutral. Achieving gender equality in the field of energy can be linked with human rights and social, environmental and economic development.

From a gender and human rights perspective, women and men have different energy needs.

Women spend more time than men in unpaid household work. This means that women spend more time at home and are therefore more dependent than men on heating and indoor air quality. In addition, women are more dependent on energy to use household devices (e.g.

ovens, dishwashers and vacuum cleaners). Poor housing conditions (such as poorly insulated environments) and pollutant electronic devices and fuels may have a negative impact on women's health.

According to the OECD, energy availability trends affect women and men differently. For instance, blackouts that occur during meal preparation can mean more work for women. Certain aspects of access to energy (e.g. cost and physical distribution) may also affect women and men differently. European Commission research suggests that more women than men may be subject to energy poverty. Energy poverty, also known as fuel poverty, is an expression used to describe a situation where "a household is unable to afford the most basic levels of energy for adequate heating, cooking, lighting and use of appliances in the home". Elderly women are at higher risk of fuel poverty due to their higher life expectancy and lower pensions. This risk is also shared by lone female-headed households that have lower incomes. Member States have both recognised and chosen to address the issues of vulnerable consumers and energy poverty. A strong subsidiarity approach takes account of national differences, but there is a danger of Member States not addressing energy affordability and additional consumer protection, or access to markets for vulnerable consumers. There is also a risk of actions in favour of vulnerable consumers not contributing to measures to address energy poverty.

According to the European Institute for Gender Equality (EIGE), women tend to be more sustainable consumers than men:

- they are more likely to buy eco-labelled products.
- they pay more attention to green procurement.
- they attach more importance to energy-efficient transport and fuels.
- they are more willing to change their behaviours to achieve sustainability goals, including energy efficiency.

Research carried out in Sweden shows that women are more likely to feel greater concern about their ecological footprint (61% of all women compared to 43% of all men). They are more willing to reduce their carbon emissions by buying from companies and producers whose activity mitigates climate change, such as organic food producers.

For economic growth, the green economy is a key economic factor underpinning national and EU development. Investments in green jobs in the energy efficiency and renewable energy sectors are expected to bring about investments of over €2 billion by 2020. According to Greenpeace and the European Renewable Energy Council, innovation in renewable energy production will contribute to 2.7 million more jobs in the sector over the next 20 years. However, this enormous potential growth is at risk due to the lack of suitable specialists in the field. Increasing women's participation in the green labour market may help to address the workforce shortage. In 2010, only 22.1% of those employed in the energy sector were women.

Increasing women's involvement in the field of energy has the potential to stimulate sustainable economic growth. Gender parity would consolidate women's right to equality and represent a significant social achievement.

Yet this potential is blocked by persistent gender inequalities. First of all, women are often employed in low-qualified and non-technical jobs in the energy sector. This may be related to the fact that fewer women than men undertake studies in science, technology, engineering and mathematics (STEM). Moreover, the average digital literacy of women is lower than that of men. Women's participation in the energy labour market is also discouraged by gender stereotypes, which portray the energy sector as a technical working environment that is unsuitable for women.

Women are also less likely to hold decision-making positions in the energy sector. The absence of women in energy policy and strategy planning decreases the likelihood that women's interests and needs will be taken into account.

The energy sector is influenced by a set of persistent gender inequalities, which can be summarised as follows:

- gender gaps in energy access.
- gender gaps in the energy labour market.
- gender gaps in energy-related education, namely segregation of women and men students across fields of study.
- gender gaps in decision-making.

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## Gender inequalities in the policy area - Main issues

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## Women and energy poverty

Lone female-headed households, and lone women and older women are all at a higher risk of fuel poverty than men.

Energy poverty is a problem that is on the rise in industrialised countries. When there is an increase in oil and gas prices there is a rise in energy costs, and this particularly affects poor households. Over the past decades, the proportion of lone-parent households has increased in the EU. Most of these lone-parent households are headed by mothers. Lone parents are considered to be a group significantly at risk of living in poverty.

The most recent Guidance Document on Vulnerable Consumers recognises that retirement and unemployment have an impact on the time spent at home. This affects heating or air conditioning costs. Older women have been identified as being at greater risk of energy poverty due to lower pensions. This guidance document also draws attention to the higher risk of fuel poverty among people who live alone in large homes, as heating/air conditioning costs will be high. These circumstances tend to apply to older people who often stay in the family home after their children have left. Women are also disproportionately affected due to their higher life expectancy.

The assumption that older women are more exposed to energy poverty can be supported by the figures for excess winter mortality (EWM). For instance, at the end of 2013 the UK Office for National Statistics published a Statistical Bulletin on EWM, which points out that women constitute 58% of the total number of excess winter deaths. The greatest number of excess winter deaths – for all age groups and both sexes – is found among women aged 85 and over. It should be borne in mind that older women outnumber older men two to one, because women have a higher life expectancy. In addition, compared to the previous period, the greatest increase in EWM was seen in women under 65 (where the EWM index increased from 8.2% in 2011/2012 to 12.4% in 2012/2013).

Energy poverty is not confined to the elderly, and elderly women in particular. Nearly 11% of the EU's population are not able to adequately heat their homes at an affordable cost. This situation is estimated to affect around 54 million people in Europe (figures for 2012). The scale of the problem can be attributed to rising energy prices, low income and energy-inefficient homes, and is particularly prevalent in central, eastern and southern Europe.

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## Gender gaps in the energy labour market

In Europe, the energy sector workforce is composed mainly of men (77.9%) with women representing only 22.1%. The same trend seems to apply to the renewable energies sector, where women are also underrepresented. In the renewable energy sector, women represent less than 30% of positions in manufacturing (e.g. fuel for vehicles, pollution-control equipment), construction (e.g. retrofitting buildings) and energy production. The more skilled jobs in these areas – metal workers, insulation specialists, plumbers and pipe fitters, electricians, heating and cooling experts – are mostly male-dominated. Other sectors, such as engineering and financial and business services (where the better-paid jobs are concentrated), are also dominated by men. When working in the renewable energy sector, women are generally employed in lower-skilled jobs, primarily in administration and communication.

Some of the most commonly cited reasons explaining women's low participation in the energy labour market are the following:

- lack of appropriate skills due to the gender gaps in energy-related education.
- the perception of the energy sector as a male domain and persisting gender stereotypes.
- the difficulty of achieving a work–family life balance which discourages women from taking on jobs that involve unpredictable work schedule or emergency travel.
- insufficient career promotion opportunities and mentoring programmes for women.

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## **Gender gaps in energy-related education**

According to 2014 Eurostat data, more women (42.3%) than men (33.6%) complete tertiary education. Yet women are more present in the humanities than in scientific fields. Eurostat data for 2012 show that the number of women graduating in science and technology per 1,000 inhabitants is considerably less than the number of men: 11% of women compared to 22% of men, aged 22 – 29. The increase in the percentages of tertiary graduates in science and technology over the 2010 – 2012 period is slightly higher for men at +2.9 percentage points) than for women, at +1.2 percentage points. At the same time, the energy sector requires more workers with scientific knowledge and specialist expertise.

There is a complex set of reasons for this situation:

- Some subjects of study and fields of work are established as either 'feminine' or 'masculine', for example the energy field is seen as a male domain.
- There is an absence of women scientist/engineer role models and a lack of science-

oriented guidance and mentoring programmes during upper-secondary education.

- The approach of teaching science in schools is outdated and unattractive to the interests of students taking the science curriculum.

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## Gender gaps in decision-making

The number of women who hold management positions in the energy sector is very low. According to a study by EIGE, research carried out in 2010 in Germany, Spain and Sweden showed that 64% of the 295 energy companies surveyed had no women at all on boards or management groups. Also, only 5% of the companies had women in 40% or more of their posts. The situation is hardly better in the renewable energy sector. For example, in Germany women represent only 8% of board members in associations promoting renewable energy. Figures tend to be slightly better in the oil industry, where there has been an increase of 3 percentage points in women's participation in leadership positions in the period 2000 – 2007, from 9% in 2000 to 12% in 2007.

The situation is much the same in the public sector. According to the 2012 EIGE study, 17.3% of women in the energy sector are employed in high-level positions, compared to 82.7% of men. The situation is slightly better in the Nordic countries than in Mediterranean countries. However, in both Nordic and Mediterranean countries, women leaders are absent in the technological areas of the energy sector. For instance, in Sweden, women and men participate equally in the decision-making process in ministries related to energy, yet women are less well represented in the Swedish Environmental Protection Agency and the Swedish Nuclear Power Inspectorate.

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# Gender equality policy objectives at EU and international level

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## EU level

### European Commission

The main objective of the European Commission in the energy sector is increasing women's participation in the knowledge economy, including the green economy. The Commission has set out a specific framework to tackle problems related to scientific skills and the low participation of women in the green labour market. This can be summarised as follows:

## **E-skills for the 21st century: Fostering competitiveness, growth and jobs**

The framework specifies that there is a need to promote specific actions addressing women in order to increase their participation in ICT and STEM fields. These actions include exchanging information and good practices on Member State initiatives for the promotion of science, maths and ICT role models, and career profiles and perspectives.

## **Agenda for modernising higher education systems**

Increasing women's participation in higher technical and scientific education is another EU objective. This Agenda acknowledges that tackling stereotyping and removing barriers women still face in reaching the highest levels in postgraduate education and research can liberate untapped talent. The Agenda envisages that one of the key policies to be addressed by Member States is implementing the recommendations of the Helsinki Group on women in science.

## **The Seventh Framework Programme's (FP7) cooperation work programme on energy**

This demonstrates the European Commission's commitment to enhance scientific excellence through mainstreaming gender equality. It continues the gender mainstreaming goals already drawn up for FP6 and ensures that the gender dimension is addressed in European research. This includes promoting the participation of women scientists in framework programme activities, with a target of 40%.

## **Council of the European Union**

In the 2012 Council Conclusions Gender equality and the environment: Enhanced decision-making, qualifications and competitiveness in the field of climate change mitigation policy in the EU, the Council calls on the Member States and the Commission to:

- take active and specific measures aimed at achieving a balanced representation of women and men in decision-making in climate change mitigation at all levels, including the EU level.
- support women in science and technology at national and European level.
- cut out gender stereotypes and promote gender equality at all levels of education and training, as well as in working life.
- integrate the principle of gender mainstreaming into all relevant legislation, policy measures and instruments related to climate change mitigation.

Furthermore, it calls on the Commission to:

- provide guidance about mainstreaming gender in policy areas.
- consider focusing on the issue of women and climate change in a future report.
- take action, with the participation of civil society, to raise awareness of the gender dimension of climate change policy.

## European Parliament

In 2012, the European Parliament issued a resolution on women and climate change, which includes references to the energy policy sector on the mitigation of climate change. It calls on the European Commission to:

- encourage women to pursue technical and scientific training and careers in the environmental and energy technology sectors. The need for expertise in this area will guarantee women secure jobs with a stable future, and ensure greater awareness of women's needs when it comes to establishing climate change policies.
- set up a toolkit to encourage inclusive decision-making.
- launch awareness-raising campaigns at the grassroots level, focusing on everyday consumer spending choices related to household and childcare activities.

Furthermore, it stresses the important role played by women in implementing mitigation measures in daily life, e.g. through energy and water-saving practices, recycling measures and the use of eco-friendly and organic products. Women are still seen as the primary managers of these resources in the home.

In the same year, the European Parliament adopted a resolution on the role of women in the green economy. This resolution calls on the Member States to:

- innovate and stimulate greater participation of both women and men in the development of renewable and environmentally friendly energy and architecture.
- promote women's entrepreneurship in the green economy.
- ensure that women are equally represented in political decision-making bodies as well as in government-appointed bodies and institutions. These bodies are those dealing with defining, planning and implementing environmental, energy and green jobs policies, to include the gender perspective.
- appoint more women to management roles and company boards within the green



jobs sector.

- use and develop ways to encourage women to choose courses and careers in the environment, transport and energy sectors. At the same time, fight stereotypes that favour careers in natural and applied sciences for men.

Furthermore, the resolution urges the Commission to be particularly aware that billions of people are totally dependent on biomass for energy. Children and women suffer from health problems because they collect, process and use biomass.

In 2014, the European Parliament adopted a resolution on A 2030 framework for climate and energy policies, which stresses that active labour market policies have to be targeted and designed to meet worker and labour demands. This is needed to avoid an insufficiently qualified labour force in emerging sustainable technologies, and to provide young people, women and disadvantaged groups with access to sustainable quality jobs in the green economy.

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## International level

### United Nations

The United Nations Conference on Sustainable Development – Rio+20 – took place in Rio de Janeiro, Brazil on 20 – 22 June 2012. It resulted in a focused political outcome document, titled *The Future We Want*, which contains clear and practical measures for implementing sustainable development. It recognises the critical role that energy plays in the development process, and that modern energy services are essential to social inclusion and gender equality. In September 2011, UN Secretary-General Ban Ki-moon launched the Sustainable Energy for All initiative and shared his vision for how governments, business and civil society working in partnership can make sustainable energy for all a reality by 2030. The United Nations General Assembly unanimously declared the decade 2014 – 2024 as the decade of sustainable energy for all. This underscores the importance of energy issues for sustainable development and for the elaboration of the post-2015 development agenda. The first two years of the decade will focus on women, energy and health.

The new sustainable development goals agreed at the UN Sustainable Development Summit include specific objectives on affordable and clean energy for all. Even though not directly referring to gender equality, two targets under Goal 7 (ensuring universal access to affordable, reliable, sustainable and modern energy for all) are highly relevant for ensuring women's equal access to energy, as women are considered vulnerable to energy poverty.

- “By 2030, ensure universal access to affordable, reliable and modern energy

services.”

- “By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.”
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## Policy cycle in energy

### How and when? Energy and the integration of gender dimension into the policy cycle

Gender dimension can be integrated in all phases of the policy cycle. For a detailed description of how gender can be mainstreamed in each phase of the policy cycle [click here](#).

Below, you can find useful resources and practical examples for mainstreaming gender into the energy. They are organised according to the most relevant phase of the policy cycle they may serve.

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## Practical examples of gender mainstreaming in energy

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### Norway

The Norwegian action plan for women’s rights and gender equality was launched in 2007 to emphasise the importance of gender sensitivity in energy as one of the five priority areas of Norwegian development cooperation. The plan states that Norway will take measures to ensure:

- both women and men participate at all levels in the management of natural resources in partner countries.
- contribution to the creation of jobs and livelihoods for both women and men.
- support for sustainable, safe energy solutions that ease women’s burden of work and improve their access to health services and education.

- support for the development and use of clean energy solutions, such as solar energy.
  - promotion of the active participation of women in decision-making and implementation processes.
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## UK

The UK initiative for the future sustainable procurement national action plan gives the British government a clear direction on how to make real progress towards better, more sustainable procurement. This will in turn allow it to move forward on sustainable development and set an example both to business and consumers in the UK and to other countries. Gender equality and sustainable energy represent two criteria to be considered by the British authorities in awarding contracts.

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## Timeline

The key milestones of the energy policy are presented below.

### **Green Paper - A European strategy for sustainable, competitive and secure energy (COM(2006) 105 final)**

Read the strategy [here](#).

2006 - 2006

### **Communication from the Commission to the European Council and the European Parliament: An energy policy for Europe (COM(2007) 1 final)**

Read the document [here](#).

2007 - 2007

### **Regulation (EC) No. 663/2009 of the European Parliament and of the Council of 13 July 2009 establishing a programme to aid economic recovery by granting Community financial assistance to projects in the field of energy**

Read the regulation [here](#).

2009 - 2009

**Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC**

Read the directive [here](#).

2009 - 2009

**Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (Text with EEA relevance)**

Read the directive [here](#).

2009 - 2009

**Directive 2009/125/EC of the European parliament and of the Council of 21 October 2009 establishing a framework for the setting of eco-design requirements for energy-related products (recast)**

Read the directive [here](#).

2009 - 2009

**Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020**

Read the decision [here](#).

2009 - 2009

**Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the**

## **Committee of the Regions: Energy 2020 – A strategy for competitive, sustainable and secure energy (COM(2010) 639 final)**

Read the document [here](#).

2010 - 2010

## **Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings**

Read the directive [here](#).

2010 - 2010

## **Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Energy Roadmap 2050**

Read the document [here](#).

2011 - 2011

## **European Parliament's resolution on the role of women in the green economy**

Read the resolution [here](#).

2012 - 2012

## **Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A policy framework for climate and energy in the period from 2020 to 2030**

Read the document [here](#).

2014 - 2014

## **Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Green Employment Initiative: Tapping into**

## the job creation potential of the green economy

Read the document [here](#).

2014 - 2014

## Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: European energy security strategy

Read the document [here](#).

2014 - 2014

## Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A framework strategy for a resilient energy union with a forward looking climate change policy

Read the document [here](#).

2015 - 2015

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## Current policy priorities at EU level

**The energy union policy is based on five mutually-reinforcing and closely interrelated dimensions designed to bring greater energy security, sustainability and competitiveness:**

- energy security, solidarity and trust.
- a fully integrated European energy market.
- energy efficiency contributing to moderation of demand.
- decarbonising the economy.
- research, innovation and competitiveness.

Energy detailed objectives and targets are included in the EU 2020, 2030 and 2050 energy [strategies](#).

### **The main EU energy policy priorities by 2020 are:**

- making Europe more energy-efficient by accelerating investment into efficient buildings, products and transport.
- building a pan-European energy market by constructing the necessary transmission lines, pipelines, LNG terminals and other infrastructure. By 2015, no EU country should be isolated from the single market.
- protecting consumer rights and achieving high safety standards in the energy sector.
- implementing the strategic energy technology plan – the EU's strategy to accelerate the development and deployment of low carbon technologies such as solar power, smart grids and carbon capture and storage.
- pursuing good relations with the EU's external suppliers of energy and energy transit countries.
- supporting entrepreneurship to make European business fitter and more competitive.
- covering every part of the increasingly international value chain from access to raw materials to after-sales service.

### **EU energy targets to be achieved by 2020 are included in the EU 2020 strategy:**

- reducing greenhouse gas emissions by 20% compared to 1990 levels by 2020. The EU is prepared to go further and reduce by 30% if other developed countries make similar commitments and developing countries contribute according to their abilities, as part of a comprehensive global agreement.
- increasing the share of renewable in final energy consumption to 20%.
- moving towards a 20% increase in energy efficiency.

### **By 2030, the EU aims to reach the following targets in the energy field:**

- a 40% cut in greenhouse gas emissions compared to 1990 levels.
- at least a 27% share of renewable energy consumption.
- at least 27% energy savings compared with the business-as-usual scenario.

### **By 2050, the EU aims to reduce greenhouse gas emissions by 80% – 95% when compared to 1990 levels. The main priorities set for reaching this objective are:**

- decarbonising the energy system.

- increasing the share of renewable energy and using energy more efficiently.
- investing in infrastructure and replacing old infrastructure in place; designing the common energy market.

Furthermore, the EU aims to allow labour market and skills policies to play an active role in supporting employment and job creation in the green economy.

**To achieve this, the Commission sets the following priorities of activities:**

- bridging the skills gaps.
  - anticipating change, securing transitions and promoting mobility.
  - supporting job creation.
  - increasing data quality
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**Want to know more?**