

Gender Awareness in Energy - SSH: Gamified Decision Making for a Participatory Learning Process

Antonio De Nicola
ENEA

Aleksandra Wagner
Jagiellonian University

Introduction

Energy transition refers to the shift from existing energy systems, often reliant on fossil fuels, to ones that increasingly depend on renewable and sustainable energy sources. Global challenges, like rising air pollution, climate change and the pursuit of energy security, have made this transition imperative. Unfortunately, this urgency could potentially exacerbate inequalities and injustices, particularly affecting segments of society that might be excluded from the process. In this context, the European project gEneSys¹ aims to address gender-related injustices that could emerge during the energy transition. This workshop, an initiative of gEneSys, strives to raise awareness about this issue through an innovative co-creation approach involving various energy transition actors, including researchers, practitioners, and other stakeholders. The insights gathered will also serve as a baseline for defining just energy transition pathways, functioning as transformation archetypes to achieve a more equitable society.

Workshop duration: 1h 30 m

4 scenarios:

1. Green energy business
2. Policy making
3. Education
4. NGOs

1) Green energy business.

This scenario involves an interview for a position of the Product Development Team Leader in the Green Energy industry, with two candidates: a man and a woman. The unit is responsible for a series of steps including the conceptualization, design, development and marketing of newly created or rebranded goods or services. The company needs a well-qualified employee who could contribute to the further development of the business. They seek someone for a long-term perspective. The woman is highly qualified, but she is young, recently married, and expecting a child. Her role in the game is to present the requirements for effectively balancing work and family life. The second candidate is a man, and his task is to highlight the advantages of hiring a man, such as flexibility in working hours and willingness to travel. The third participant in the game

¹ gEneSys: Transforming Gendered Interrelations of Power and Inequalities in Transition Pathways to Sustainable Energy Systems. This project has received funding from the European Union's Horizon Europe - Culture, creativity and inclusive society - under grant agreement no. 101094326. <https://genesys-project.eu>

assumes the role of an opposing manager, tasked with presenting the barriers to gender equality. Lastly, the fourth participant plays the role of a manager advocating for hiring women, and her/his task is to propose tools and solutions to overcome the barriers raised by the opposing manager.

Role	Task
1.1 Female candidate	To present some requests for work-life balance
1.2 Male candidate	To present some advantages of hiring a man
1.3 Opposing manager	To present some barriers for gender equality
1.4 Manager in favour	To present how to overcome barriers (tools & solutions)

1.1 Role profile: You are a woman, you have completed your MA degree with excellent results, and for the next five years you have worked hard to gain professional experience in the energy sector. Your professional achievements are impressive, and you have demonstrated your commitment, responsibility and ambition. You got married a few months ago and are now expecting your first child. You love your job and want to return to it immediately after maternity leave. You decide to apply for a new position in the green energy industry because you believe it will help you balance your career and family life.

1.2 Role profile: You are a male with 4 years of work experience. Work is your priority. You are "success-hungry" and want to develop your career in the green energy industry. You are flexible, ready to work a lot and willing to travel for business. You have no family commitments.

1.3 Role profile: You are one of two managers involved in the recruitment process. You appreciate the experience and achievements of both candidates, but you think that hiring a man would be more convenient for the company due to his willingness to prioritise work. You consider gender equality to be highly problematic for various reasons.

1.4 Role profile: You are one of two managers involved in the recruitment process. You prefer to select the female candidate because of the gender balance in the company. You believe that the possible limitations related to the recruitment of a young mother can be overcome.

2) Policy making.

This scenario revolves around **a new local policy aimed at reducing CO₂ emissions within the city**. Specifically, the municipality has implemented a prohibition on internal combustion engine cars in the city center, allowing only electric cars to circulate. However, due to this ordinance and the high cost of electric cars, a female cook working at a restaurant in the city center is now compelled to rely on public transportation at night. Unfortunately, night buses are infrequent and with less extensive routes. Furthermore, there has been a recent surge in attacks and robberies targeting women during night time in the city center. The objective of this simulation is to depict a potential debate involving the female worker, an environmental activist, a local politician advocating for the electric car policy, and another politician seeking to find a middle ground among the diverse demands that have arisen.

The role of the female worker is to express the impact and challenges resulting from the policy on women's lives. The pro-policy activist's role is to emphasize the benefits of the policy while disregarding the secondary effects on individuals. The pro-policy politician is responsible for prioritizing the policy's implementation, highlighting only its advantages. On the other hand, the anti-policy politician's role is to act as a mediator and propose innovative solutions that address the concerns raised.

2.1 Role profile: You are a woman who works in the city centre as a cook in a restaurant that is open until late in the evening. You usually finish work after midnight and do not earn enough to afford the electric car. You are afraid to use public transport at night because of recent attacks and robberies against women reported by the media and other workers.

2.2 Role profile: You are a male environmental activist. You have spent over ten years fighting for a better, less polluted city. You know that a climate catastrophe is just around the corner and that we - as a society - have the last chance to mitigate climate change. The key is a joint effort by all of humanity, including the citizens of our city. This means that a change in daily routines is necessary and urgent.

The proposed policy, although it has some disadvantages, is an absolutely necessary step to achieve climate neutrality in the city. There are a lot of advantages like: less traffic, reduction of emissions, as a consequence benefits for the health (children, adults). It is a policy aimed at a common good, which is a less polluted city and some specific problems and risks can be addressed and mitigated.

2.3 You are a local policy maker working in the municipality, the department of transport. You support this new policy as a necessary tool to achieve climate neutrality, which is one of the city's strategic goals. You want to develop the public transport system and believe that it can be decarbonised, safe and comfortable for all residents. You have many ideas on how to do this, including better integration of goods and passenger transport (e.g. parcel lockers at stations).

2.4 You are a local policy maker working in the field of social policy. You understand the arguments for decarbonising transport, but you are also aware of the negative

consequences of the proposed solution for some groups of citizens. You know the specific risks related to different dimensions of inequalities. You have some ideas on how to implement solutions that would help to reduce these risks. You want to support the implementation of climate change policies, but in a way that does not affect the most vulnerable citizens.

Role	Task
Female worker	To present negative consequences of policy implementation
Male activist	To present policy benefits
Policy maker (in favour of the policy)	To present policy motivations and benefits
Policy maker (against the policy/mediator)	To present creative solutions to mediate (e.g., public transportation until late night, car sharing)

3) Education.

This scenario involves a campaign led by the Energy Technologies Department of a university to **increase the enrolment of female students**. The key actors in this scenario are as follows: a professor, a prospective female student, and two current female university students. The professor's role is to propose ideas for the campaign. The prospective female student's role is to share her expectations for the future. The first university student's role is to present reasons why it may be challenging for a woman to enrol, such as activities in the labs that end late in the evening, leading to personal safety concerns when returning home, or the limited availability of women's toilets throughout the university. On the other hand, the second university student's role is to explain the advantages of women enrolling, emphasizing its importance and highlighting what a female perspective can contribute to the energy world.

Role	Task
Professor	To propose ideas for the enrolling campaign

University student I	To present barriers for female students
University student II	To present why it is good and important to enrol
Prospective student	To present her expectations for the future

3.1 Role profile: You are a professor at the Faculty of Energy Studies, Department of Energy Technologies. The initiative proposed by your department is a communication campaign aimed at increasing the number of female students, who now represent less than 10% of all students enrolled in the courses offered by your department. You have some ideas about why young women rarely choose to study energy technologies and want to address them in a campaign to change attitudes and encourage women to consider energy studies as a good career path for them. You want to listen to your students to make the campaign relevant and effective.

3.2 You are a female student of energy technologies. After two years of study, you have a lot of insights about what makes studying here difficult for women. You think that the current programme doesn't reflect gender perspectives, which results in operational difficulties in the daily functioning for female students, from the lack of sufficient number of toilets for women to laboratory activities finishing late in the evening. There are other concerns that you want to raise. Your point is that it is not only the issue of expectations and gender bias in thinking about educational pathways, but also the daily routines of studying that create additional challenges for female students.

3.3 You are a male student enrolled in the Energy Studies programme as the Energy Technologies Department. You are very satisfied with the merits of the programme and think that it is a good option for female students. You also believe that gender balance in the energy sector is a necessary condition for effective transition, as it unleashes the potential of human talent and skills. You believe that gender balanced organisations offer a better work-life balance and achieve more efficiency in their operations. You support the idea of the campaign and try to highlight why the inclusion of women is prospective and beneficial for all.

3.4 You are a female student who will be graduating in energy studies next year. Recently you have been thinking more about your expectations for the future. You think it is important to address in a campaign what women expect from working in the energy sector and what this sector can offer them. The aim is not only to encourage students to choose this course, but also to start a discussion about the presence of women in the energy sector. Think about what you need to develop your career in energy sectors (female mentorship, respect for work-life balance, parental policies for both parents and others (?)) and propose how to include these issues in the campaign.

4) NGOs.

Cobalt is a key element to produce electrical machines, but the mining of this metal in Africa (a Developing Country- DC) has some dark sides. One of these is that it causes harm to pregnant women (e.g. premature births or babies with malformations). The following players are involved in this scenario. The first is an African miner who will present the problems caused by her work. The second is a representative of industry (e.g. batteries or electric cars) who will present why it is useful to continue with metal mining from a social good perspective (social good) and an economic one (revenue). The third player represents the mine owner (mining company owner) who will present the benefits of having a mine (roads, infrastructure, etc). The fourth player represents NGOs and will act as a mediator by proposing ideas on how to protect women considering their vulnerability.

Role	Task
African miner (female)	To present problems of female miners
Industry manager (male)	Motivations for energy transition innovation
Owner of mine (male)	Societal benefits of cobalt mining
NGOs	Present creative solutions to mediate

4.1 Role profile:

You are a female miner working in a cobalt mine in a Developing Country(DC). You face considerable challenges in getting to work in the mines of this resource-rich country: there is a lack of health and safety at work, and some of your colleagues have been killed by cave-ins. Accidents and abuse are common in this type of work in the DC. Women are often forced to do dangerous jobs by men who take most of their pay. Their work is exhausting, they are responsible for carrying large sacks of earth and grinding stones by hand, but they are paid the least. They have no access to trade unions, which could offer them more protection. In addition, cobalt mining causes a lot of

pollution, which affects health and causes serious damage to pregnant women and their children.

4.2 You are a male manager working for an international company that produces electric cars. You believe that the electric car is a good solution that takes into account people's need for mobility and independence on the one hand, and the need for decarbonised transport on the other.

Electric cars are promising for the future of individual and public transport, but they require batteries made from rare minerals such as cobalt. More than 75% of cobalt comes from the DC, and you are aware of the many problems associated with cobalt extraction, but you believe that they are complex and difficult to solve at the level of individual organisations, and need to be solved by legislation. The benefits of using cobalt must not be undermined in developing the innovation needed for the energy revolution.

4.3 You are a man, a manager working in the cobalt mining industry in DC. You know that this type of activity always has some disadvantages for the local community and the natural environment, but your company tries to mitigate them. It offers benefits to the local community, such as investment in infrastructure. The company has built a road, which is useful for transporting goods, but also for local people. It supports the local health centre and public school. They point out that the company is often the only employer in a location.

4.4 You are an NGO activist specialising in women's rights. You know all the reports on the critical situation in the DC (provided by international NGOs). You are inclined to reach a compromise by securing the rights of the workers and other local people and the cobalt mining. You believe that the owners of the cobalt mines can contribute to the development of the local community by including a gender lens in identifying and mitigating the problems. You want to encourage managers to be more proactive and take social responsibility for the unintended consequences of their business.

Game implementation

1. Homework Groups (40 minutes)

In this phase of individual work participants consider carefully the case studies and the roles. They elaborate all the reasons that led them to make a decision which would be the best for each player, and its consequences for other groups.

2. Individual work.

Participants are randomly divided into the groups and they have assigned a role.

During 10 minutes, every player takes time to justify their position and prepare to convince the decision-makers using a pre-defined form (not all the fields need to be filled in at this stage):

<i>The challenge (problem to solve)</i>	<i>Objective</i>	<i>Target group</i>	<i>Impacts of the decision (short, mid and long term)</i>	<i>Needs</i>	<i>Tensions</i>
<i>Institutional frameworks</i>	<i>Constraints</i>	<i>Actions</i>	<i>Stakeholders</i>	<i>Threats</i>	
<i>Opportunity</i>	<i>Decision</i>		<i>Allies and opponents</i>		

Decision to take: what kind of decision is expected to be made

Objective: what is an intended consequence of making a decision

Target: who are the individuals, groups or institution that can benefit from the decision

Impact: what can be outcomes of this decision for each of the target groups

Needs: what are the needs of each target group in the context of a decision.

Tensions: what are the possible tensions between different target groups' needs

Constraints: Any kind of limitation, restriction or legal rule the recovery decision must be compliant with.

Actions: An activity that should be done to implement the decision.

Stakeholder: A person, group or organization that has an interest or a concern in a decision.

Decision threat: Anything or anyone threatening the success of the decision.

Decision opportunity: Any benefit that can be achieved from the decision.

Institutional framework: Institutional subjects responsible for the decision.

3. *Team work (40 minutes)*

This stage consists of two steps. In the first step, each team member briefly presents his or her own work: the proposed decision and the reasons for it.

In the second step, the team discusses until they agree on a common decision based on maximised utility and fill in all fields in the canvas.

4. Presentation of results (40 minutes): 10 minutes per each team.

5. Summing up (10 minutes)

6. Award (to be announced after the meeting)