Energy information and critical literacy

This free, short course empowers you to navigate the complex world of energy information, make informed decisions, and contribute to a sustainable energy future within the European Union. The course will help equip you with essential skills to decipher, evaluate, and apply critical thinking to energy issues.

You might be:

- An engaged citizen seeking to understand energy sources, technologies, and policies.
- A concerned consumer wanting to make informed choices about your energy consumption.
- A critical thinker interested in evaluating information and challenging misinformation.

This course will deepen your understanding of the digital energy transition and support your own digital energy journey! The course lasts for around 30 minutes. It is a self-paced, stand-alone course and part of the suite of 12 courses called Digital Energy Essentials.

At the end of the course, we suggest some further learning materials for you to explore, including the course What is the Digital Energy Transition? If you are unfamiliar with what digital energy is and the reasons behind moving towards digitising our production and consumption of energy, you may want to start with this course.

This course is part of a suite of learning materials developed by the Every1 project which aims to enable and empower everyone’s engagement in the energy transition. You can find out more about the project here: https://every1.energy

You can enrol to track your progress on the course. If you view all sections of the course, and complete a short quiz, you will be awarded an Every1 project digital badge.

Course learning outcomes

After studying this short course, you should be able to:

- Define energy information and critical energy literacy within the European Union context.
- Use different strategies and approaches to assess the credibility of energy information sources and recognise potential biases.

Energy information and critical literacy

How this course works

EVERY1

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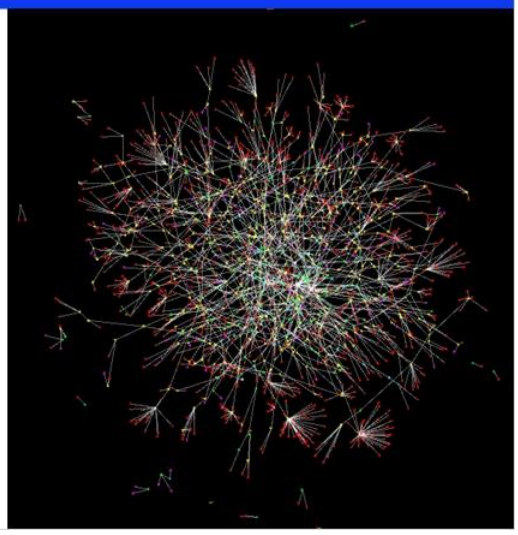

How this course works

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Energy information and critical literacy EVERY1

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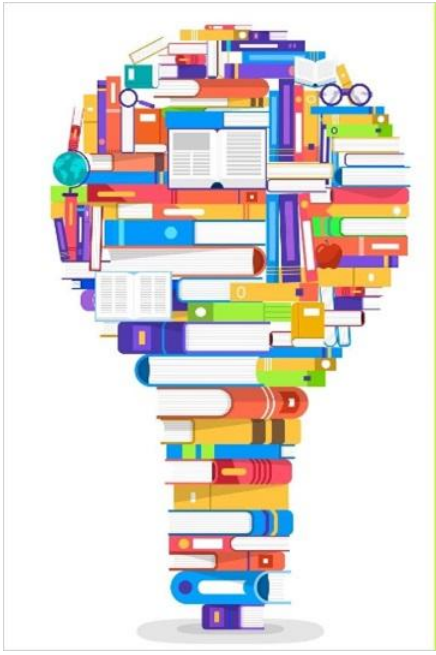

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Introduction

The European Union (EU) is undergoing a profound energy transformation, driven by the urgent need to combat climate change, reduce dependence on fossil fuels, and create a more sustainable and secure energy system.

Citizens play a vital role in this transition.

By understanding energy information and applying critical literacy skills, we can make informed choices, participate in policy debates, and contribute to a cleaner energy future.

What is energy information?

Let's take a closer look at what we mean by the term **energy information**.

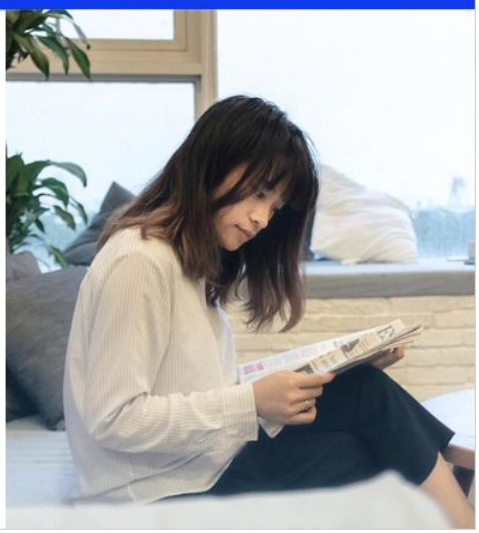
Energy information can refer to a wide range of data, knowledge, and perspectives related to:

- **Energy sources:** Fossil fuels, renewable energy (solar, wind, hydro, geothermal, biomass), nuclear energy.
- **Energy technologies:** Power generation, transmission, distribution, energy efficiency, and energy storage.
- **Energy issues:** Climate change, energy security, energy access, energy poverty, and the social and economic impacts of energy choices.

What is energy information?

Energy information is important as it enables us to:

- **Make informed decisions:** Whether you're choosing an electricity provider, considering home energy upgrades, or voting on energy policies, sound decisions rely on access to accurate and unbiased information.
- **Understand the big picture:** Understanding the complexities of the energy system empowers you to grasp its implications for the environment, economy, and society as a whole.
- **Actively participate in conversations about the digital energy transition:** Being energy literate enables you to engage in meaningful discussions, advocate for responsible policies, and hold decision-makers accountable.



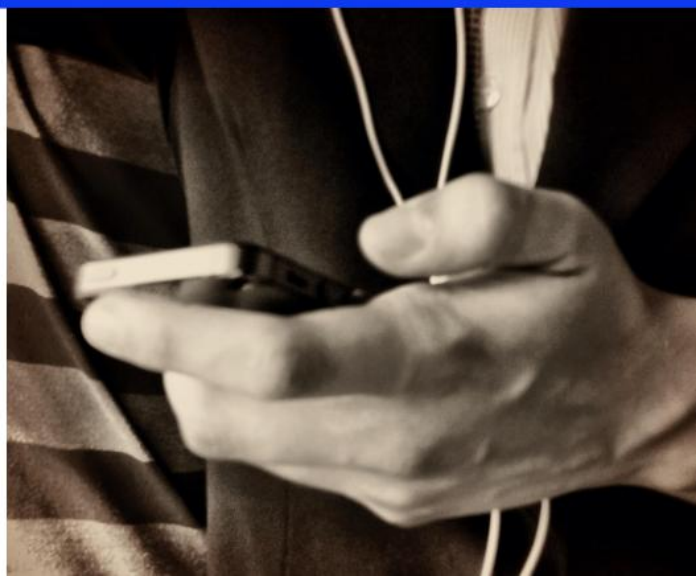
What is critical literacy?

In this course we describe **critical literacy** as active engagement with information.

This means that we actively question, analyse, and evaluate information rather than passively absorbing it.

Let's take a closer look at how we might critically engage with energy information.

We list some examples on the next slide.



What is critical literacy?

Identify sources and biases by scrutinising the origin of information and recognising potential influences. Is the source credible? Are there any vested interests?

Assess accuracy and completeness by examining information for factual accuracy, logical consistency, and potential omissions. Does the information align with other reliable sources? Are there any gaps in the data or arguments presented?

Identify misconceptions by recognising common logical fallacies and misleading arguments often used in energy debates. Is the reasoning sound? Are there any unsupported claims or exaggerations?

Discern propaganda by identifying attempts to manipulate or distort information to promote a particular agenda. Is the information presented to you in a balanced and objective manner, or is it designed to sway your opinion?

Consider social and political contexts by understanding how energy issues are intertwined with power dynamics, social justice, and economic inequality. Who benefits from certain energy choices? Who bears the costs?

What is critical literacy?

You might recall examples of when you critically engaged with energy information.

However, you might have also been not quite sure as to what you were hearing or reading was true.

If you'd like to explore some examples of common misconceptions or misunderstandings about energy, you may want to explore this International Energy Agency's article on Three myths about today's global energy crisis.

Or the World Economic Forum's Renewable energy: common myths debunked.

Evaluating energy information

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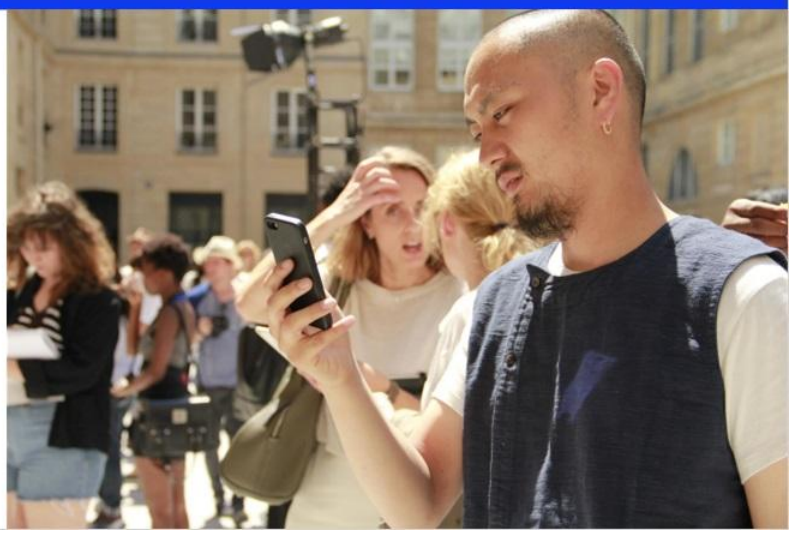
To effectively navigate the abundance of energy information available, it's essential to critically evaluate sources and the information they provide.

Let's take a deeper look at some ways in which you can critically engage with energy information.



Evaluating energy information

EVERY1

- **Conducting a credibility check:** Assess the source's authority, expertise, and potential biases. Is it a reputable scientific organisation, a government agency, an industry group, or an individual blogger?

- **Checking funding and affiliations:** Understanding the source's funding and affiliations can reveal potential conflicts of interest or agendas that might influence the information presented.

Evaluating energy information

What kind of perspectives, motivations and qualifications might the author(s) have?

- **Look beyond the words:** Consider the author's background, qualifications, and potential motivations. Are they an expert in the field? Do they have any affiliations that might influence their viewpoint?

Assess the accuracy and completeness of the information:

- **Challenges in the digital age:** The abundance of information available online can be overwhelming, and not all sources are created equal. Additionally, the lack of standardisation in energy data collection and reporting can create inconsistencies and complicate comparisons.
- **Strategies for verification:** Cross-referencing information with multiple reliable sources, seeking expert opinions, and checking for citations and supporting evidence are crucial steps in assessing accuracy.

Evaluating energy information

Look out for bias and misinformation:

- **Red flags:** Watch out for emotional language, exaggerations, cherry-picking of data, one-sided arguments, and logical fallacies. If something seems too good to be true or overly alarmist, it warrants further scrutiny.
- **Critical analysis:** Apply critical thinking skills to evaluate the evidence presented and the conclusions drawn. Are there alternative explanations or perspectives?

Evaluating energy information

EVERY1

Evaluate website credibility:

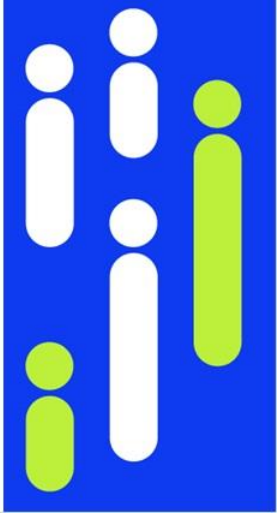
- **Beyond the surface:** A visually appealing website doesn't guarantee reliable information. Consider factors like the domain name, ownership, author credentials, transparency about funding and affiliations, and the presence of a clear editorial policy. Look for references and citations to support claims.

Evaluating energy information

EVERY1

Adopting a critical approach can also help you make informed energy choices by enabling you to better understand:

- **Your options:** Explore the different energy sources and technologies available to you as a consumer in the EU. Consider factors such as cost, environmental impact, and reliability.
- **Energy efficiency:** Learn about energy-efficient appliances, home energy upgrades, and behavioural changes that can help you reduce your energy consumption and save money.
- **Renewable energy:** Explore options for using renewable energy sources, such as solar panels, wind turbines, or green electricity tariffs.



Conclusion

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An energy-literate society is better equipped to understand the complexities of the energy system, engage in meaningful policy debates, and make choices that prioritise long-term sustainability.

By applying critical literacy skills to energy information, you can become an active and informed participant in the EU's energy transition.

Additional resources

- Find out more about the digital energy transition in our What is the digital energy transition? course. If you've already completed this course, read the European Commission article on Digitalisation of the energy system.
- Although aimed at the UK context, the myths explored in the UK National Grid's Clean Energy Myths: is it really too expensive and not reliable? are relevant to many other contexts.
- Read the Energy Saving Trust's article Debunking Solar Myths.

Acknowledgements

Energy information and critical literacy is an adaptation of selected material ('The original works') as follows:

Kellberg, S., Keller, M., Nordine, J., Moser, S. & Lewalter, D. (2024) Energy literacy for all? Exploring whether prior interest and energy knowledge mediate energy literacy development in a modern socio-scientific museum exhibition, International Journal of Science Education, Part B: Communication and Public Engagement. 1-22. This paper is licensed CC BY 4.0. Nature of Adaptation of the Original Work: This course integrates findings from this research on how prior knowledge and interest influence energy literacy development.

The International Energy Agency's (IEA) World Energy Employment 2022 report which is licensed CC BY 4.0. Nature of Adaptation of the Original Work: This course utilises data and insights from this report to highlight the employment implications of the energy transition in the EU. This is a work derived by the Every1 project from IEA material and the Every1 project is solely liable and responsible for this derived work. The derived work is not endorsed by the IEA in any manner.

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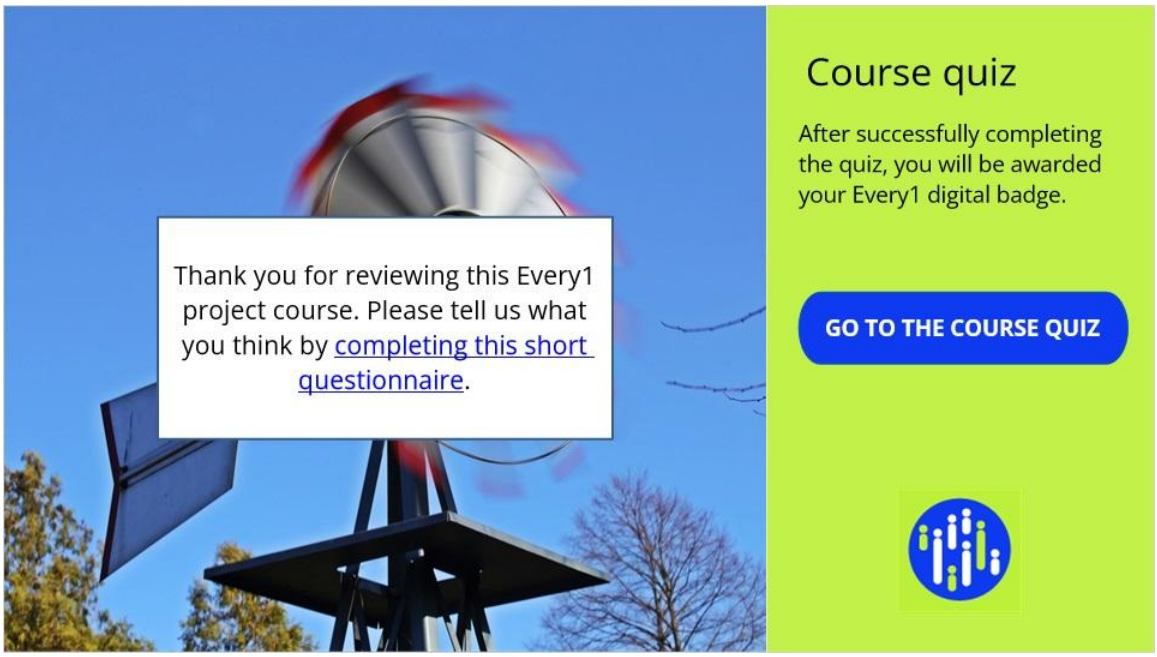

Course quiz

Now it’s time to complete the course quiz – it’s a great way to check your understanding of the course content.

This quiz contains 3 questions and a pass mark of 70% and above is required if you'd like to be awarded your Every1 digital badge.

You can review the answers you gave, and which were correct/incorrect, after each attempt has been completed.

If you don’t pass the quiz at the first attempt, you are allowed as many attempts as you need to pass.

Grading method: Highest grade

Grade to pass: 21.00 out of 30.00