

Myths and Misconceptions of solar energy: communicating solar energy

In partnership with the Clean Energy Solutions Center (CESC)

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ASSISTING COUNTRIES WITH CLEAN ENERGY POLICY

Overview of the expert

Factor is an international group, specialized in providing global, innovative and sustainable solutions in areas such as climate change, energy, sustainability, trading and innovation.

Our key value is our people. We have offices in six countries, where our interdisciplinary team works for public and private stakeholders, international organizations and non-profit entities.

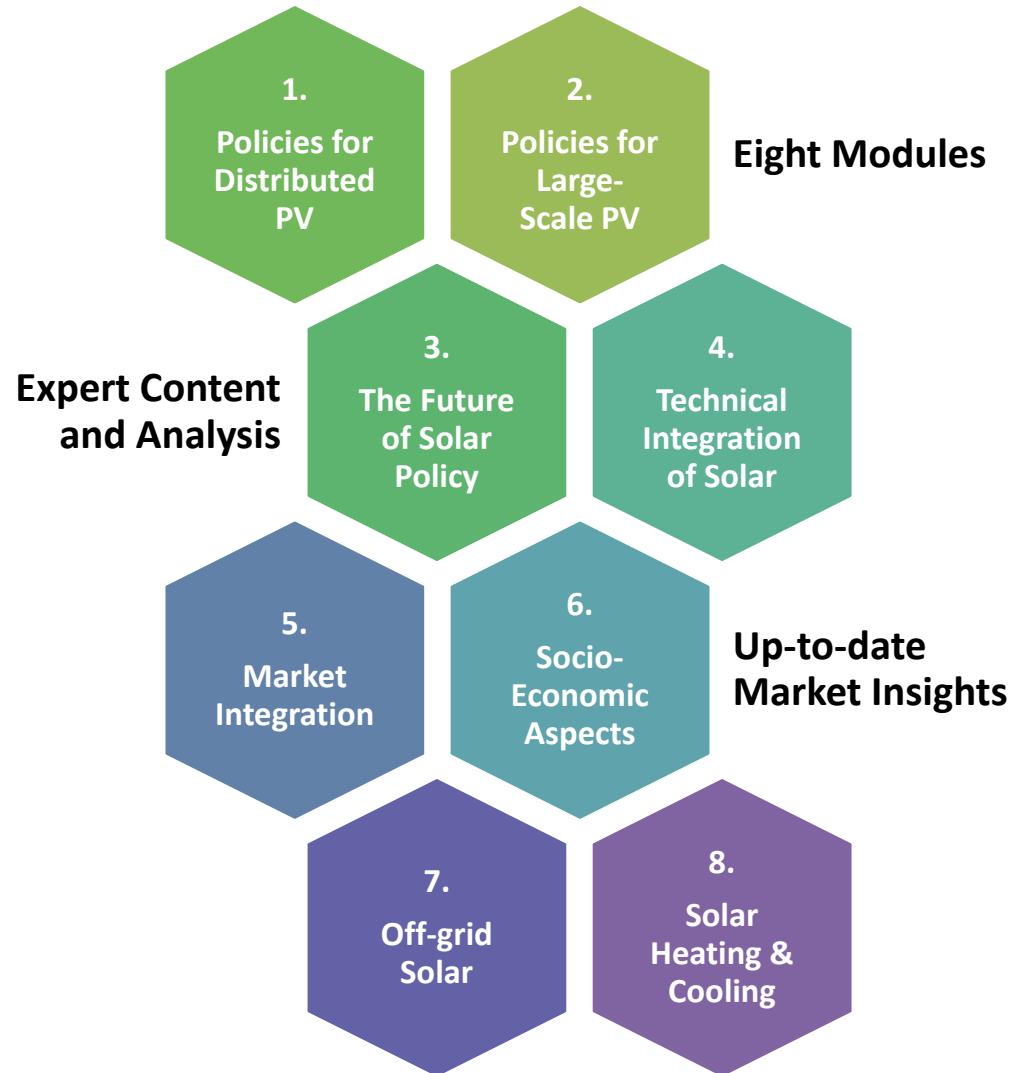
Our own history and experiences are based on constant innovation. This helps us target our services, by combining academic knowledge, technology and practical experience.



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Dept, [Factor](#)
20 years in RE
Sector
- Worked for
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Training Course Material

This Training is part of Module 6, and focuses on debunking the solar myths



Overview of the Training

- 1. Introduction: Learning Objective**
- 2. Understanding Debunking the Myths**
- 3. Main body of presentation**
- 4. Concluding Remarks**
- 5. Further Reading**
- 6. Knowledge Check: Multiple-Choice Questions**

1. Introduction: Learning Objective

Learning Objective

This module provides:

1. Best practices in debunking the renewable (solar) myths.
2. Best practices in communicating renewable (solar) energies.

2. Understanding Debunking the Myths

Debunking the myths

Removing the influence of myths is not as simple as packing more information into people's heads.

Refuting misinformation involves dealing with complex cognitive processes.

There is also an added complication, not only is misinformation difficult to remove, debunking a myth can actually strengthen it in people's minds.

Communication campaigns have to focus in the undecided majority.

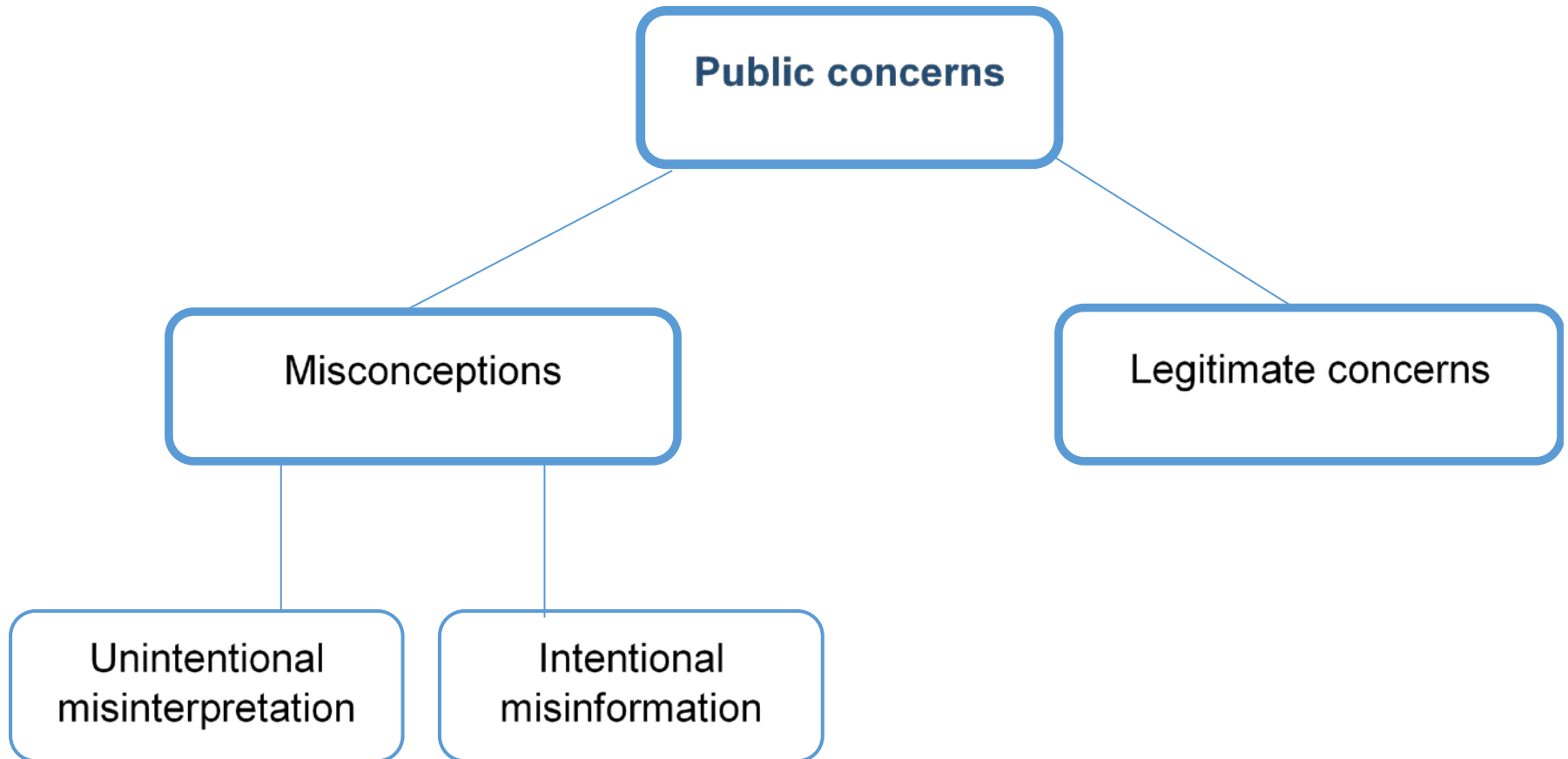
3. Main Body of Presentation

Main Body of Presentation

1 Best practices in debunking the myths

2 Best practices in communicating renewable (solar) energy

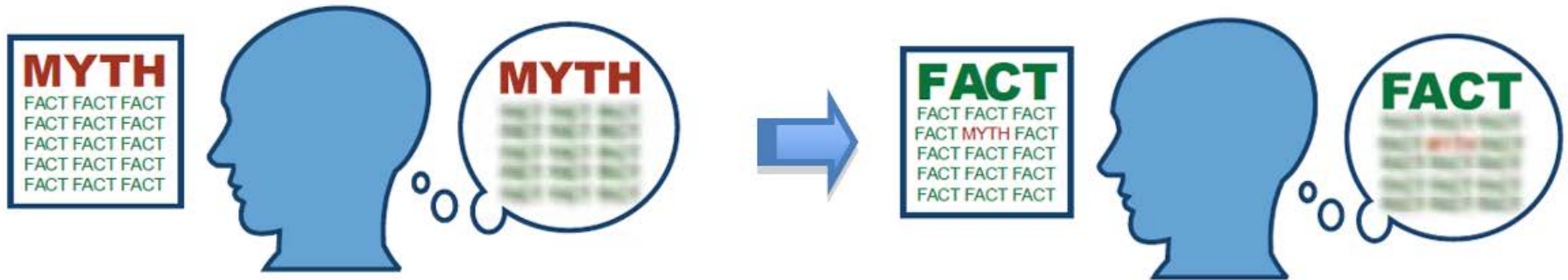
Understanding what a myth is



A myth is a widely held but false belief or idea.

Debunking the renewable (solar) myths

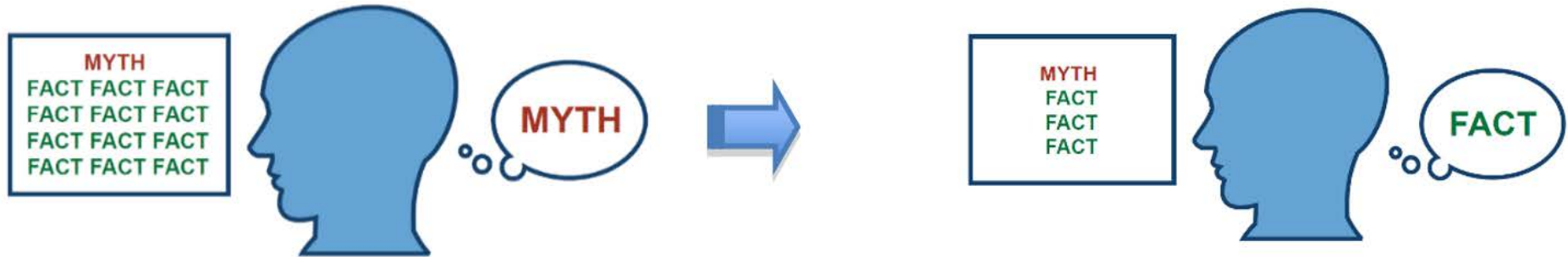
Familiarity backfire effect



Source: Cook, J., Lewandowsky, S. (2011)

Debunking the renewable (solar) myths

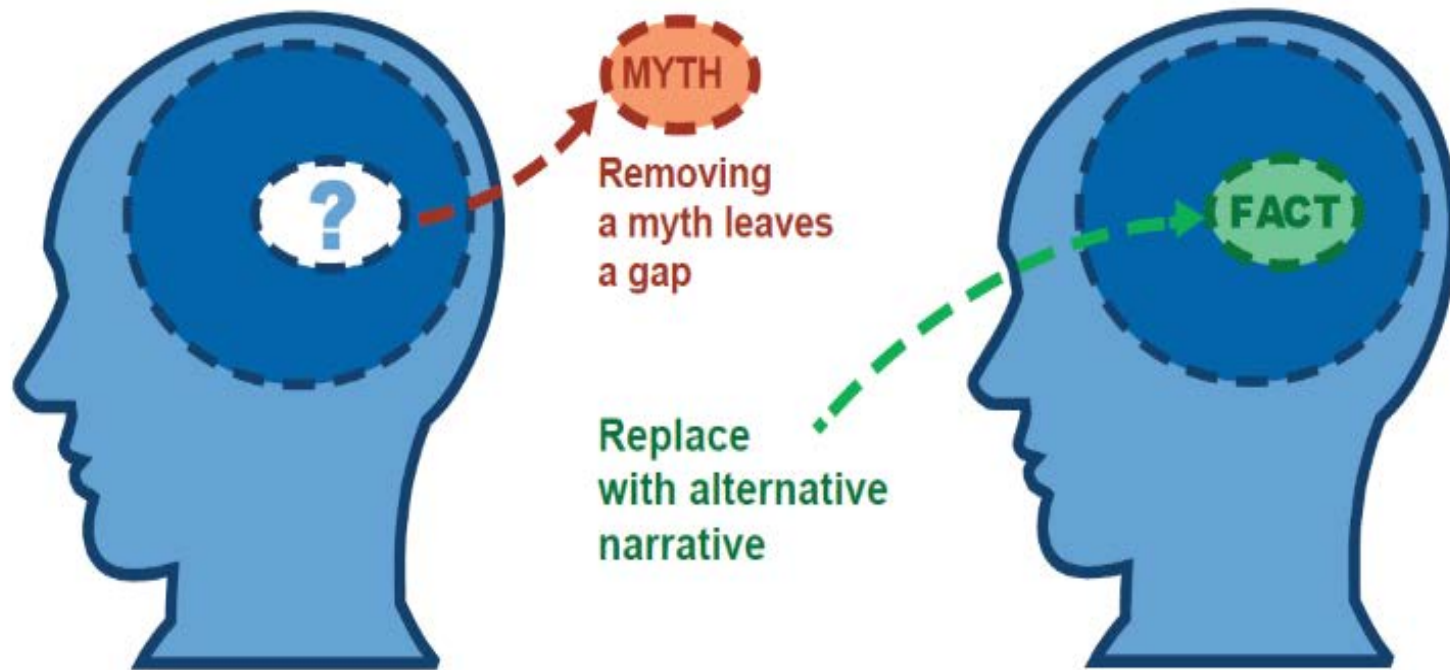
Overkill backfire effect



Source: Cook, J., Lewandowsky, S. (2011)

Debunking the renewable (solar) myths

Worldview backfire effect



Source: Cook, J., Lewandowsky, S. (2011)

Debunking the renewable (solar) myths

97 out of 100 climate experts agree humans are causing global warming.

Several independent surveys find 97% of climate scientists who are actively publishing peer-reviewed climate research agree that humans are causing global warming.



On top of this overwhelming consensus, National Academies of Science from all over the world also endorse the consensus view of human caused global warming, as expressed by the Intergovernmental Panel on Climate Change (IPCC).

However, movements that deny a scientific consensus have always sought to cast doubt on the fact that a consensus exists. One technique is the use of fake experts, citing scientists who have little to no expertise in the particular field of science.

For example, the OISM Petition Project claims 31,000 scientists disagree with the scientific consensus on global warming.

However, around 99.9% of the scientists listed in the Petition Project are not climate scientists. The petition is open to anyone with a Bachelor of Science or higher and includes medical doctors, mechanical engineers and computer scientists.

Source: Cook, J., Lewandowsky, S. (2011)

← Core fact communicated in headline.

← Core fact reinforced in opening paragraph, fleshed out with additional details.

← Core fact reinforced with infographic.

← Explicit warning cueing reader that misinformation is coming and indicating the nature of the misinformation.

← The myth

← The gap created by this debunking is how can there be a consensus if 31,000 scientists dissent? This gap is filled by explaining that almost all the 31,000 scientists are not climate scientists.

Debunking the renewable (solar) myths

ENERGY FACT CHECK
a resource of the American Council on Renewable Energy (ACORE)

THE FACT CHECK | ENERGY ISSUES | ENERGY LIBRARY | ENERGY CONTACTS | ABOUT US

FACT CHECK

CLAIM: With cheap, abundant natural gas and coal, expensive renewables are unnecessary. Utilities should stick with these fuels instead of having to deploy new, more expensive renewable resources.

FACT: Natural gas costs have a history of high volatility while renewable prices are continuing to decrease, allowing for long-term pricing. The prices of renewable energy resources are already starting to beat coal prices and utilities are trading coal for renewables across the country. [Click here to get the facts.](#)

Auf den ersten Blick: „Wir können uns die Erneuerbaren Energien nicht leisten.“

100 EURO

WWF se propone acabar con los mitos contra las renovables

Ante la posibilidad de abandonar las renovables y seguir viendo crecer una alternativa más viable: Es el objetivo del Proyecto 'Renovables: Mitigando mitos' sobre las Energías Renovables, que WWF ha puesto en marcha con el apoyo de la Oficina Española del Cambio Climático, del Ministerio de Medio Ambiente (MAM).

Propone un análisis objetivo de los mitos que rodean a las energías renovables y a los beneficios que aportan al medio ambiente y a la economía. El objetivo es proporcionar información clara y objetiva sobre las energías renovables, sus ventajas y sus desafíos, y ayudar a los ciudadanos a tomar decisiones informadas sobre su consumo energético.

Los mitos que se abordan son:

- 1. Las energías renovables son más caras que los combustibles fósiles.
- 2. Las energías renovables no son fiables.
- 3. Las energías renovables no permiten almacenar la energía.
- 4. Las energías renovables no permiten cubrir la demanda energética.
- 5. Las energías renovables no permiten reducir las emisiones de CO2.
- 6. Las energías renovables no permiten reducir el consumo de agua.
- 7. Las energías renovables no permiten reducir el consumo de tierra.
- 8. Las energías renovables no permiten reducir el consumo de materiales.
- 9. Las energías renovables no permiten reducir el consumo de energía.
- 10. Las energías renovables no permiten reducir el consumo de recursos.

PV FAQs

What is the energy output for PV?

Renewable energy sources such as wind, solar, hydro, geothermal, biomass, and ocean energy are all clean and sustainable. They produce electricity without emitting greenhouse gases or other pollutants. They also provide a secure and stable energy supply, as they are not subject to the same price volatility as fossil fuels.

What is the energy output for PV?

The energy output of a PV system depends on several factors, including the amount of sunlight, the efficiency of the panels, and the orientation of the panels. On average, a PV system can produce between 1 and 4 kWh of electricity per square meter per day.

How much energy can a PV system produce?

A PV system can produce between 1 and 4 kWh of electricity per square meter per day. This is equivalent to the energy output of a 100-watt light bulb for 10 hours.

Wir können es uns nicht leisten, auf Erneuerbare Energien zu verzichten.

Die Erneuerbaren Energien sind die einzige saubere und nachhaltige Energiequelle. Sie sind die Lösung für die Klimaprobleme der Zukunft. Die Erneuerbaren Energien sind die einzige Energiequelle, die nicht nur sauber und nachhaltig ist, sondern auch die einzige Energiequelle, die die Energieversorgung der Zukunft sicherstellen kann.

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Debunking the renewable (solar) myths

<https://zerohomebills.com/top-10-solar-energy-myths-debunking-10-solar-energy-myths/>

http://www.estelasolar.org/Docs/2016_ESTELA_Debunking_Myths_Final.pdf

https://www.irena.org/-/media/Files/IRENA/Agency/Events/2013/Jan/10/6_Nada.pdf?la=en&hash=DE31B9CE7EDDF53B30EC019B6CB236E2EFEB580E

<https://medium.com/solarhood/top-6-myths-of-rooftop-solar-debunked-e2929739865b>

<https://offgridworld.com/10-solar-power-myths-debunked/>

<https://center4ee.org/debunking-solar-myths/>

<https://www.youtube.com/watch?v=O5zd5uLfssc>

Debunking the renewable (solar) myths

Common pitfalls of addressing public concerns.

Efforts emphasized on myths, not on legitimate worries.

Target audience is unclear.

Overlapping, incohesive efforts.

Media engagement is poor.

Information only, no consultation or deliberation.

Opposition is underestimated.

Lack in knowledge relevant to developing countries.

Main Body of Presentation

1 Best practices in debunking the myths

2 Best practices in communicating renewable (solar) energy

Myths about PV technology

Best practices in renewable energy communication campaigns

- 1. Partnering and financing:** Partnerships broaden the reach of communications and reduce costs – which is crucial in the context of RE communications, which tend to have limited funding. Cooperating with like-minded institutions can increase human and financial resources available for the campaign, which in turn has the possibility of improving its design, reach and overall effectiveness while simultaneously reducing cost burdens for those involved. Partnering is critical, there is a lack of a unique voice for the solar sector.
- 2. Pre-campaign research:** Research builds in-depth understanding of target audiences and provides insights into how best to communicate with them, producing more effective communications. Better preparation can also reduce costs.

Myths about PV technology

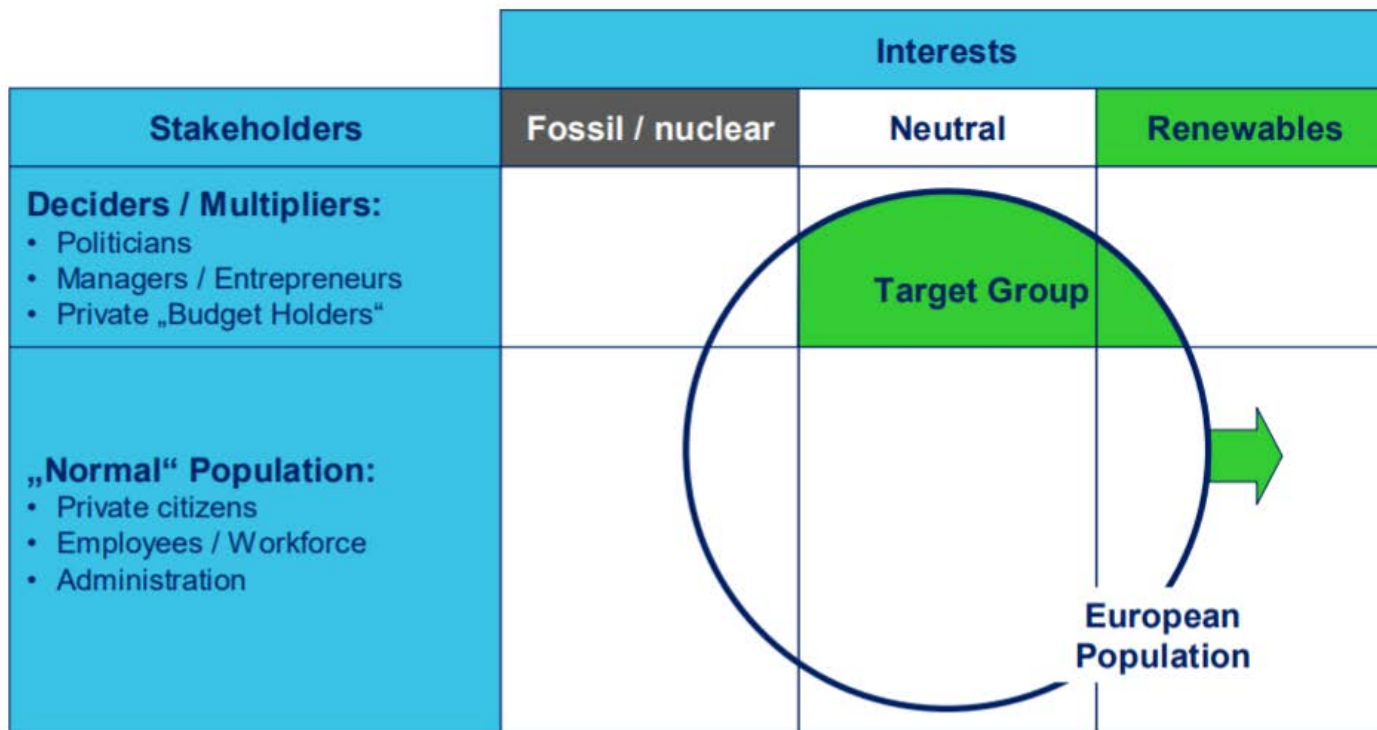
Best practices in renewable energy communication campaigns

- 3. Definition of objectives:** A RE campaign will only be as targeted, measurable and successful as its objectives allow it to be. Precise and clearly defined campaign objectives have a number of advantages: first, they facilitate a more accurate evaluation of a strategy later on – broad goals, such as that of “awareness-raising”, are difficult to measure; second, they generate more precise definitions of target audiences, in turn enhancing a campaign’s specific prospects of success; and finally, carefully defined objectives help the development of the tailored messages needed to convince specific groups.
- 4. Time planning and duration:** Timing is everything for RE communications campaigns. Appropriate timing and duration are keys to a campaign being perceived as relevant by its target audiences. Longer campaigns are able to build effective distribution networks for their messages.

Debunking the renewable (solar) myths

Best practices in renewable energy communication campaigns

5. Audience definition and segmentation:



Source: IEA-RETD (2013)

Debunking the renewable (solar) myths

Best practices in renewable energy communication campaigns

5. Audience definition and segmentation:



Debunking the renewable (solar) myths

Best practices in renewable energy communication campaigns

6. Campaign messaging

The most important guiding principles for the development of messaging include: Messages must be **personally relevant** and linked to audience concerns to maximise attention levels;

Messages **provoking emotional responses** tend to be more memorable and effective;

Messages should motivate individuals to **become actively cognitively engaged** e.g. by means of unusual, unfamiliar and novel presentation of content;

Messages should be **short, simple and salient**, detailed technical and factual information is less important;

Individuals do not make classically rational decisions, which should be taken into account when formulating messages;

Individuals tend to value fairness and act pro-socially, particularly if free-riding can be minimised.

Source: IEA-RETD (2013)

Debunking the renewable (solar) myths

Best practices in renewable energy communication campaigns

6. Campaign messaging

Individuals perceive the value of an object higher if they already possess it than if they don't.

Individuals value a ticket with a 50% chance of winning \$20 differently:

- If they already possess it: \$11.02
- If they have to acquire it: \$ 5.60



Creating a sense of ownership to increase support for RE

- 'My wind turbine and me' competition in schools, France



Source: IEA-RETD (2013)

Myths about PV technology

Best practices in renewable energy communication campaigns

- 7. Campaign creatives:** Aiming only to be heard or seen is not enough, particularly in a crowded arena such as energy policy – RE campaigns must compete with communications about other energy sources, and strive to be remembered and acted upon. Communications messages should be placed into compelling and memorable stories. Simply getting a target audience to hear or see a message is alone challenging, but ensuring they will remember it, let alone absorb it deeply enough to change their perception, is another issue all together.
- 8. Campaign channels:** Efforts must be made to match audience segments identified as particularly relevant to RE deployment with communications channels they personally value and are exposed to. Successful campaigns should identify or create distribution networks for content, ensuring that each channel is well-matched to its intended audience. Poorly functioning mechanisms for distribution of content, or the content not being sufficiently compelling to generate impact, resulted in a lack of interest, particularly in some web-based campaigns.

Myths about PV technology

Best practices in renewable energy communication campaigns

- 9. Evaluation:** Learning from your mistakes is only an option if you know what mistakes were made. Evaluating communications practices allows organizations to assess whether the communications measures have been successful in meeting their defined objectives, and will provide information that will allow communications strategies to be refined in the future. An important shortcoming of many campaigns is that original objectives were not well-defined, so it was difficult to define success for the campaigns. Additionally, evaluations are often not budgeted for and therefore were not carried out.

- 10. Proactive response to negative media coverage:** There are many misconceptions and negative opinions expressed about RE in the media, and these should be addressed to enhance understanding and perceptions of RE. It was generally observed that the negative media campaigns which have created the need for RE communications activism in some national contexts were never addressed directly. RE communicators should actively engage with individuals (e.g. journalists and politicians) and institutions that publish falsehoods in open fora.

4. Concluding Remarks

Concluding Remarks

1. Avoid reinforcing myths.
2. Focus on facts on benefits and advantages.
3. Core facts should be presented visually.
4. Target the undecided majority rather than the unswayable minority.
5. Publish arguments according to level of audience.
6. Engage specialized media and opinion leaders in briefings and dialogue.
7. Proactively participate in public debates.

5. Further Reading

IEA-RETD (2013): Communication Best-Practices for Renewable Energies. Available at: http://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Re-Communicate_Communication_best-practices_for_renewable_energy.pdf

IRENA (2013): Workshop: Social Acceptance of Renewable Energy. Website homepage: <https://www.irena.org/events/2013/Oct/Workshop-Social-Acceptance-of-Renewable-Energy>

Cook, J., Lewandowsky, S. (2011), The Debunking Handbook. St. Lucia, Australia: University of Queensland. Available at: https://skepticalscience.com/docs/Debunking_Handbook.pdf

6. Knowledge Checkpoint: Multiple Choice Questions