



Acceptance, Communication, Engagement Challenges & Solutions

Scaling up renewables for **green** hydrogen production

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Researcher at IKEM

- Studied law in Germany, Belgium and South Africa specialised in International and European Environmental Law
- Research Associate at the Sustainability and Innovation & Energy Law Department at IKEM
- Projects related to social innovations and citizen engagement, public participation and acceptance management in the sustainability transition

Today's presentation

1. S&I Department @IKEM
2. Acceptance research & management
3. Empowering narratives for renewables & green hydrogen
4. Inspiring S&I projects
5. The way ahead



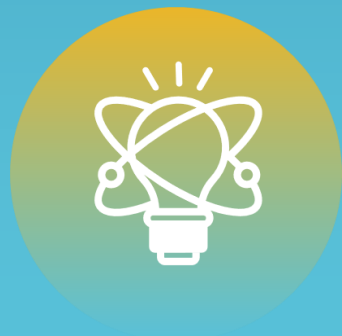


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Sustainability & Innovation (S&I)

The energy transition offers a unique opportunity to create a sustainable, inclusive & equitable society for all

- We investigate innovative ways of system transformation from a transdisciplinary & international perspective
- We create visibility & acceptance for sustainability issues & ensure that our research is applied practically
- We make our research results accessible with innovative communication formats



7+

Projects (2022)

11

Team members



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Acceptance Research & Management for Renewables & **green** Hydrogen



Not just any Hydrogen (H₂), green H₂!

Today, most H₂ is produced from fossil fuels



More green H₂ means a lot more renewables!

By 2050, H₂ production could take up to 25% of renewable electricity



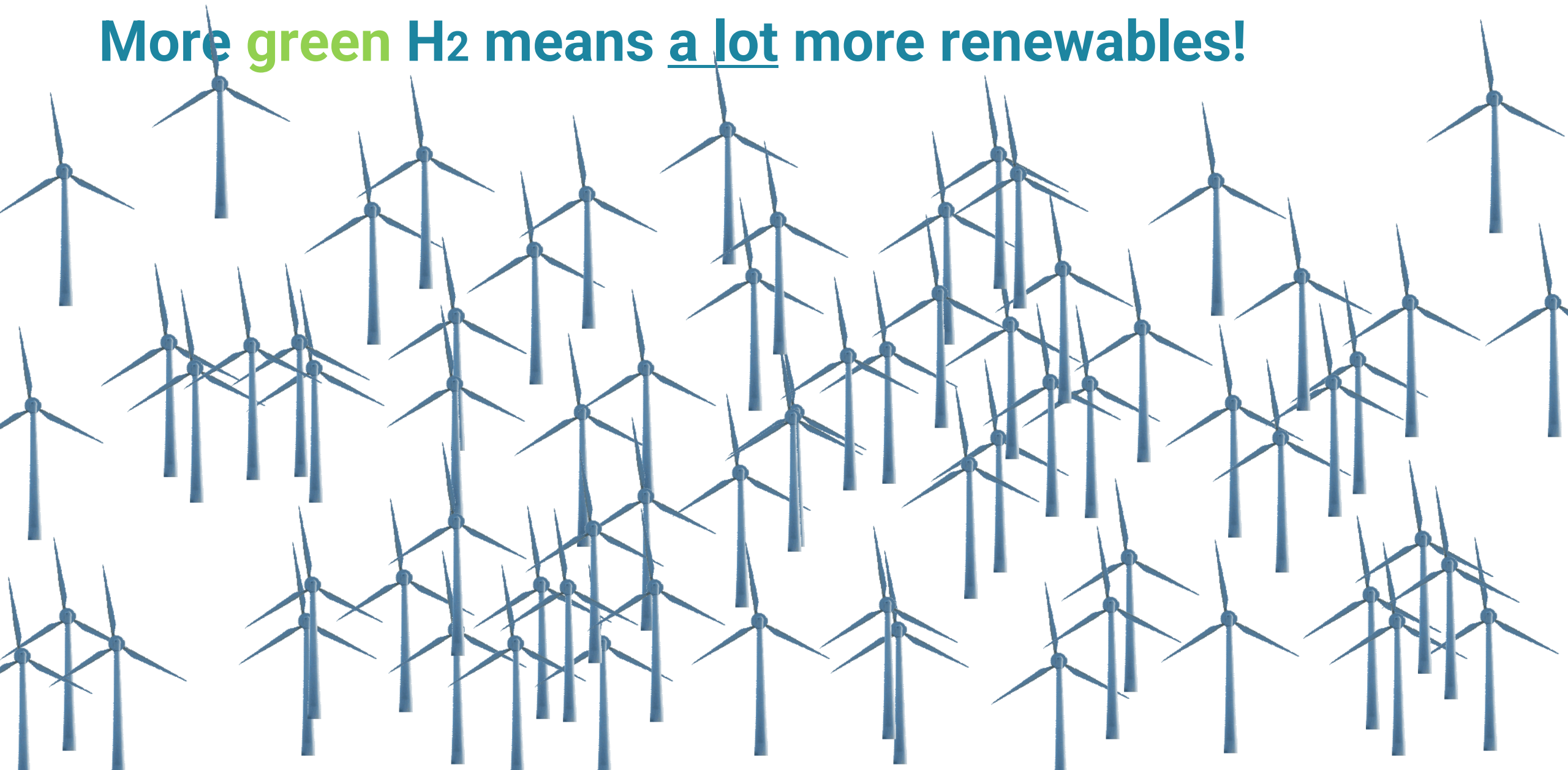
More green H₂ means a lot more renewables!

By 2050, H₂ production could take up to 25% of renewable electricity

This means we rapidly build out more renewable energy!

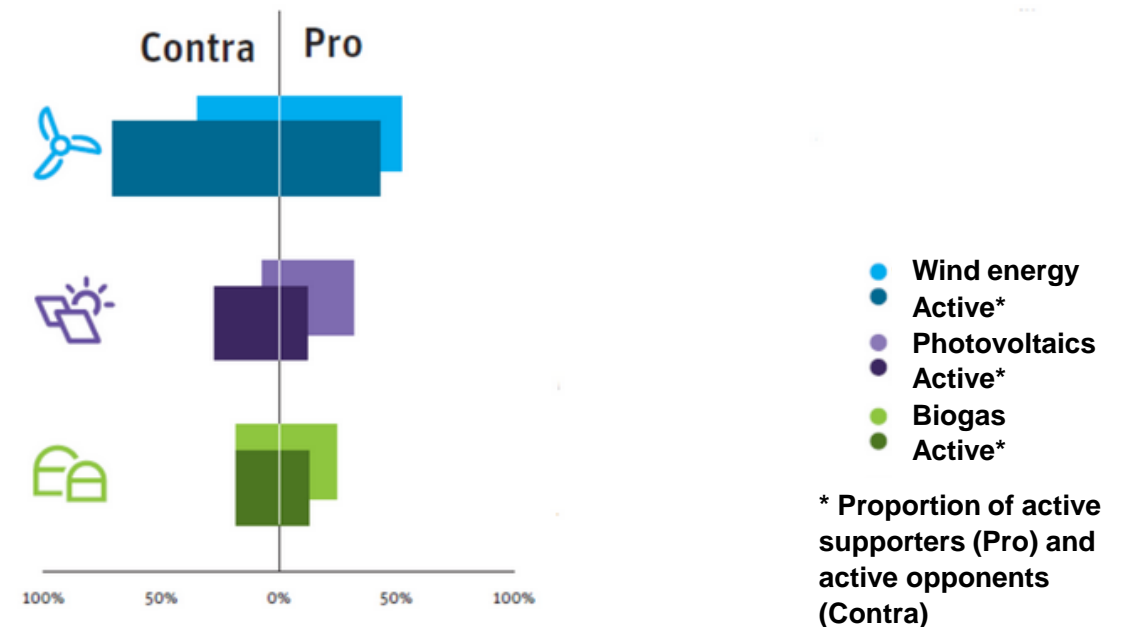


More **green** H₂ means a lot more renewables!



Acceptance Research

- Empirical studies on attitudes & perceptions towards the energy transition
- Prevention of conflicts, opposition & protest
- Promotion of local acceptance & acceptability of decentralized renewables

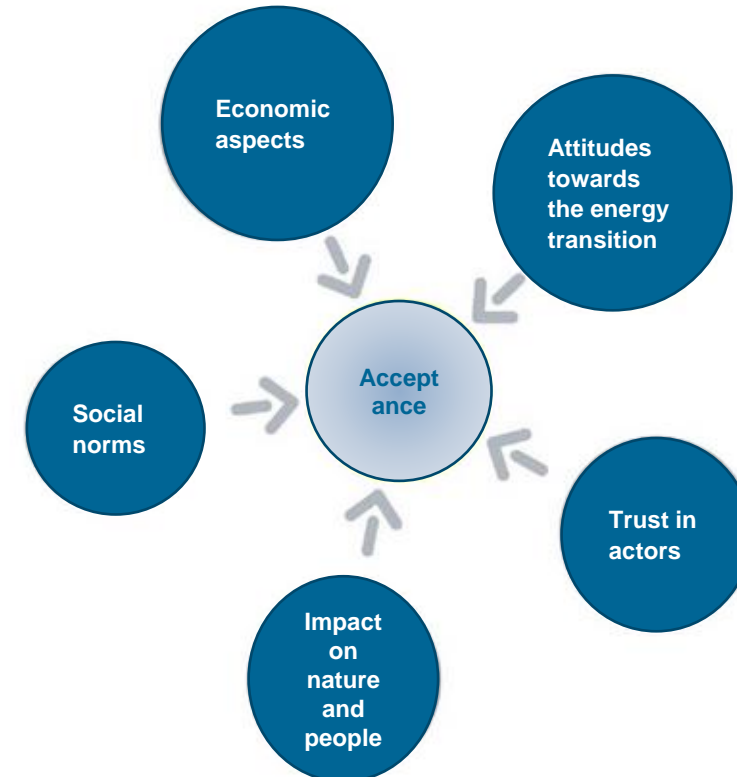


"Were you for or against the construction of the plant? Did you become active?"
 Proportion of active supporters (Pro) and proportion of active opponents (Contra) in percent: opponents become disproportionately active

(Source: *Hübner et al. (2020)*, Factors promoting acceptance of renewable energies, Federal Agency for Nature Conservation [ed.], p. 20).

Shaping the Energy Transition sustainably – Acceptance Management through Public Participation

- Early & citizen-oriented information for the affected public
- Public participation in transparent planning & approval procedures of decentralized energy plants
- Complementary informal public (e-)participation formats for affected public



The five decisive factors of local acceptance of RE installations.
The larger the factors, the stronger their weight.

(Source: *Hübner et al. (2020)*, Factors promoting acceptance of renewable energies, Federal Agency for Nature Conservation [ed.], p. 20).

Empowering Narratives & Positive Climate Communication



Positive Narratives to Engage & Empower

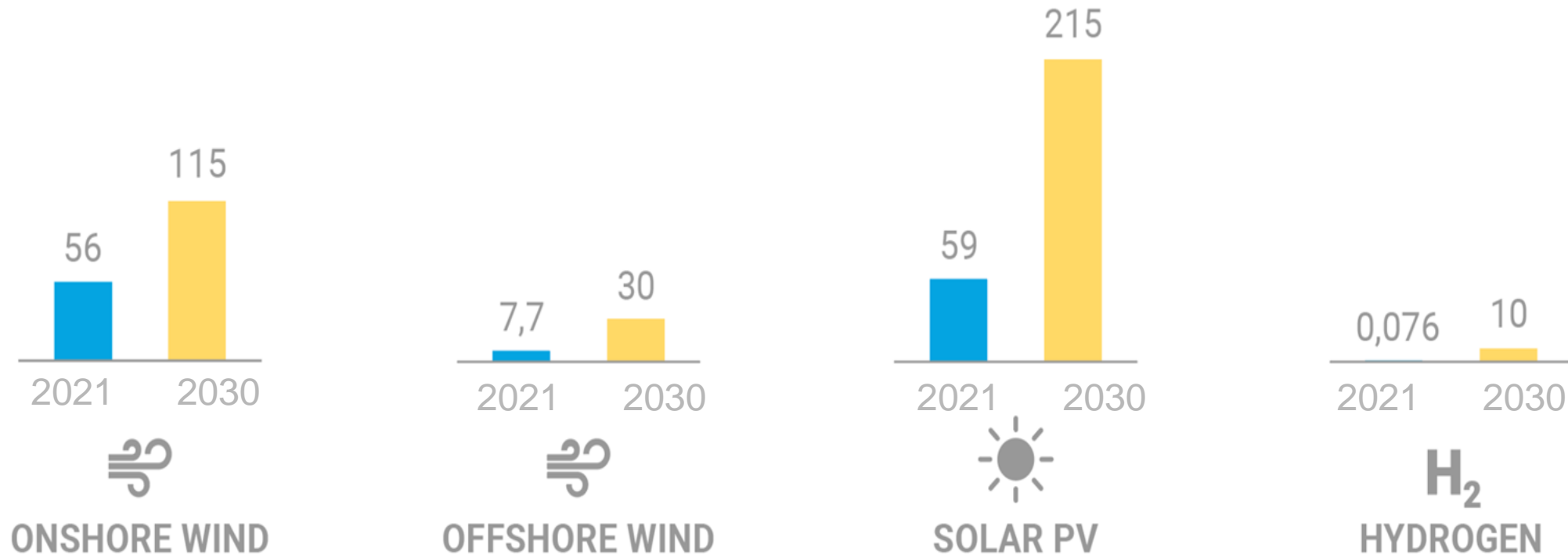
- Negative narratives of climate catastrophe can make people feel overwhelmed & resignate, rather than engage
- Positive narratives showcasing solutions & opportunities that empower & inspire
- Effective, empowering climate (science) communication can be a major catalyst for behavioural change, including political affiliation & voting behaviour

POWER
ride

For instance:

Germany's 2022 Easter package: 80% RE in electricity by 2030!

Easter Package - 2030 expansion goals (in GW)



Opportunities & employment benefits

Easter package implementation could yield:

1.4 times
the investment
needed

2.7 times
the fiscal support

over

400,000

jobs by 2030



Questions?





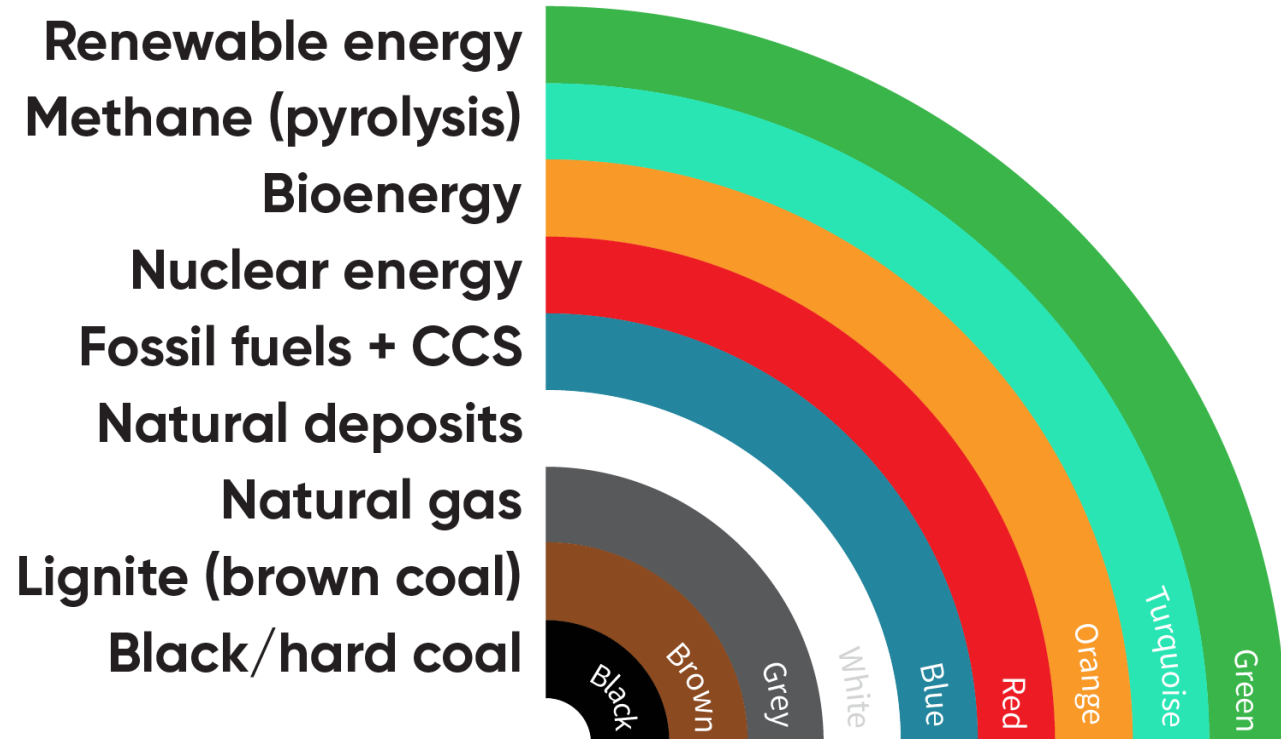
Inspiring Projects

Hydrogen Rainbow: a colorful source of energy

With the "hydrogen rainbow", IKEM illustrates the various processes to produce hydrogen.

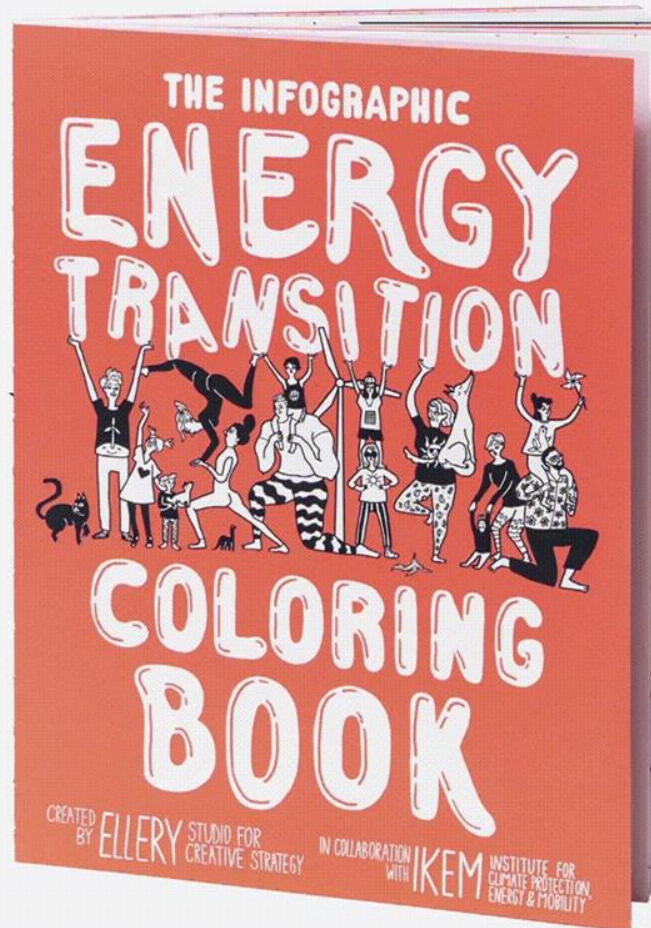
Hydrogen color theory:

- Green
- Turquoise
- Orange
- Red
- Blue
- White
- Grey
- Brown
- Black



Source: Visualization by IKEM (2020).

Infographic Energy Transition Coloring Book



Infographic Energy Transition Coloring Book

The Infographic Energy Transition Coloring Book is a unique visual communication and educational tool that uses infographics to engage people of all ages in the conversation on climate change & renewable energy



**ENERGY
EXPERTISE**

**INFOGRAPHIC
STORY-TELLING
SKILLS**

Impact: We connect with a broad audience!



Impact: We connect with a broad audience!



Impact: We connect with a broad audience!



Impact: We connect with a broad audience!





- **Energy research & network building for the collaborative expansion of social engagement opportunities**
 - **Transdisciplinary energy research**
 - Inventory & analysis of innovative participation models & representative energy transition projects
 - **Energiewende-O-Mat („Energy transition-O-Mat“)**
 - Based on the inventory, develop a user-friendly online-tool
 - **Communication, visualisation & capacity-building**
 - Creative communication, capacity-building workshops & visualisation



13.12.2022

IKEM Academy: Energy & Climate

The IKEM Academy is a world-renowned multidisciplinary forum for highly qualified researchers and professionals of all ages who want to learn more, thank more and do more for the global energy transition.

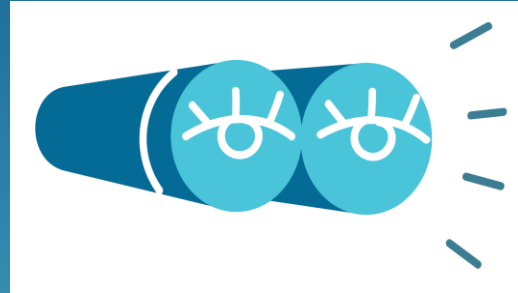


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The Way Ahead

13.12.2022

IKEM Academy: Energy & Climate

IKEM ACADEMY ENERGY & CLIMATE



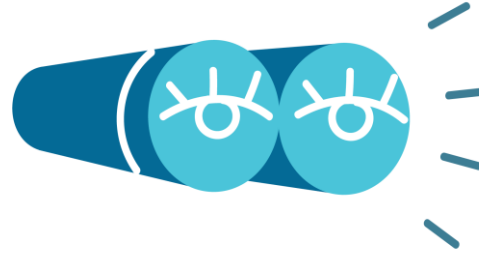
2023 Earth 2050:
Roadmap to a carbon-positive planet

20 years

60
nationalities

450+
alumni





- ➡ Next year is the 20th anniversary of the Academy!
- ➡ Save-the date: **3. - 7. July 2023 in Berlin**
- ➡ Co-creative workshops, panels, site visits, seminars

AND.... Our Future Booth powered by Artificial Intelligence (& Ellery Studio)!

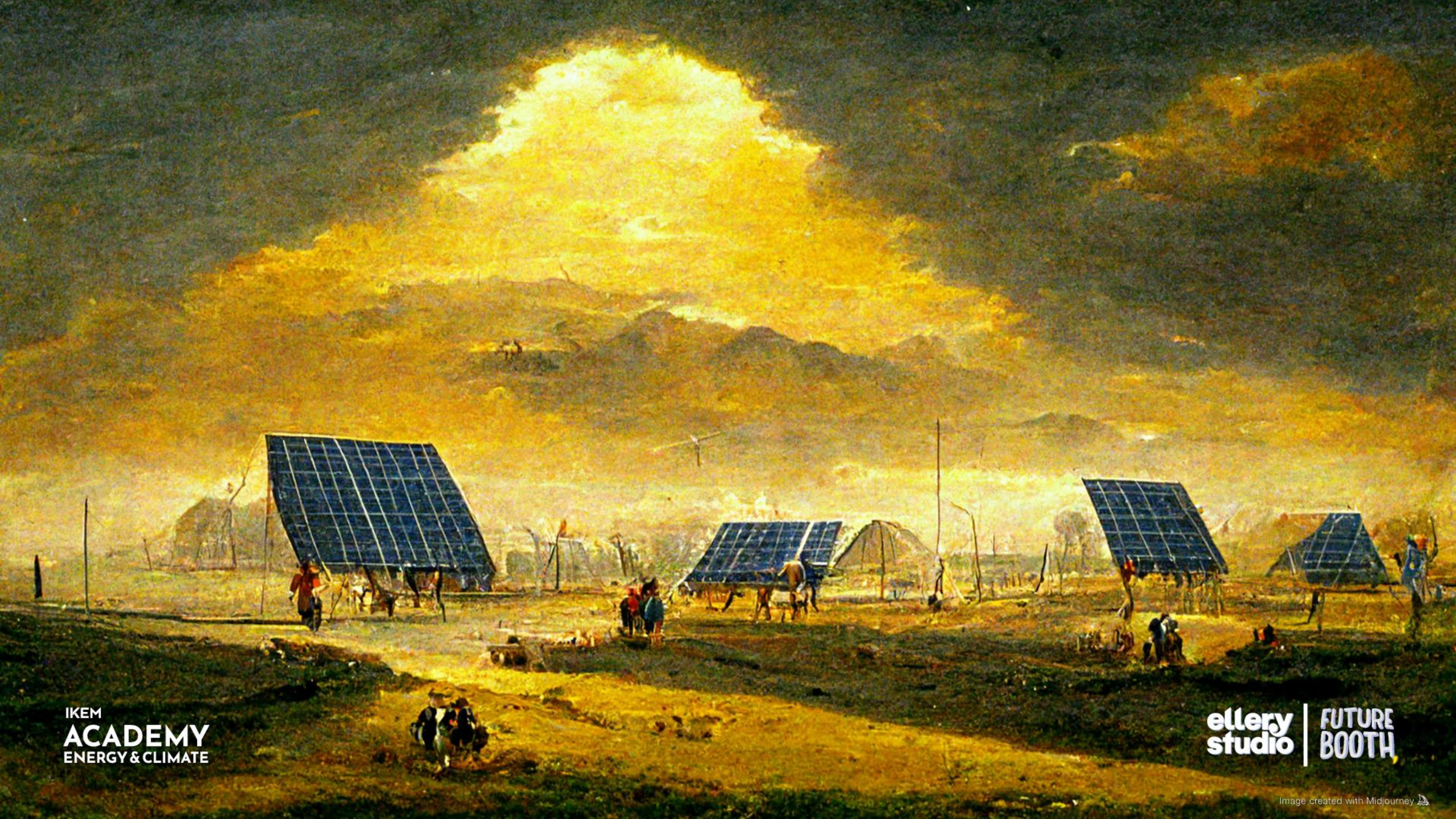
Imagine & visualise sustainable futures!





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Looking forward to Engaging Discussions!

Do you have questions?

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Wissenschaftliche Mitarbeiterin

