



— **10th LERU Bright Conference**

Energy Transition in the 21st Century

12-16 August 2013, University of Freiburg

in cooperation with the University of Strasbourg



BRIGHT 2013: ENERGY TRANSITION IN THE 21ST CENTURY

Albert-Ludwigs-Universität Freiburg

in cooperation with the **Université de Strasbourg**

August 12-16

BRIGHT Students' Conference

The BRIGHT Students' Conference is the annual gathering of students from member universities of the League of European Research Universities (LERU). The conference, celebrating its 10th anniversary this year, aims to provide an environment in which excellent students can focus on themes crucial to their education and cultural development, as field specialists and stakeholders of the Europe of tomorrow. While LERU was founded to enhance the cooperation between Europe's top research universities, the purpose of the BRIGHT Conference is to develop a strong network between Europe's brightest students and to offer them a platform on which they can discuss politically, socially and intellectually challenging topics that are shaping our present and future.

BRIGHT 2013

The BRIGHT Conference is organised by students, for students. 126 students from 21 universities, all members of LERU, can participate in this five-day forum. The 2013 edition of the BRIGHT Conference will be held at the University of Freiburg and the Université de Strasbourg from August 12 to 16, and include cultural, networking, and evening activities.

Theme: Energy Transition in the 21st Century

In many European countries, the energy sector is shifting from an emphasis on oil, coal and nuclear energy towards wind, solar, water and bio-fuel technologies. Among the reasons are the necessary reduction of CO²-emissions and the wish for energy independence, especially from foreign oil. In some countries, the topic of energy transition has gained considerable momentum after the 2011 Fukushima nuclear catastrophe. The Federal Republic of Germany plans to have 80% of its energy to come from renewable sources by 2050. This calls for the active participation of Germany's states and cities. Freiburg is one of the country's leading cities in implementing a sustainable and eco-friendly strategy in all areas of life.

The various available renewable energy sources provide different possibilities for separate geographical regions: offshore wind parks along coastlines, solar energy in the south, or water-generated energy in the mountains. The infrastructure needed to connect these decentralized energy sources to the electricity networks is still under construction, thus great efforts by the European nations will be necessary to efficiently coordinate the energy transition.



Topics

1.) History and Development

In this working group, students will explore the history of energy transition in the European Union. What were the circumstances and milestones of its development and implementation? Drawing on examples from their respective countries and their respective fields, participants will try to identify a common European energy transition strategy in the 21st century.

2.) Technologies

In this working group, students will explore all available energy sources, evaluate their cost- and CO² efficiencies as well as their effect on the environment. Participants will also discuss the appropriate technologies, including the practicality of low- and high-technologies. What are the chances, what are challenges? Which technologies are applicable to different geographical regions and economic systems?

3.) Dependencies

One goal of energy transition is to lessen dependence on fossil energy carriers like oil and gas, or nuclear fuels like uranium, by shifting to renewable energy sources. However, with new sources come new dependencies. What are the political implications of this shift? What are the limitations of renewable energy and high-technology? In this working group, students will explore these modern challenges.

4.) Networks

Energy transition is a project that affects every layer of society, thus many different interest groups are involved in the issue. Who are the most important protagonists in politics, society and economy? What are their interests and what is their influence? In this working group, students will explore these complex networks and interactions in a national, European and global context, and discuss the resulting challenges for a successful energy transition. This topic ties in with the BRIGHT 2012 conference theme "Networks: Complex Futures".

5.) Policies and Regulations

The late 20th century saw an abundance of large conferences on global topics such as climate change, foreign aid, and the regulation of the world economy. In this working group, students will explore the relevance energy transition has to all these global issues, and how it can play a role in resolving them. Participants will discuss international energy policies and regulations, chances to promote energy transition globally, and identify opportunities for future cooperation.

6.) Economy and Energy Transition

Energy transition is conditional upon the implementation of new technologies, the availability of qualified, highly-skilled workers, and an appropriate infrastructure. In this working group, students will identify the relevant issues that energy transition implies for businesses and economies. What types of costs have to be considered? What are incentive structures to invest in energy transition, and what are their risks and chances? Participants will also examine the potential that energy transition holds for national, European, and Third World economies.

7.) Commitment and Participation

Personal and community commitment are key phrases in the discussion on energy transition. In this working group, students will examine whether energy transition is a normative project guided by commitment, or if it is a rational project that aims to solve problems like resource scarcity and climate change. What are the main reasons for moving to a greener energy household? Why are social movements involving energy issues so successful in mobilizing large numbers of people? If there is social commitment, which responsibilities are being assumed? How can this concept of responsibility be extended to a broader network of producers and consumers?

8.) Local vs. Global

In this working group, students will discuss the advantages and disadvantages, as well as the chances, of local versus global energy transition policies and solutions. Do climate protection and energy transition require global governance or should regional governments act as pioneers and set examples for others to follow? How does the subsequent decentralization of energy and greater autonomy of smaller regions affect energy policies? How can cities implement energy transition, as opposed to rural areas? As a local example, the sustainable urban development Vauban Quarter, part of Freiburg's Green City Project, will be more closely examined.

Application

Each LERU university selects and nominates their candidates for the conference. Ideal candidates should meet the following requirements:

- have good communication skills in English,
- have completed at least their first year of studies (Master's and PhD candidates are also welcome to apply),
- display an interest in European institutions, especially the LERU, with regard to the subject matter of the Conference.

We recommend that the selection procedure includes:

- a Curriculum Vitae,
- a letter of motivation, which must include:
 - a demonstration of broad interests,
 - an indication of the top three preferences for working groups (see the topics above),
 - an indication of whether the student would like to chair a working group.

The Organising Committee will assign the selected students to working groups, bearing in mind the topics they listed as well as diversity with respect to fields of study, nationality and home university. The selected students will receive an invitation to prepare a **discussion paper** of 3,000 characters (+ 500 words) on the topic of the relevant working group. Alternatively, students might prepare a **short video or find another alternative format** as preparatory work for the Conference. Note that all papers and other contributions will be made available for preparatory reading on the BRIGHT 2013 website.

Further information will be provided on the website, available as of March 15:

www.bright2013.uni-freiburg.de

For questions and further information please feel free to contact the **Administrative Organising Committee** at bright2013@io.uni-freiburg.de

Freiburg: "Green City"

Since the 1970s, when Freiburg's citizens successfully stopped further planning of the nuclear power plant at Wyhl in Kaiserstuhl, Freiburg has developed a favorable political, economic and scientific climate to become a center of alternative culture and environmental movements in Germany. Its reputation as one of Germany's most environmentally conscious and innovative cities is based on its high standards and general attitude regarding issues like the conservation of energy, the use of modern technologies and renewable energy sources; its traffic and transport policies; its cutting-edge research and development, including at the University of Freiburg; local companies and research institutes leading in the field of solar technology; and many more.

Among the awards Freiburg has been honoured with are **Germany's Environment Capital** in 1991, the **European Public Transport Award**, the **German Solar Prize**, federal prizes for sustainability in urban development and top place in the **'Sustainable Community'** competition organized by the German Environmental Aid Association. In 2010, Freiburg was named **Federal Capital for Climate Protection** and **The European City of the Year**. Freiburg bears the name "Green City" proudly, and well-deservedly.

The University of Freiburg

The University of Freiburg is one of the oldest and most renowned higher education institutions in Germany. The university's leading position in research and education makes it one of the most attractive academic centers in Europe. Its graduates and faculty members include a number of Nobel laureates, and many are at the top of their fields.

The University of Freiburg is, like no other university in Germany, a true comprehensive university with 11 faculties, combining classical fields from the humanities, the social and natural sciences, and medicine with environmental sciences, life sciences and engineering, and offers 183 degree programs at all academic levels. It also fosters many partnerships with top universities, research institutions, and businesses around the world, and offers English-language Master's programs in a broad range of disciplines, including online Master's programs in Photovoltaics, Intelligent Embedded Microsystems, Medical Physics and Technology, and others.

With more than 24,000 students and roughly 15% international students, the University of Freiburg offers a truly diverse atmosphere, set in one of Germany's greenest and most charming cities. Located in the heart of Europe, less than an hour by train from France and Switzerland and surrounded by green hills and vineyards, Freiburg's ideal geographic location also offers boundless opportunities for relaxation and exploration.

The University of Strasbourg

The University of Strasbourg was created by the successful merger of three universities in 2009. It was the first French university to have merged as a single entity. It offers to its 42,000 students academic programs in almost all disciplines, with a particular focus on multidisciplinary approaches. It's one of the most outstanding research universities in France and was one of the 7 universities that was awarded by the program "Initiative of Excellence" launched by the French government in 2011.

The main strength of the University of Strasbourg stems from its active involvement in virtually every scientific discipline. Many of its research teams have a worldwide reputation in scientific domains as well as in social sciences and humanities. The University of Strasbourg is strongly tied to its neighbor Universities of the Upper Rhine Region, such as Freiburg and Karlsruhe in Germany, and Basel in Switzerland. It is a founding member of LERU. Its international attractiveness is attested by the fact that nearly 20% of its students come from abroad (up to 50% for PhDs).

The University of Strasbourg has a strong commitment to technology and knowledge transfer. It is a member of the international Biovalley cluster, one of the most important clusters in biotechnologies and health in Europe with more than 2,000 jobs and 45 companies created since 2005.

Not only are the University of Strasbourg and the University of Freiburg closely connected through their LERU memberships, they have been formally linked since 1989, when the Eucor (**European Confederation of the Upper Rhine Universities**) network was established. In 2010, a Letter of Intent was signed by both institutions, consolidating the close cooperation between them.

We are looking forward to welcoming you in Freiburg and Strasbourg!

Universiteit van Amsterdam • Universitat de Barcelona • University of Cambridge • University of Edinburgh • Albert-Ludwigs-Universität Freiburg • Université de Genève • Universität Heidelberg • Helsingin yliopisto (University of Helsinki) • Universiteit Leiden • KU Leuven • Imperial College London • University College London • Lunds universitet • Università degli Studi di Milano • Ludwig-Maximilians-Universität München • University of Oxford • Université Pierre et Marie Curie, Paris • Université Paris-Sud 11 • Université de Strasbourg • Universiteit Utrecht • Universität Zürich