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EDITORIAL

DOMINIQUE CAMPANA
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The G7 summit held in Biarritz in late August and presided over by France, demonstrated that multilateral approaches and discussions are still very much necessary in order to bring a more concerted answer to current challenges. A number of decisive multilateral meetings, including the Climate Change Summit in New York, should be held by the end of 2019 to encourage the international community to realign its efforts with the 2°C trajectory and increase the States' mobilisation efforts, as well as those of businesses, local actors, investors. ADEME is keen to be part of this dynamic by promoting the sharing of experiences and best practices on an international scale. In this newsletter you will find two examples of ADEME's work. One of our priorities is to improve the energy efficiency of the building sector, responsible for around 40% of global greenhouse gas emissions, and to train professionals in sustainable building. ADEME also attaches particular importance to the issues that islands are facing and is supporting their transition towards a 100% renewable electricity mix by 2030.

FOCUS

**NON-
INTERCONNECTED
ZONES: 100%
RENEWABLE
OBJECTIVE**

Thanks to the study of renewable energy sources in Guadeloupe, Martinique and Reunion, ADEME proved the technical feasibility of a 100% renewable electric system in these insular territories, thus allowing them to progressively reach energy autonomy.

In May 2019, ADEME published the results of its study "Towards energy autonomy in NIZs" undertaken in Guadeloupe, Martinique and Reunion. A NIZ, or non-interconnected zone, is a territory that's not connected to the continental electrical grid. The aim of the study was to evaluate the technical, organisational and economic implications of a renewable energy mix in NIZs by 2030.

FOCUS



THE SPECIFICITIES OF INSULAR ELECTRICAL SYSTEMS

"There is a great difference between electrical systems in continental France and those in NIZs," explains Stéphane Biscaglia, ADEME's Technical coordinator for the study. "The latter are smaller, less resilient, more carbonated, because the energy resources come from the import of hydrocarbon and coal, and have higher production costs." The average production cost of a megawatt hour of electricity is about 42 euros on the continent, whereas it ranges from 150 to 250 euros in an NIZ. Thus, electricity production from renewable energy sources is very competitive in these territories. The energy mix depends on the NIZ, but solar energy always comes first, representing between 61% and 78% of the available resources. In Guadeloupe and Martinique, wind power comes second, while in Reunion, hydropower does.

ENCOURAGING RESULTS

"By considering the extreme case in which all vehicles are electric by 2030, the potential for renewable energy in the NIZs is sufficient to reach energy autonomy," underlines Stéphane Biscaglia. Nevertheless, for this potential to be fully exploited, a number of constraints need to be removed, some of them concerning regulation. For example, the fact that exploiting renewable energy sources in protected natural areas is next to impossible, or that there are a number of conflicting uses blocking access to renewable deposits. Furthermore, important storage capacities will need to be built, and authorities will have to encourage inhabitants to reduce their energy consumption in order to relieve some of the pressure on the electric system. By keeping these practical considerations in mind, the NIZs should be able to produce 50% of their electricity through renewable energy by 2030. Stéphane Biscaglia is enthusiastic: "We have proven the technical feasibility of using 100% renewable energy in these NIZs and our results have allowed to incorporate ambitious goals within the revision of the multiannual energy plans (programmations pluriannuelles de l'énergie-PPE)." A second study covering Mayotte, Guyana and Corsica will be published in the near future.



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Focus on...

MEDENER CONFERENCE, FOCUS ON ISLANDS

The 7th international conference of the Mediterranean Association of national energy management agencies (MEDENER) will take place on the 26th of September 2019 in Rhodes, Greece. The conference will focus on sustainable energy solutions for islands and isolated regions, precursors of the energy transition in the Euro-Mediterranean region. ADEME will share the conclusions of its study on energy autonomy in NIZs (see main article), so that they may be used and engender public policies in other insular territories.

EXPERTISE

SUSTAINABLE CONSTRUCTION MOOC:

A LEARNING PLATFORM DEDICATED TO GREEN BUILDING

The Sustainable Construction MOOC platform, free and accessible to all, offers a large number of online courses focusing on major issues for the future of the building sector. How does it work and what are its new features?

The Sustainable Construction MOOC platform is the first MOOC (Massive Open Online Course) platform dedicated to sustainable building. Set up through a collaborative endeavour by building industry professionals, the platform was launched in 2016 by ADEME and the Plan Bâtiment Durable (Sustainable Building Plan), in partnership with France Université Numérique (FUN). The platform, accessible to all and entirely free, already boasts over 40,000 subscribers. ADEME has been working on raising the level of competence of building professionals for a long time. In 2014, a report by the Plan Bâtiment Durable highlighted the usefulness of MOOCs for professionals, and the following year, a feasibility study confirmed their relevance. These online courses are indeed increasingly popular among industry professionals.

A LARGE DIVERSITY OF MOOCs

The platform offers a large number of online courses focusing on major issues for the future of the building sector. Some are designed to introduce new concepts, such as energy efficient renovation or biosourced materials, while others aim to delve deeper into a particular issue, such as how to optimise the management of collective heating systems. Learners are by and large professionals, but the platform is also aimed at students and private individuals. "We've had globally positive feedback from users, who particularly appreciate the fact that the MOOCs include testimonies from professionals and practical cases, and that they are developed by a team of people with proven expertise in the subjects covered," underlines Florence Godefroy, Training project manager for the depart-



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ment in charge of the mobilisation of professionals at ADEME. In fact, the lessons, selected following a call for projects, are developed by educational and training institutions, research departments, universities and technical institutes, such as the CEREMA and the CSTB. At the start of 2018, ADEME made its first contribution to the platform with a MOOC about sustainable construction in humid tropical areas. At the end of a course, a certificate is delivered to participants who have achieved a success rate of 50 to 70%.

EVOLUTIONS WITHIN THE PLATFORM

Being a collaborative project, the platform evolves fairly regularly. The latest innovation is the SPOC (Small Private Online Course), a private version of the MOOC dedicated to 20 to 30 participants, which offers personalised support. *“The SPOC increases the chance to see participants complete the training and take part in discussions with each other and with the teaching team. It’s also an interesting format for companies who wish to train a group of people together,”* explains Florence Godefroy. Furthermore, the platform has started to become more international. In partnership with the AFD, a bilingual (French/English) MOOC project on the topic of sustainable cities and urban innovation

in Africa is currently in the pipeline. As for potential improvements, ADEME wants to carry on spreading the word, especially amongst teachers and trainers, who could very usefully reuse some of the MOOC content in their courses.



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To find out more:

> <https://www.mooc-batiment-durable.fr/>

And more...

A MOOC FOR TROPICAL AREAS

The MOOC “Sustainable construction in humid tropical areas”, developed by ADEME from expertise drawn from the French overseas territories, enables participants to gain a basic understanding of eco-construction and a panoramic view of the subject. Over a period of 3 weeks, on the basis of one module a week, the duration of the course is about 10 hours. Following its success abroad - 1/3 of learners live in Africa - it is currently being translated into English. Three other MOOCs titled “Lighting, heat and acoustics: how to build efficiently in humid tropical areas” are also offered by the Sustainable construction MOOC platform to help participants gain a deeper understanding of these notions.

WORLDWIDE



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ENERGY EFFICIENCY IN BUILDINGS

THE ADVANCES OF THE PEEB PROGRAMME

As part of the Programme for energy efficiency in buildings (PEEB), ADEME is currently working with authorities in Vietnam and Senegal on this theme in order to put political commitments into action.

Together, the building and construction sectors are responsible for about 40% of CO₂ emissions. The aim of the Programme for energy efficiency in buildings (PEEB) is to encourage and finance energy efficiency improvement projects in buildings in developing countries. It is managed by a number of French and German agencies, including ADEME.

The PEEB is currently in its initial deployment phase (8 million euros mobilised, in particular for the creation of a secretariat), which will last until late 2020. During this phase, actions and investments are being carried out in 5 pilot countries: Mexico, Morocco, Tunisia, Senegal and Vietnam.

THE PEEB IN VIETNAM AND SENEGAL

ADEME is particularly active in Senegal and in Vietnam. The agency is currently working with the Ministries for the environment and construction in these countries to help them establish long-term sustainability policies, and with social

housing providers and property development companies. Thanks to their experience in the French overseas territories, which have a tropical climate close to that of Senegal and Vietnam, ADEME has gained useful tools that are transferable internationally.

"In Senegal, we're particularly working on the new town of Diamniadio, currently under construction to relieve the congestion in Dakar, in order to develop building projects that incorporate environmental and energy performance criteria," explains Cécile Gracy, Project Manager for ADEME's International Climate Initiatives. *"In Vietnam, the idea is to work with the Ministry of Construction in order to identify building projects and convince real estate developers to integrate energy efficiency requirements within those projects. A part of the budget might also be directed towards training and capacity building activities for local actors."*



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News

PUBLICATION

Construction in tropical climates



In 2015, ADEME and its partners launched an international task force called Low Energy in Tropical Climate for

Housing Innovation (LETCHI). It was formed to find solutions and optimize the energy efficiency and comfort of buildings and housing in tropical countries. It aims to promote the principles of architectural design suited to the climate, the choice of local materials, and energy efficiency, with the goal of reconsidering the way buildings are designed and adapting the bioclimatic principles of vernacular architecture to current requirements and global architectural standards. Experts from France (Reunion Island), India, Sri Lanka, Thailand, Vietnam, Malaysia, Indonesia, Singapore and East Africa are getting together to share their experience and expertise, demonstrating the feasibility of constructing passive, bioclimatic residential buildings with high energy efficiency, real thermal comfort, and at an affordable cost, in tropical areas.

> Available for free download:
www.ademe.fr/batiment-climat-tropical

EVENTS

7-8 October 2019
Global Forum 2019, Shaping the future
ANGERS, FRANCE

The Global Forum is a high-profile international event dedicated to business and policy issues affecting the successful evolution of the Digital Society. The Global Forum brings each year in a different city around the world, more than 300 key policy-makers and public/private stakeholders from all around the world. ADEME will be talking about the environmental impacts of the digital world from 11h30 à 12h45 on the 8th of October.

> www.globalforum.items-int.com