

The energy transition
into actions

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EDITORIAL

The last session of climate negotiations held in Bangkok have shown that the countries involved are still very much committed in the fight against climate change, but that they need to redouble their efforts for the adoption of the implementing rules of the Paris Agreement during COP24. Beyond States commitment, extreme weather events and the scientific community remind us every day of the urgent need to act to preserve our environment. In this line, the mobilization of the civil society is required for scaling up the transition towards a low-carbon emissions economy. This is the context in which was held, from 12 to 14 September in San Francisco, and despite the United States pulling out of the Paris Agreement, the Global Climate Action Summit.

This initiative has helped over 4,000 representatives from global businesses and local authorities reaffirm their commitment. ADEME, alongside 8 companies from the Club ADEME International, was able to highlight the crucial role played by startups and innovative companies in the reduction of greenhouse gas emissions and the preservation of our planet's resources, especially through an event dedicated to the Assessing Low Carbon Transition (ACT) initiative. Launched by ADEME and the NGO CDP in 2015, the aim of this project is to help companies align their actions with the objective of keeping the rise in global average temperatures to below 2°C.

FOCUS

FRANCE'S CLIMATE PLAN: PROGRESS REPORT

Launched on 6 July 2017, the French Climate Plan aims to help step up the pace of the climate and energy transition in France and around the world to reach carbon neutrality by 2050. A year after its adoption, a number of measures were introduced.

A day of discussions over the Climate Plan, held last July, enabled participants to review the measures put in place in the last twelve months, including: the adoption late 2017 of the Law ending the research and exploitation of hydrocarbon; the adoption in April 2018 of a new building energy renovation programme, which includes support for low-income households helping to meet the objective of energy insecurity eradication in 10 years; the circular economy roadmap, presented in April 2018, which includes 50 measures to reach an objective of 100% recycled plastic by 2025... Globally, the One Planet Summit organised in December 2017 has helped push for

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more solutions over the issue of financing climate action and many commitments, including a commitment by the French government to invest 1.5 billion euros in the adaptation to climate change in 2020.

THE ROLE OF ADEME

ADEME takes part in a number of initiatives, supporting the work done by the Ministry for an Ecological and Solidary Transition. As ADEME President Arnaud Leroy underlines: *“Knowing what the sources of emissions are is the first step towards carbon neutrality. Also, we are fully committed to supporting companies in implementing low-carbon strategies and, to a larger extent, encouraging the French public to adopt this dynamic in their day-to-day lives. And beyond our borders, we aim to strengthen global commitment to increase the scope of our ambitions for the climate.”*

As part of the Climate Plan, ADEME was tasked with managing the “TPE&PME – Gagnantes sur tous les coûts!” initiative, which helps small, medium-sized and very small businesses improve their environmental performance. This technical support is to be given to 5,000 businesses from 2019. Late 2017, ADEME also co-organised the call for project proposals “Mon Projet pour la planète” (My project for the planet), which proved a great success with 1,200 applications submitted directly by members of the public and 44 chosen projects.

As for research and innovation, this third component of the Investments for the Future programme has been awarded a budget of 10 billion euros, 1 billion of which ADEME has invested into demonstrators implemented at the local level, innovative projects put forward by start-ups and SMEs, and the development of efficient innovation ecosystems in the fields of transport and mobility.

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Focus on...

THE TROPHÉES BEGES

To mark the anniversary of the Climate Plan, ADEME and the Ministry for an Ecological and Solidary Transition have announced the 5 winners of the Trophées BEGES (GHG emissions assessment awards): the Conseil Départemental de la Haute-Garonne (Local authorities category), the Grenoble Alpes University Hospital (Public Institutions category); the MAIF (large businesses category), Anovo France SAS (medium-sized businesses category) and the city of Seclin (Voluntary action category). These awards have put the spotlight on those organizations who have gone beyond the regulatory obligation of drawing up a GHG emissions assessment and have invested to further reduce their emissions. Over 50 applications were submitted.

To find out more, go to:
<http://www.bilans-ges.ademe.fr>

EXPERTISE

HYDROGEN

IN FRANCE,
A GROWING
INDUSTRY

On 1 June 2018 the French Government launched the national hydrogen programme to effectively kickstart the deployment of the first applications of hydrogen in France.

From 2019, 100 million euros will be invested in projects in industry, mobility and energy. ADEME will be actively supporting the key actors of this industry throughout the country.

Hydrogen has proved a real asset in terms of energy independence. *“Thanks to electrolysis, we can convert electricity produced by renewable energies (solar, wind, hydraulic) and water into hydrogen gas,”* explains engineer Luc Bodineau, who specialises in hydrogen at ADEME’s Advanced technologies and research department. *“Storable, transportable and reusable through hydrogen fuel cells, this renewable hydrogen becomes a high-potential energy vector with a wide range of applications.”*

In fact, in its Brief published last April, ADEME detailed the potential contributions of hydrogen to the transition to a sustainable energy model. As part of a future electrical mix bringing together renewable sources of energy, for example, hydrogen brings with it solutions for more flexibility and optimisation for energy grids. On a different note, hydrogen technologies offer new opportunities for the auto-consumption of local energies on the scale of a building or village, especially in non-interconnected zones. Moreover, hydrogen is a particularly strong asset for clean mobility thanks to the development of fuel cell electric vehicles, increasing the number of options there are for electromobility. Finally, green hydrogen should help reduce the impact of the current uses of hydrogen produced from fossil fuels as a “raw material” for industries. It’s also worth bearing in mind that globally over 60 million tons of industrial hydrogen, which is at present non-renewable, are produced annually. In France, production amounts to 900,000 tons, which makes up no less than 7.5% of the GHG emissions of the entire industrial sector.



→ *Going further*

The GRHYD project: a first for France

On 11 June 2018, the first French Power-to-Gas demonstrator was inaugurated at Cappelle-la-Grande. Launched in 2014 and co-financed by ADEME as part of its Investments for the Future programme, the GRHYD project tests the injection of hydrogen in the territory's natural gas distribution network. Its innovative character lies in its objective of a high rate of hydrogen incorporation in gas networks (up to 20%), which is more than other European demonstrators tested namely in Germany. By boosting the growth of a new mode of renewable energy storage and development, this demonstrator perfectly illustrates the ambitions of the hydrogen programme.

“Storable, transportable and reusable through hydrogen fuel cells, this renewable hydrogen becomes a high-potential energy vector with a wide range of applications.”

AMBITIOUS OBJECTIVES

The French hydrogen industry already involves international leading manufacturers throughout the value chain. Today, the focus is on experimentation and the development of economic models on a more regional scale to encourage the emergence of ecosystems that are sustainable both economically and environmentally (see boxed text). The hydrogen deployment programme envisioned by the government should capitalize on these assets to prepare the mass deployment of this molecule that has proved so essential to the energy transition. In order to achieve this, the programme is organised around three major objectives. Firstly, the objective of decarbonating industrial hydrogen has been set at 10% by 2023, and between 20% and 40% by 2028. In parallel, the programme aims to develop hydrogen mobility with 100 charging stations, 5,000 light commercial vehicles and 200 heavy goods vehicles

by 2023. By 2028, the objective is to put on the road between 20,000 and 50,000 light commercial vehicles, between 800 and 2,000 heavy goods vehicles and between 400 and 1,000 charging stations. Finally, 100 million euros will be invested by 2019 to develop the French hydrogen industry.

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To find out more, go to:
> <https://www.ademe.fr/vecteur-hydrogene-transition-energetique>





OFF-GRID ACCESS TO ENERGY

FOSTERING INNOVATION

Led by French companies and NGOs, the nine selected projects of the call for project proposals "Innovative solutions for off-grid access to energy" aim, each in its own way, to improve access to energy for communities that are not connected to the grid.

Launched during COP21, Mission Innovation aims to speed up public and private R&D efforts in the field of clean energy. Among the 8 topics that this initiative addresses, France and India are in charge of the "Off-Grid Access to Electricity" innovation challenge. ADEME, in partnership with the French Ministry for an Ecological and Solidary Transition, launched in July 2017 a specific call for project proposals. Out of 94 applications, 9 were selected for funding, with a total budget of 5.8 million euros and the support from ADEME amounting to 1.8 million euros. The selected projects offer, over a period of two to three years, many types of innovative solutions, from the purely technological ones in such areas as hydrokinetic river turbines and solar desalination of seawater to other projects focused on the development of local economy: the development of a biomass industrial production line, for example, or better access to solar irrigation. One project is testing an innovative nanogrid electrification model. Finally, there are also projects based on innovative economic

models like the leasing of electric vehicles or the use of new technologies that enable the beneficiaries to become independent energy producers and entrepreneurs.

But ADEME hasn't limited its interest to the selected candidates. "This call for project proposals has allowed us to identify several promising projects in addition to the selected ones," explains Iris Nicomedi, Project officer international initiatives at ADEME's International Affairs Division. "In order to give these solutions a boost and help them flourish, we organised a day-long event on 7 June for all the stakeholders, project leaders and investors to meet." These initiatives will certainly give new perspectives on access to energy in a particularly vulnerable region of the world.

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More information:
> https://www.ademe.fr/sites/default/files/assets/documents/acces_energie_hors_reseaux-010607.pdf

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News

PUBLICATIONS

2010-2017 Report: France's Strategic Investment

This document presents the France's Strategic Investment Programme, which was created by the French government in 2010 to stimulate innovation and investment in France. Over 30 projects managed by SMEs and large consortiums whose project proposals were selected by ADEME are covered in detail in this brochure.
Réf. 010592

Update of the ADEME energy-climate scenario for 2035-2050



ADEME is updating its energy-climate scenario for 2035-2050, the first update of its "outlooks" published in 2013. This work confirms the possibility of massively reducing, by 2050, GHG emissions and final energy consumption. Of the entire energy mix, renewable energies could make up 46% to 69% of the final energy demand in 2050.
Réf. 010603

> Downloadable for free from www.ademe.fr/mediatheque

TO ATTEND

27-30 NOV. 2018
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LYON, FRANCE

For 40 years, Pollutec has been bringing together professionals from all over the world to discuss innovative solutions to reduce the impact of human activity on the environment. ADEME is a stakeholder of the event and will be on hand to answer any questions you might have.

> www.pollutec.com