

## EDITO



Comme nous vous l'avions annoncé il y a quelques temps, l'Ecole est en mouvement vers l'Ecole de l'innovation énergétique et de la mobilité durable. Les programmes évoluent et des mobilités de collègues, au sein de l'Ecole, commencent à se concrétiser ! De nouvelles initiatives, permettant de former nos étudiants aux métiers d'aujourd'hui tout en les préparant aux métiers de demain, voient le jour dans tous les centres. Trouver cet équilibre n'est pas si facile mais est possible. Nous avons choisi de l'illustrer dans ce numéro en vous présentant la démarche stratégique effectuée par nos collègues, dans le domaine de la mobilité durable. Suite à cette étude stratégique, les trois programmes du centre vont évoluer dès la rentrée de septembre pour mieux répondre à la demande de nouvelles compétences de l'industrie des transports. Pour attirer les jeunes dans ces programmes et réveiller la soif d'apprendre des plus anciens, nous misons sur un nouveau MOOC sur la mobilité de demain, riche en innovations pédagogiques, qui sera lancé tout début novembre. A découvrir également dans ce numéro !

[Lire la suite](#)

As we announced some time ago, IFP School is on its way to becoming the School for Energy Innovation and Sustainable Mobility. The programs are changing and the mobility opportunities of colleagues in IFP School are beginning to take shape! New initiatives are coming to all of the centers that will enable us to train our students in the professions of today while preparing them for those of the future. Not an easy balance to strike, but it is possible. We have chosen to illustrate it in this issue by presenting the strategic approach our colleagues have taken in sustainable mobility. Following this strategic study, the center's three programs will be changing as of the September school start in order to better meet the demand for new skills in the transportation industry. To attract young people to these programs and reawaken a thirst for learning in the more mature, at the beginning of November we are launching a new MOOC on future mobility that will be rich in educational innovations. Also featuring in this issue

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## Edito

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In a dynamic school, younger people can also reach leadership positions, bringing plenty of enthusiasm and ideas with them.

And ideas come easy to our young alumnus, who fulfilled his dream of traveling New Zealand by bike before joining the world of work. He shares his story with us.

Happy reading and I wish you all a pleasant, restful holiday.

Christine Travers  
Dean, IFP School

## The IFP School programs are changing

To cater for the expectations of companies, young students and society at large, the content of the School's programs changes regularly from year to year.

There are governing bodies in place to help the school manage these changes. So for example, the Advisory Board, which includes representatives from industry and academia as well as alumni, advises the school on its key strategic directions. The Steering Committees in each of the four areas covered by the school (sustainable mobility and powertrains, energy economics and management, processes for energy and chemistry, georesources and energy) decide on the changing skills needed in the targeted industrial sectors. Finally, the School's many contacts with companies, both at HR and operational levels, help the school to keep a finger on the pulse of present and future changes in order to inform its thinking on what changes need to be made to the content of the programs.

Against the current backdrop of energy transition, the need to evolve our teaching programs is even more pronounced and affects both the short term, with new features to be implemented as of the next school year, and the medium term, with a more forward-looking perspective on the changes to be anticipated. Effectively, in addition to preparing its graduates to be immediately operational in their first job, IFP School must also prepare them for the jobs of the future. To achieve this, the School must give them a wide range of skills that will enable them to anticipate forthcoming changes in industry.

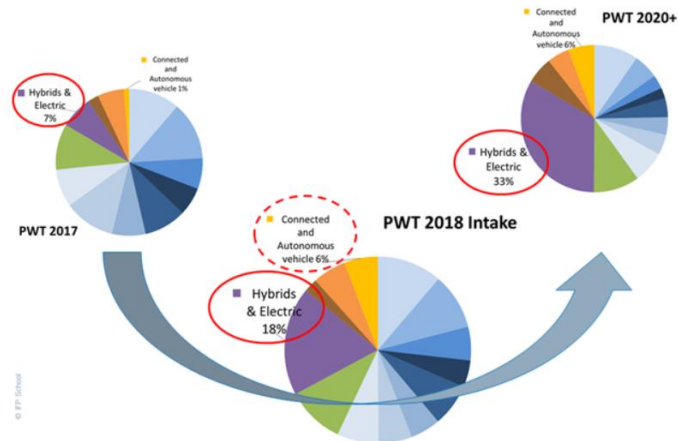
### A recent example of a strategic study

In the area of sustainable mobility and powertrains, the School decided to conduct a strategic study to evaluate the changes to be implemented for the 2018 school year, then for 2019 and so on.

With this objective in mind, interviews were conducted between November 2017 and February 2018 with managers of 15 companies in the sector, including: car manufacturers, equipment suppliers, service providers and engineering consultants.

We found that with the growth of electrification and hybridization, and in the context of intermodal transport solutions and the shift in public transport, it was primarily the systems approach to the powertrain at the vehicle's core that had to be covered in order to give our students the key skills sought by the industry. In this way, new skills expected of our students were identified, in areas such as transmissions, electric motors, optimal energy management, connectivity, etc.

By way of example, for the *Powertrain Engineering program*, specific teaching on hybrid and electric powertrains, which currently makes up 7% of the program, will increase to 18% by the beginning of the 2018 school year and should account for 33% of teaching after the start of the school year in 2020.



Similarly, the *Energy and Powertrains program* will see rapid growth in electrification and the *Energy and Products program* will cover batteries and electromobility.

In addition to the need to listen to companies in order to anticipate and prepare for technological and societal changes, the guidelines arising from the strategic study will allow us to better promote the dynamics of IFP School to young people, as well as its positioning in line with technological innovations, which is likely to attract more candidates to our graduate courses.

Changes are also planned for the other areas of the School in the short or medium term, including the strengthening of teaching related to energy efficiency, ex-biomass processes, geothermal energy, CCUS, offshore wind, intermittent energy markets, etc.

So the innovations at IFP School affect the field of education as much as course content.

## New MOOC in November on the mobility of the future



Following the success of its previous Massive Open Online Course (MOOC), IFP School is launching a new MOOC on Tomorrow's mobility in November 2018.

With completely new content and new educational innovations, this free online course will take place over 4 weeks, from November 5 to 30, 2018.

In a transport sector undergoing rapid change, this MOOC will above all offer an introduction to the environmental and legislative context that provides the framework for future technological developments. The course will then cover the design and operation of electric and hybrid powertrains, component by component (electric motor, battery, power electronics and control), the degrees of hybridization, the various possible architectures and new trends in autonomous and connected vehicles. The advantages and disadvantages of each solution in meeting the needs and constraints of future mobility will be analyzed from a technical standpoint.

To find out more about the design of the engines of the future and the environmental and societal issues around mobility, registrations are now open at <https://mooc.mobility.ifp-school.com/>

Feel free to share the info with your friends and colleagues!

Do you want to support the project or be involved? [Get in touch!](#)

## Interview with Sébastien Bianchi, new Energy and Markets program supervisor



**What are the main features of the Energy and Markets program?**

The [Energy and Markets program](#) covers a broad spectrum and is divided into two main parts. The first touches on the technical aspects of energy (oil, gas, electricity, renewables) for production, processing and distribution, making up around a third of the total teaching of the program. The second part addresses economic and financial aspects. We train students in all market challenges (major flows, key players, recent changes in the way energy is sold, etc.) and in project development (financing, evaluation, negotiation).

**When taking on the role of Program Supervisor, what are the main challenges to overcome?**

I will continue to develop the content of the program, as my predecessors have done on a regular basis by strengthening the gas and electricity aspects. Today, the impact of digital technology on the energy sector must be taken into account and we will train our students in Big Data analysis. We also want to focus on energy innovation: that can certainly be done through specific teaching, but first and foremost it's about a state of mind that we need to instill in our students. Finally, there's a more general thought process that I want to carry out around the opportunities we offer students to go into real depth on a given subject in order to better build their professional career. That would involve offering a range of advanced courses, which could be optional courses or shared courses with other school programs. All of this will have to be researched, analyzed and designed to begin with. To summarize, these are all motivating prospects that have me feeling excited!

## Discover the latest news from the Alumni Association

### The 2nd "IFP School Alumni's Got Talent"

On May 30, the Alumni Association held the 2nd edition of "IFP School Alumni's Got Talent". To recap, these events are an opportunity to showcase an alumnus who has made his mark with a project, a journey or a remarkable achievement.

This time, Maxime Berthier (PWT 2017) came to present his adventure. Maxime fulfilled a dream by traveling the length of New Zealand by bike - a distance of more than 4,000 km - over three months. He came back full of encounters, life lessons and memories. The Association gave him the opportunity to share his adventure around a cocktail evening open to visitors, attended by Association President, Jean Sentenac.

### Save the date: Annual dinner on November 30

The Alumni Association's annual dinner will take place on Friday, 30 November 2018 at 7 pm at the Paris Marriott Champs-Élysées Hotel, 70 av. des Champs-Élysées in Paris.

Year groups celebrated in 2018: 1948, 1958, 1968, 1978, 1988, 1998 and 2008.

Practical information and registration details will be sent at a later date.

## Discover the latest news from the School

### IFP School Honorary Patronage for 2018 Class



This year 2018, marks the 20th traditional patronage ceremony organized by IFP School for each class.

Like the prestigious honorary patrons in the energy and transport sectors before him, Patrick Pouyanné, Chairman and CEO of Total, visited IFP School to meet the students of the 2017-2018 class on 17 April.

In conjunction with the event, Patrick Pouyanné spoke about the current energy context and Total's strategic orientations to take up the challenges related to energy transition. He discussed his experience and asked the students to harness their creativity and innovate in order to develop the energy mix of the future. After his giving speech, Patrick Pouyanné held a Q&A with the students, surrounded by Didier Houssin, Chairman of IFPEN, and Christine Travers, IFP School Dean.

### 9th IFP School Graduation Ceremony

On Saturday 16 June, the IFP School graduation ceremony for the class of 2017 took place in Paris. More than 200 students participated in the event and received from Dr. Christine Travers, Dean of IFP School, the medal which symbolizes the end of their studies at IFP School. Didier Houssin, Chairman of IFP Energies nouvelles and Jean Sentenac, President of the IFP School Alumni Association, were also present. More than 600 persons attended the event, gathering graduates, their families and guests, industrial sponsors and members of IFP School staff.

This year, seven companies sponsored the event : Axens, ExxonMobil, Perenco, Renault, Schlumberger, TechnipFMC and Total.

Following the award of medals and the class photos, participants were welcomed on board Le Paquebot yacht for a cruise on the Seine river.