7D- THIRD INDUSTRIAL REVOLUTION : DEVELOPING SMART GRIDS.

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Speakers:
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What are smart grids? A smart grid is an electric grid which collects and provides information thanks to information and communication technologies, in particular smart meters: these devices, installed in your house, help consumers to measure precisely and control their energy consumption.
The smart grid gathers information both from the consumers and from the producers in order to optimize and regulate resources of electricity. Thus, smart grids are supposed to improve energy efficiency, reliability of networks, and enhance sustainability of the production, consumption and distribution of electricity.

Emmanuel De Corte: ***"Smart grids enable the energy transition"***

Smart grids are at the origin of a change of paradigm.
Mr. De Corte identified 6 major trends in the energy market:
• Increasing demand of electricity, in particular in Asia
• Increasing environmental awareness
• Declining fossil fuel supplies
• Ageing assets
• Development of advanced technologies
• Increasing need to maintain reliability of energy supplies

These trends are affecting the on-going energy transition on several points: on the political field, the technologic field and finally the economic field. That's why in a constant evolving and unstable context, Mr. De Corte defended the fact that we need to rethink our whole system. Functioning as an intelligent network of energy, smart grids bring an innovative solution to many of the problems above:
• Increased interactions, users are all connected
• Increased communication
• And thus increased global energetic efficiency

Smart meters in particular completely change the game insofar as everyone becomes active and monitors its energy's consumption. In conclusion, the whole system presents several assets:
• Flexible, both to needs and offers
• Accessible: available to all
• Reliable
• Economic
That's why these new tools could be at the origin of a paradigm shift : while before demand and production acted independently, with a production overwhelmed by an increasing demand and a rarefaction of resources, from now on, demand can follow and adapt itself to energy production.

A bright future for smart grids

For Emmanuel De Corte, smart grids are not a revolution, not only the term appeared as early as 1998, with the first smart meters in 2001, but they're above all an evolution towards the next step: smart energy cities. Several experiments had been successful (Powermatching city, with 25 houses), and even larger experiments are to be implemented. In spite of all, such networks rely on end-consumers that's why the end-users acceptance and participation is the key: they have to get used to the idea of active consumers, to get used to the idea of becoming producers, or, as Mr. De Corte said, prosumers.

Roch Drozdowski : ***"Smart gas grids are part of a wider smart network"***

Strategy analyst at GrDF, Mr. Drozdowski exposed at the conference the position of GrDF in the field of smart grids. Indeed, GrDF is working on gas smart grids, to benefit from the advantages of such networks in the domain of gas. GrDF is in particular developing the Smart metering project: the objective is to implement a smart grid for the gas energy. Although such project would require an important investment (replace 11million of meters in households, install a communication network and implement an information system), a gas smart grid would mean on the long-term:
• More flexibility : since the grid would act as an energy storage and a flexible provider
• An increased use of non-conventional gas (in particular the biogas stemmed from wastes)
• A greener gas grid, tending towards a 100% renewable gas by 2050
• More secured supply of gas : GrDF is in particular working on smart pipe projects
• A smarter use of gas thanks the decentralization of energy generation and the apparition of hybrid systems.