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## **Alstom and CEA-Liten create a laboratory dedicated to energy storage and solar integration into Smart Grids**

Alstom Grid and the teams of the French state-owned research entity CEA - INES (Institut national de l'énergie solaire) announce the creation of a joint Research and Development Centre in Chambéry (France). This joint laboratory will focus on developing advanced energy storage solutions and integrating renewable energy farms into smart transmission and distribution grids.

This laboratory will be located in INES' Chambéry campus. It will directly benefit from its core expertise in storage and solar applications as well as its existing testing capability across various ranges of solar and storage technologies. Alstom Grid, Alstom's sector dedicated to power transmission, brings its expertise in power electronics, power conversion and Smart Grid control room integration. This partnership has been put in place to develop early breakthrough innovation by expanding services and solutions to accelerate the deployment of embedded storage into Smart Grid systems and facilitating further introduction of renewable beyond the European target of 20% of the energy mix by 2020. The teams will also further investigate the potential use of direct current (DC) applications into smart cities projects.

*"With the creation of this R&D centre, Alstom Grid confirms its commitment to accelerating research for large-scale energy storage solutions." declared Patrick Plas, Senior Vice-President, Grid Power and Automation at Alstom Grid. "Already at the forefront of Smart Grid innovation, this partnership will allow us to develop and test new technologies and build CO2 free electrical grids. This laboratory is complementary to the "IEED<sup>1</sup> Supergrid" which is to be created in Villeurbanne".*

This new laboratory is a natural expansion of the relationship established in the past three years with INES through key Smart Grid demonstration projects such as Reflexe in Nice and Greenlys in Rhône-Alpes (France).

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<sup>1</sup> Institut d'Excellence en matière d'Energies Décarbonées

*“ This partnership combines our recognised expertise around Solar and Storage with Alstom Grid’s research and development programmes as well as our joint first returns of experience from current demonstrator projects around the world. Collaborating together on sustainable technology research will be a major step for our two organisations,”* said Jean Therme, director of CEA Technological Research.

#### **About Alstom**

*Alstom is a global leader in the world of power generation, power transmission and rail infrastructure and sets the benchmark for innovative and environmentally friendly technologies. Alstom builds the fastest train and the highest capacity automated metro in the world, provides turnkey integrated power plant solutions and associated services for a wide variety of energy sources, including hydro, nuclear, gas, coal and wind, and it offers a wide range of solutions for power transmission, with a focus on smart grids. The Group employs 92,000 people in around 100 countries. It had sales of €20 billion and booked close to €22 billion in orders in 2011/12.*

***Alstom Grid** has over 100 years of expertise in electrical grids. Whether for utilities or electro-intensive industries or facilitating the trading of energy, Alstom Grid brings power to its customers’ projects. Alstom Grid ranks among the top 3 in electrical transmission sector with an annual sales turnover of more than €4 billion. It has 20,000 employees and over 90 manufacturing and engineering sites worldwide. At the heart of the development of Smart Grid, Alstom Grid offers products, services and integrated energy management solutions across the full energy value chain—from power generation, through transmission and distribution grids and to the large end user.*

**Websites** [www.alstom.com](http://www.alstom.com) , [www.alstom.com/grid](http://www.alstom.com/grid)

#### **About CEA**

*The French Alternative Energies and Atomic Energy Commission (CEA) is a public technological research organization working in four main areas: low-carbon energies, defense and security, information technologies and health technologies, and large research facilities. Building on excellence in fundamental research and on recognized expertise, the CEA takes part in organizing cooperation projects with a wide range of academic and industrial partners. [www.cea.fr](http://www.cea.fr)*

***CEA-Liten** (Laboratory for Innovation in New Energy Technologies and Nanomaterials) is a CEA institute located for the most part in Grenoble and Chambéry (on the INES site). It is one of Europe’s newest and most important research centres in the new energy technology field. It works to support the nation’s efforts to diversify its energy mix through more effective use of renewables, in particular to meet energy requirements in transport, housing and mobile electronics. It also seeks to make French businesses more competitive. Involved in 350 research partnership contracts every year, Liten works hand in hand with French industry. It is one of the CEA laboratories with the most patents - 134 new applications filed in 2009 and a portfolio of 400 international patents. Liten’s research activities are focused on solar energy, low-energy buildings, future transport applications (hydrogen, fuel cells and batteries), as well as nanomaterials for energy and methods guaranteeing their safe use.*

*For more information, please visit our website: [www-liten.cea.fr](http://www-liten.cea.fr)*

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