



PRESS RELEASE

Genoa, February 15, 2018

Innovation Agreement signed by the Italian Ministry of Economic Development and the Liguria Regional Administration in relation to the Ansaldo Energia "Lighthouse Plant" project

The Innovation Agreement was signed today by the Italian Ministry of Economic Development (MISE) and the Liguria Regional Administration in relation to Ansaldo Energia's "Lighthouse Plant" project.

MISE was represented by Stefano Firpo, General Director for Industrial Policy, Competitiveness and SMEs, Liguria Regional Administration by President Giovanni Toti and Economic Development Councillor Edoardo Rixi, and Ansaldo Energia by Chairman Giuseppe Zampini.

The Smart Factory Cluster managed the identification, on behalf of MISE, of the Enterprise 4.0 Plan Lighthouse Plants, leading to the selection of Ansaldo Energia as one of the two Lighthouse Plants finalised so far.

Ansaldo Energia will invest a total of €14m in a three-year industrial research and development plan, based on the development and application of the main digital technologies covered by the Enterprise 4.0 Plan to the entire manufacturing process at its two Genoa production sites (Campi and Cornigliano).

The terms of the Innovation Agreement finalised today by MISE and the Liguria Regional Administration mean that Ansaldo Energia's investment - in addition to the incentives provided by the Enterprise 4.0 Plan - will be eligible for a grant equal to 25% of the total (20% MISE and 5% Liguria Regional Administration).

Ansaldo Energia Group is a leading international player in the power generation industry, to which it brings an integrated model embracing turnkey plants, components (gas turbines, steam turbines, generators and microturbines), servicing and work in the nuclear energy sector. Ansaldo Energia is 59,9% owned by CDP Equity in the Cassa Depositi e Prestiti Group, an Italian state-owned entity which has been promoting the country's economy since 1850, and 40% by Shanghai Electric, the world-leading producer of power generation machinery and mechanical equipment. Visit us at ansaldoenergia.com.

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Ansaldo Energia Lighthouse Plant

Scenario

The digital transformation of Ansaldo Energia began years ago and covers all key process in the value chain, from marketing and sales through to product development that is increasingly integrated at a digital level with service activities, as well as embracing production, supply chain management, and the erection and startup of machines and plants. Human capital continues to be the focus of Ansaldo Energia's digital transformation, which addresses the technology to support the ongoing improvement of safety at work, the skills and quality of resources, and the overall organisation of the Group.

The process

The Smart Factory Cluster managed the identification, on behalf of MISE, of the Enterprise 4.0 Plan Lighthouse Plants, leading to the selection of Ansaldo Energia as one of the two Lighthouse Plants finalised so far (the only Italian-owned one).

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The successful completion of this process has rewarded the strategic decision made by Ansaldo Energia to concentrate in Genoa production of the technology it acquired from Alstom and to leverage its digital technologies to deliver the highest standards of innovation and quality, which continue to be applied to production processes.

The project

The Ansaldo Energia Lighthouse Plant is a project organised in eight application areas of particular interest for Ansaldo Energia, each representing a goal to achieve:

1. Production Operations Management
2. Physical Operations Management
3. Production Asset Performance Management



4. Technical Data Management
5. Quality Data and Additive Manufacturing Management
6. Smart Safety
7. Smart Training
8. Cyber Security

Specifically, the Lighthouse Plant project addresses the development and application of all the technologies envisaged by the Enterprise 4.0 Plan, based on a model organised in three main strands of action:

1. The first three application areas (1. Production Operations Management, 2. Physical Operations Management, 3. Production Assets Performance Management) make it possible to extend digitalisation to all production lines, improving their efficiency and quality, as well as introducing innovations such as the Smart Tracking of all production factors and Predictive Maintenance achieved by retrofitting in-service plants and machinery (following the same approach that Ansaldo Energia is adopting for its installed fleet to offer value added digital services to our customers);
2. The next two applications areas (4. Technical Data Management and 5. Quality Data and Additive Manufacturing Management) capitalise on the use of new big data technologies in the technical and quality areas to facilitate the collection, analysis and use of data to support the decision-making and actions of factory resources. Also promoted is the use of Additive Manufacturing (3D Printing) in production processes;
3. The three most recent applications (6. Smart Safety, 7. Smart Training and 8. Cyber Security) refer to innovative digital processes and applications (augmented and virtual reality, simulation, simplified man-machine interface) that, after development and testing in the factory, could be replicated and adapted for other operating scenarios, including worksites for new plants and service work in the field (maintenance and assistance).

The project finally embraces the opportunity to extend the new applications to the Italian small and medium enterprises forming part of the supply chain that supports Ansaldo Energia's competitiveness on international markets.



Partners

The design and implementation of such an ambitious project has and will continue to require not only the support of MISE and the Liguria Regional Administration, but also the collaboration of a series of fundamental actors including:

- Universities, such as Genoa University and Milan Polytechnic;
- R&D Centers, such as CNR/Itia and the Italian Welding Institute;
- The suppliers of plants and, more generally, the Italian small and medium enterprises that form part of the Ansaldo Energia Supply Chain;
- Technology partners like Siemens, SAP, TIM and Ericsson, which will make it possible to experiment with 5G, Leonardo and many others;
- Innovative start-ups and SMEs like those selected by Ansaldo Energia with Digital X Factory, the Call for Innovation to which about 160 Italian companies responded and which selected Smart Track as the winning start-up, a Genoa-based company offering innovative digital solutions to support safety at work.