



INVESTMENT PROPOSAL FOR THE REQUALIFICATION OF THE EX ITALCEMENTI AREA IN MONSELICE

Regional Union of the Chambers of Commerce of Veneto 20.02.2014



TECHNOLOGICAL PARK FOR RENEWABLES ENERGY SOURCES AND THE ENVIRONMENT

REQUALIFICATION OF THE EX ITALCEMENTI AREA MUNICIPALITY OF MONSELICE

The municipality of Monselice covers an area of 56.26 km², including the villages of Marendole, Ca' Oddo, San Bortolo, San Cosma and Monticelli.

It has about. 17,603 inhabitants and its economy is based largely on agriculture.

This area is subjected to a landscape protection thanks to the Regional Park Colli Euganei. It is situated on the ex Italcementi cement plant area, and compatibly with the environmental conditions, is currently subjected to a specific evaluation for an industrial requalification.

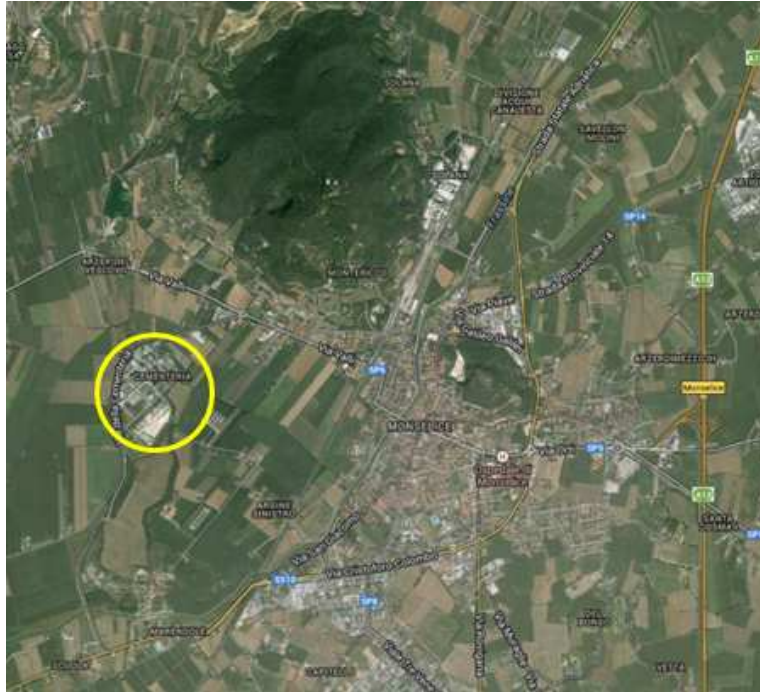


Figure 1: ex Italcementi area

ITALCEMENTI AREA: the area is categorized as industrial sector D4. It covers an area of 562,615 m² and is surrounded by other possessions, mostly of agricultural use. Moreover,, it is about 2.00 km far from the Monselice's residential area and is less than 1 km far from the villages of Marendole and Carmine.

A TECHNOLOGICAL PARK FOR RENEWABLES ENERGY SOURCES

1. Introduction

The forthcoming closure of the Italcementi area represents for the Municipality of Monselice and all the Euganean territory a thorny problem not only from an environmental and urban planning perspective, but it is also to become an employment issue..

The potential risk is not only related to the socio-economic problem. In fact, the development potential of the area may result in speculative activities. Hence, improving the area, could represent a valuable



asset for all the Euganean territory and could determine a significant process in changing towards different socio-economic development models as opposed to the traditional mining activity.

The weak point caused by the environmental situation could become as one of strength, allowing to build new perspectives of development.

For instance, by focusing on the implementation of environment-friendly and sustainable activities from the perspective of energy usage, it would be possible to valorise the environment, while exploiting the underutilized geothermal energy, which has made the Euganean territory a popular area.

Thanks to the proximity to R&D centres and universities, not only such a choice could boost the regional renewable energy quotas, but also it would generate innovation, changing and sustainable development processes towards a knowledge intensive economy.

2. The project

With regard to the requalification of the ex Italcementi area, the project includes the setting up of a green technology park for the valorization of geothermal energy and environment protection..

The activities sponsored and hosted by the Green Technology Park should include a wide (supply) chain linked to energy and environment, including R&D activities, testing, advanced manufacturing and services.

Hence, the cited activities could be extended to the development of technology integration in different areas, including the energy and environmental fields, networks development and management, domotics, plant engineering and security, popularization of science and technology, education and recreational activities.

Both the renewable power generation and commercialization, and the sale of land will bring to the municipal territory a good deal of direct and indirect benefits. In fact, revenue from solar, geothermal and biomasses helps to stimulate the local economies, creates new jobs as well as supports the Park development.

Thanks to these initiatives, the current employment levels can be guaranteed as well as it will be possible to start-up companies (start-ups will arise), creating new jobs. Furthermore, this initiative will



have positive effects on the current demand for highly trained manpower and positive consequences outside the Euganean territory too.

In fact, by adopting Open Innovation methodologies it would be possible to activate information-exchange and collaboration processes, to promote the knowledge and technology transfer and to develop cooperative systems within companies, R&D centres, universities, institutions with the aim of ensuring the economic development and competitiveness of a large area.

Stakeholders

Such an ambitious project requires a convinced and resolute action by the local institutions in a systematic and cooperative way within the most dynamic entities of the territory. The success of the Park will depend on its ability to innovate and to create strong and lasting cooperative relationships and alliances with the leading local entities in order to increase the knowledge base and share competencies and experiences too.

Networking is the key element, which can contribute to realize this project in a complementarity and specialization perspective thanks to the stakeholders' know-how and the operational and relational skills.

Therefore, it is very important to have the presence of enterprises that are at the forefront in the energy and environmental field. International largest power companies such as ENEL, ENI or even the local Municipalities could play an important role of leadership and act as a driving force for research and technological activities.

The same fundamental leading role could be held by scientific bodies such as CNR or ENEA. The involvement of national or regional institutions such as ISPRA, ARPA, Protezione Civile, etc, which works in the environmental or energy security field would be determinant for the development and the success of the initiative expected.

The presence of important industrial, scientific and technological leaders would support the establishment of knowledge-intensive and hi-tech SMEs. Moreover, it would facilitate the top industrial companies of components, devices and systems, which focus on innovative applications in the energy, environmental, security and domotics sectors. Other activities in the fields of specialized training, mentoring and dissemination of scientific experimentation could also be part of this technological growth.

3. Sectors, initiatives and activities





The project of the technological park for renewable energy could include the following priorities:

Energy

- geothermal production plant (heat and/or electric), in order to generate electric energy and hot water-steam (please see the attached technical data sheets of the production plant);
- photovoltaic-geothermal integrated plant to maximize the return (see technical data sheets of the production plant attached);
- experimental plants for the enhancement of biomasses and bio fuels;
- testing of optimization systems for the accumulation of energy (hot/cold), for its management and distribution;
- development and technology testing for the exploitation and enhancement of energy sources available as by-products (hot/cold water), through experimental plants in the sector of aquaculture, agro-technical applications, floriculture (greenhouses, ponds for fish farming, etc.);
- analysis and development of innovative technologies directed towards saving/recovering energy, improving the energetic efficiency for the end consumer (common uses and households);
- analysis and development of integrated systems of energy production from RES (solar thermal, photovoltaic and geothermal), integration between cogeneration and district heating in conjunction with the industrial heating recovery, i.e. trigeneration systems (combined production of electric energy, hot/cold), etc.;
- analysis and development of advanced applications of high-efficiency photovoltaic systems, cutting edge testing and alternative materials (active elements in polycrystalline or amorphous thin-film, composed nano and bio materials etc.).

Environment

- R&D of ecofriendly technologies and solutions, energy efficiency improvement reduction of harmful emissions in industrial and waste to energy plants;
- management and optimization of water resources, together with their distribution, control and abatement of thermal and chemical pollution of the wastewaters;
- analysis and testing of recycled materials;
- assistance services and analysis, environmental certification, clearing up, land recovery and environmental restoration;



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- civil protection, hydrogeological setting.

Technology and industrial plants:

- planning and development of new technologies, devices for the detection of the operating parameters and the optimization and testing of new technologies for the management of plants, distribution networks, integrated and innovative systems, telemetry and remote control for diagnosis;
- certifications, security, technological development, technical and logistical systems for the energy generation, distribution, control, measurement and recovery;
- realization of prototypes and/or demonstrative, experimental plants for the energy distribution and related services in order to represent a distinctive model able to be replicated on the local territory thanks to the best innovative technologies developed;
- security and protection systems.

Domotics:

- development of network solutions (home e building networking), structured wiring and development of new integrated solutions for the distribution of interior and exterior multimedia signals (domotics, TVCC, video surveillance, controls, etc.), provided by operators active in specific sectors (TV, telephony, internet service providers);
- development of technological solutions for the transition from closed and private systems to a condition of standard interoperability, multimodality, multimedia and security systems adequate to the present and future services (VoIP, broad band up to the IPTV);
- safety-security systems integration;
- development of high-efficiency lightening systems.

Technical and specialized training

- planning, realization, management and maintenance of advanced technological applications in the multi utility and Energy field (cogeneration and trigeneration of fossil fuels, bio fuels, thermal solar and photovoltaic plant (including their monitoring and management through telematic way);
- panning and management of new technologies for the environment;
- planning of zero-impact, eco-friendly and low-energy consumption plants.

Research centre on renewable and sustainable energies





- Leading center for the development of renewable energies technologies and environmental security (studies, training, consultancy);
- exhibition spaces for the public presentation of the most advanced technologies in the field of renewable and sustainable energies, in conjunction with best practices and laboratories for the experimental teaching.

Business incubator and start-up of new business activities

- Assistance activities (financing, technology, management and commercial), intended to create and foster growth of new businesses and knowledge intensive enterprises consistent with the Park's specialization;
- Intelligent Building;
- R&D activities, advanced services, specialized and technical training, a research center, an enterprises incubator and experimental training initiatives could be hosted in an intelligent building, (a new generation structure designed with a low energy consumption and high functional performances). Such building will be equipped with the most modern and advanced solutions for the building automation, integrated with new technological, energetic, security and networks devices. It will factually represents the most advanced and frontier technologies in these fields;
- In addition, the Park could host complementary and/or synergistic initiatives (taking into account the actual energy resources in different forms).

Logistical hub for the horticulture cold chain

- Manufacturing, storage, transformation and marketing of both the horticultural products for the fresh fruit and vegetable sector and their derived products such as frozen food, ready-made vegetables, cooked or prepared vegetables.

Aquatic Park

- The availability of low temperature hot water could foster the realization of an aquatic or sport Park, fully equipped with swimming pools of different size.

4. The project

Partnership composition

It is assumed to establish an adequate network of companies and public bodies in order to create an exemplary multistakeholder governance model.





The ESCO will also manage the environmental recovery and restoration of the area, even for subsequent lots, through funds usage deriving from the production of renewable energy. The ESCO will also support the targeted renovation of existing buildings and the demolition of the remaining. A small area of a renovated building will be used as a museum in memory of the workers who spent most of their lives working for the cement plant.

The ESCO may also directly build up new structures such as the **Intelligent Building**, or even dispose of the land to allow primary Leading Companies to invest in ownership structures.

The role of research coordinators at the Park will be played by the University of Padova and the Veneto Region.

The stakeholders involved in the project realization are the Ministry of MIUR, MISE and the Ministry of the Environment. The MIUR could be interested in the scientific research.

The MISE could have to tackle the employment problems, which may occur in case of the Cement Factory shut down.

The Ministry of the Environment (MOE) is interested in the requalification project as it has to tackle the environmental problems of an highly compromised area. Moreover, in the long period the MOE will take advantage from the specialized research carried out on the park.

As territorially competent institutions, the Veneto Region and the Province of Padova will be involved in all the initiatives that will concern the Park. Such institutions could provide a critical support throughout the project implementation phases.

The Chambers of Commerce System and the Venetian Enterprise Europe Network should look for all the prospective companies – either domestic or foreign - interested in presenting Park-related European projects.

ENEL and the ESCO could be interested in the energy production, as well as in the management of all the related services, thus they may be interested in investing in some facilities.

A constructive dialogue among the participating companies, public bodies and environmental organisations is necessary before the project implementation takes place in order to drive the business decisions and cooperate in the realisation and management of the Park initiatives.