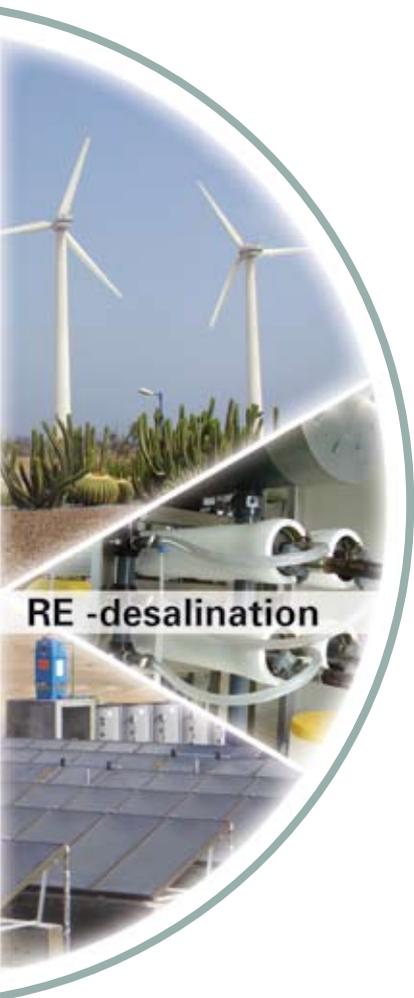




# PRODES NEWSLETTER SPRING 2010



Promotion of Renewable Energy  
for Water production through Desalination



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ProDes brings together 14 leading European organisations in order to support the market development of renewable energy desalination in Southern Europe. It started on the 1st of October 2008 and will run initially for 2 years.

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## Project Overview

ProDes supports the use of renewable energy (RE) in remote areas where the electricity grid cannot accommodate high penetration of intermittent energy sources. The project focuses on Southern Europe where desalination is an increasingly important energy demand factor. Using renewable energy to power desalination, either in stand-alone or grid connected systems, will allow better load control and consequently wider renewable energy use in these areas.

The project has the following specific objectives:

- Develop and communicate a road-map on RE-desalination
- Develop courses and provide training for students and professionals
- Facilitate collaboration between RE-desalination technology providers and SMEs on the local level
- Support communication and understanding between technology providers and investors



Renewable energy driven desalination technologies

- Provide recommendations for the improvement of the legislative and institutional conditions and communicate them to key decision makers
- Familiarize the general public with the technology and its benefits

These objectives are realized through the implementation of the carefully designed work programme by a selected group of partners from all over Europe with a wide range of backgrounds.



## ProDes Progress and Plans

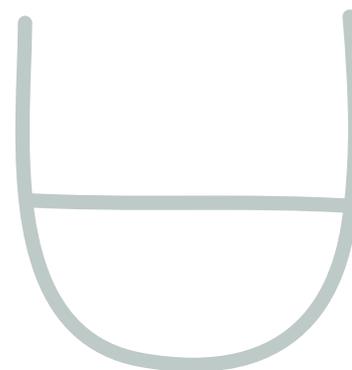
Within the first year of ProDes a lot of progress has been achieved. A Roadmap for the sector has been developed, training courses have been implemented, databases elaborated and promotional events organized. Some of these activities are presented in the newsletter, while on the project website [www.prodes-project.org](http://www.prodes-project.org) you can always read the latest news and download the publications and project results.

In the second year of the project the training activities of ProDes will continue, while several new activities will start. Among others, networking events for local SMEs and technology developers will be organized in Greece, Italy, Spain and Portugal.

Also the ProDes partners will provide concrete recommendations for improving the framework conditions suggesting policy tools that could be used to support RE-desalination. The results will be available on the ProDes website, including:

- Guidelines for raising funds for product development

- Report presenting the most promising project development opportunities
- Export market analysis
- Recommendations for a financial scheme supporting RE-desalination



## Roadmap

The roadmap is one of the main outcomes of the project. Its aim is to pave the way for the fast and efficient development of renewable energy driven desalination. It has been developed by the ProDes consortium and an extensive consultation process has ensured that the views of the RE-desalination community are fully reflected.

In chapter 1 the status of RE- desalination is described. The main options for powering desalination are presented including energy sources like solar thermal, concentrated solar power, photovoltaic, wind power, geothermal energy and ocean energy.

Chapter 2 briefly illustrates the perspectives of RE-desalination. It deals with the water crisis, the global desalination market, the status and the perspectives of RE- Desalination.

In chapter 3 technological, economic, social and institutional barriers to the development of RE-desalination have been identified and their impacts are described. Chapter 4 outlines the strategies needed to overcome each barrier.

Finally in Chapter 5 resources and activities needed to implement the strategies are presented. The

recommendations include the coordinated action by the RE-desalination community, the development of a comprehensive market study and the introduction of support schemes. If you are interested in knowing more about the roadmap, you can download it at the project website.

Image source: University of Palermo



## University courses

ProDes introduced RE-desalination in the higher education system of relevant countries. In this way we fill the knowledge gap and the lack of specialists that will work with entrepreneurs active in this fast emerging market.

In March 2009 the first Higher Education course started at the University of Palermo (Italy). About 60 students of the Engineering Faculty have attended the course with enthusiastic response to the topic and the course structure. The course was included in the Chemical Engineering degree curriculum and finished in June 2009 with a visit to a local desalination plant. It will be offered again in the following years for the students of the Engineering Faculty, Furthermore a course has been offered at the University of Almeria, where 25 students have attended it. Courses for students are also offered at the University of Lisbon and the Algabe University in Portugal, the University of Las Palmas Gran Canaria in Spain and the Agricultural University of Athens in Greece.

For more information, please consult the ProDes homepage: [www.prodes-project.org](http://www.prodes-project.org)

Image source: CRES



Image source: CRES



## E-learning course

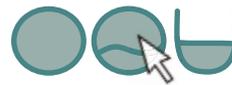
An e-learning course will be offered as part of the training activities of the project. This online course will be focused on the introduction to desalination by renewable energy resources. A set of ten chapters will present the main ideas about this topic that attracts more and more interest.

This training initiative is addressed to people interested in the field: professionals related with water or renewable energy, students and water managers.

The e-learning action will be based on an interactive and user friendly approach; the purpose is that the online student is the main leader of his/her own training process.

The course has been designed to be flexible: the students with high time restrictions will be able to complete it with a minimum dedication of ten hours; on the other hand, the course will offer several complementary training options for the students with more time or specific interest.

The e-learning course is planned to be available in March 2010. Up-to-date information will be available on the project website.



[www.prodes-project.org](http://www.prodes-project.org)



## Courses for Professionals

Separate courses for professionals are organized within the project, in order to deliver faster results by training the people that are already active in the market.

The first ProDes course for professionals on the basic principles, the state of art and the most promising technologies of RE Desalination took place at the CIEMAT's Plataforma Solar facility in Almeria (Spain) from 19. - 21. October 2009.

The purpose of this course was to provide professionals with the latest knowledge of different existing technologies involving the use of renewable energies to drive desalination.

Theory lessons were complemented with practical visits and activities at the experimental installation of solar desalination on Plataforma Solar de Almeria. The course was attended by 25 professionals from all around the world.

A second course for professionals has been organized on the 11 and 12 December in Palermo in collaboration with the local Order of Chartered Engineers. Courses will also be offered in Greece and Portugal.

For more information about the various courses please visit the project events section of the project website.

Image source: University of Palermo



## The Consortium

A strong team of research institutes, companies and associations from Europe has been brought together for achieving the challenging objectives.

WIP Renewable Energies, Germany  
CENTRE FOR RENEWABLE ENERGY SOURCES & SAVING (CRES), Greece  
Università degli Studi di Palermo, Italy  
Laboratório Nacional de Energia e Geologia, I. P. (LNEG), Portugal  
Ao Sol, Energias Renováveis, SA, Portugal  
Fraunhofer Gesellschaft -Institute for Solar Energy, Germany  
Befesa Agua, S.A.U., Spain  
AquaMarine Power, United Kingdom  
Hellas Energy, Greece  
European Desalination Society (EDS), Italy  
Plataforma Solar de Almería, CIEMAT, Spain  
Almeco-TiNOX GmbH, Germany  
MAGE Water Management Company, Germany  
Instituto Tecnológico de Canarias, SA, (ITC), Spain  
Capital Connect, Greece



[www.wip-munich.de](http://www.wip-munich.de)



[www.cres.gr](http://www.cres.gr)



[www.unipa.it](http://www.unipa.it)



[www.lneg.pt](http://www.lneg.pt)



[www.befesaaqua.es](http://www.befesaaqua.es)



[www.edsoc.com](http://www.edsoc.com)



[www.mage-watermanagement.com](http://www.mage-watermanagement.com)



[www.aosol.pt](http://www.aosol.pt)



[www.aquamarinepower.com](http://www.aquamarinepower.com)



[www.psa.es](http://www.psa.es)



[www.itccanarias.org](http://www.itccanarias.org)



[www.fraunhofer.de](http://www.fraunhofer.de)



[www.hellasenergy.gr](http://www.hellasenergy.gr)



[www.almeco-tinox.com](http://www.almeco-tinox.com)



[www.capitalconnect.gr](http://www.capitalconnect.gr)





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