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Electricity from the desert: "We are at the forefront of development"

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Paul van Son, Head of the Desertec Industrial Initiative

Paul van Son, Head of the Desertec Industrial Initiative, speaks on challenges, progress and co-operation with DLR

Interview by Dorothee Bürkle und Manuela Braun

Paul van Son is the CEO of the Desertec Industrial Initiative that was founded in November 2009. He talked about the progress made and challenges facing the Desertec project with over 200 researchers and equipment manufacturers at the 13th Solar Symposium of the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) on 29 June 2010 in Cologne. In a conversation with DLR Communications, Paul van Son describes the targets and cooperation attained thus far by the industrial consortium with the DLR research centre.

In a couple of sentences, how would you describe Desertec and the idea behind it?

van Son: The idea is to generate electricity from solar and wind energy in the desert and to channel it over power grids to the local population and, in part, to Europe.

From the view of European power provision, why do we need Desertec??

van Son: Europe does not possess many energy options. Fossil fuel energy sources are gradually disappearing or becoming very expensive, and carry their own disadvantages from an environmental standpoint. Europe has the options of photovoltaic, wind energy and hydro-electric generation for renewable energy sources. All of these options are limited and we shall require more extensive supplies of renewable energy in the long-term. Thus a portion of this may originate from the Sahara or the Middle East.



Thirteenth Solar Symposium at DLR Cologne on 29 June 2010

What function does the Desertec Industrial Initiative (Dii) play in this process?

van Son: We are laying the groundwork for the entire development necessary for North African and Middle Eastern investors to be able to build plants. We are negotiating the initial approvals that would facilitate electricity from the generating plants to be offered to the local network operators. We are currently at the fore in the drive for the construction of high-voltage direct current transmission lines, so that electricity in one country may be transmitted to another. Otherwise we are initiating stimulating provisions whereby, for example, North African countries enact feed-in tariff legislation, as we have in Germany or whereby the German feed-in compensation applies to MENA (Middle East and North African) countries. Furthermore, we are advising on the most appropriate technology for various locations, with a view to decreasing the cost of electricity generation – that still remains very high.

The Initiative was founded in November 2009. Have there been any findings to date?

van Son: Quite a few. We have acquainted ourselves particularly well with Morocco. We are cognisant of the Moroccan government’s plans and of the possibilities there. We have learnt which locations in Morocco stand consideration in the construction of solar power plants and the state of the current grid. We are also aware of the possibilities of exporting electricity from Morocco to Spain. In all of these areas, our knowledge has been significantly enhanced since November 2009, as with other North African countries.



Solar tower power plant at the Plataforma Solar de Almería in Spain

What are the largest challenges facing the Initiative?

van Son: One challenge is the differential between cost and markets during the initial years. Wind and solar energy is being promoted in Germany and this must also happen in the countries of the Middle East and North Africa, since there is no proper electricity market for renewables yet. The electrical grids and infrastructure at many possible sites are still insufficiently developed. There are a good many challenges ahead.

The consortium consists of totally diverse enterprises working in concert with DLR as a research establishment. What are the contributions of each?

van Son: A research centre furnishes studies and knowledge; partners from the world of industry may provide financing, products and contacts. We represent different interests, but we also have complementary potential, where each learns from the other and this enhances the whole. To date, all participants show keen interest and there are hardly any problems in regard to co-operation.

DLR has already been very active in the preparatory stages. The concept for Desertec is DLR's concept. In future the DLR may also undertake many commissions and enquiries– system studies, measurements, technological development, studies on heat accumulators as well as educational programmes to train the specialist personnel in the countries of the Middle East and North Africa. DLR is in a position to contribute to success over the entire spectrum.

Where do you see Desertec in the next ten years?

van Son: Over the next decade we shall see the construction of plants in the desert regions, that electricity grids become fully developed and that a high-voltage direct current transmission line between Africa, Europe and the Middle East is built.

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