

## PRESS RELEASE

### **Hanergy and Solliance team up to develop new solutions for SolaRoad – the road to the future**

**Shanghai, April 20, 2017** – Solar cell manufacturer Hanergy Thin Film Power and Thin Film Solar Research partnership Solliance today signed a Memorandum of Understanding, highlighting their intention to develop a strategic collaboration in the area of integrated solar solutions for buildings and infrastructure. The first product that parties aim to bring to large scale industrial manufacturing is pavement with integrated solar cells for SolaRoad, the world's first road that converts sunlight into electricity.

Signing of the MOU took place at the Holland Pavilion on the China Shanghai International Technology Fair (CSITF) where the Netherlands participates as country of honor in a green technologies innovation mission, strengthening the R&D collaboration and business opportunities between China and the Netherlands amongst other in the field of solar energy. High level officials from the Netherlands and China attended the ceremony, including the Dutch Secretary of State for Economic Affairs Martijn van Dam.

#### **Large scale industrial activity**

Mr. Li Ming, CEO of Hanergy Thin Film Power Group EME, is confident that this is the right time for this innovation: 'Solliance and Hanergy see a significant potential for large scale industrial activity and application of thin film solar solutions in building and infrastructure integrated PV-products. Hanergy is world leader in the manufacturing of a broad portfolio of flexible thin film solar products, among which the flexible CIGS film from Global Solar, which was acquired by Hanergy in 2013. High Tech from the USA, the Netherlands and China is coming together here. We look forward to work with Solliance on the further improvement of our products to even better fit the requirements of various applications.'

#### **Sunny road to the future**

Huib van den Heuvel, director of Solliance, also sees a sunny road to the future: 'Integrating solar cells in a road is an idea that I didn't immediately recognize as revolutionary, but in the meantime I see that if we can create a positive business case for solar energy generation here we can do it virtually everywhere, and we are convinced that we will succeed in doing so. The combination of this robust and high-performance flexible solar cell material from Hanergy and industrial, roll-to-roll manufacturing strategies opens up completely new opportunities. We are seeing the start of rugged solar technology coming to the market. Our role is to enable the roadmap of SolaRoad towards a competitive levelized cost of electricity by further development of the thin film solar manufacturing and integration processes. Next to SolaRoad we see excellent opportunities for products such as prefabricated roofing and façade components based on Hanergy substrates.'

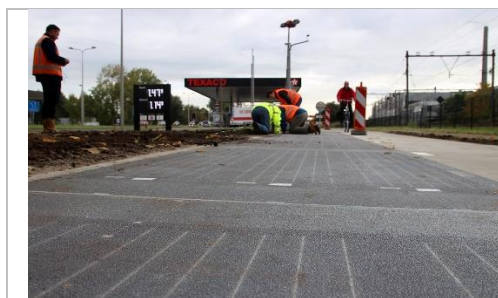
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### SolaRoad as a successful pilot

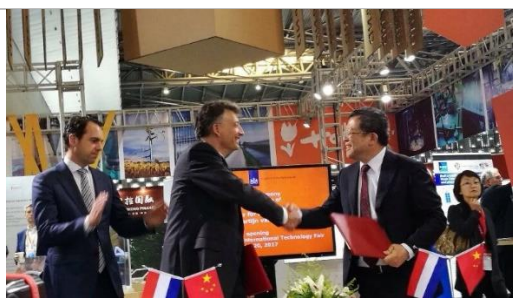
The Dutch province of Noord Holland has enabled the start of SolaRoad in 2011, together with knowledge partner TNO, and commercial partners Dynniq and Strukton Civiel. Paul Rutte, Manager Innovations at the province: ‘we have been very enthusiastic about SolaRoad from the beginning in 2009 because we see the contribution that existing infrastructure can bring us in the transition towards a sustainable energy system. SolaRoad successfully piloted the world’s first prefab element-based pavement in a public test road near Amsterdam since 2014. A first trial with Hanergy technology embedded in SolaRoad prefab elements was piloted in the test road near Amsterdam in 2016. We are pleased to see that further bundling of forces is now taking place in order to accelerate the start of industrial and large scale production of solar pavement.’

### Another SolaRoad partner

Another strong supporter of the initiative is the Province of Noord Brabant in the Netherlands. Vice Governor Anne-Marie Spierings of the province of Noord-Brabant: ‘We have given our full support to the ambition of Solliance to lead the way in Europe on the research, development and introduction of technologies for thin film solar solutions to enable an economically feasible zero-energy built environment. This SolaRoad product is in our view an example of a perfect integration of renewable energy technology in public infrastructure. We are ready to propose multiple locations for pilot projects in the coming few years in order to validate the business case; a first good opportunity that we have identified for later this year is a ‘cycle highway’ between the cities Tilburg and Waalwijk, one of 5 innovative cycle highways in Europe and part of the EU project ‘CHIPS’. We look forward to large scale implementations in three to five years from now.’



*SolaRoad in Krommenie (Netherlands)*



*Signing of MOU with Secretary of State for Economic Affairs Martijn van Dam (l), Director Solliance Huib van den Heuvel and Mr Li Ming, CEO of Hanergy Thin Film Power Group EME (r).*

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### **About SolaRoad:**

'SolaRoad' is the name of a solar road pavement that the Dutch organization for applied science TNO has been developing with a number of consortium partners since 2009. The development effort resulted in a prefab element-based pavement, which was successfully demonstrated in a public test road near Amsterdam in 2014. TNO and partners have been developing the technology towards a large scale commercially applicable product. TNO and Solliance see a significant potential for application of flexible solar substrates in the next generation SolaRoad pavements. A first trial with Hanergy technology embedded in SolaRoad prefab elements was piloted in the test road near Amsterdam in 2016. [www.solaroad.nl](http://www.solaroad.nl)

### **About Hanergy**

Hanergy is manufacturer of thin film modules and China's largest privately funded sustainable energy producer with an installed capacity of more than 10 Gigawatt. Founded in 1994, starting in hydropower and later wind, Hanergy has become one of the global leading sustainable energy producers. With her subsidiary brands Solibro (Germany), MiaSolé (USA) and Global Solar (USA) Hanergy offers a unique portfolio of high end thin film PV solution, varying from glass-glass to flexible to transparent.

[www.hanergy.eu](http://www.hanergy.eu) / [www.globalsolar.com](http://www.globalsolar.com)

### **About Solliance**

Solliance is a partnership of R&D organizations from the Netherlands, Belgium and Germany working in thin film photovoltaic solar energy (TFPV). In order to strengthen the region's position as a world player in PV, Solliance is creating the required synergy by consolidating and coordinating the activities of 250 researchers in industry, at research institutes and universities.

Various state-of-the-art laboratories and pilot production lines are jointly used for dedicated research programs which are executed in close cooperation with the solar business community.

Solliance partners are: ECN, imec, TNO, Holst Centre, TU/e, Forschungszentrum Jülich, University Hasselt and Delft University of Technology.

Solliance offers participation in its research programs and opens up its lab facilities to new entrants, either from industry or in research. On the basis of clear Intellectual Property (IP) agreements, each industrial partner can participate in this research effort, or alternatively, hire equipment and experts to further develop its own technology. [www.solliance.eu](http://www.solliance.eu)

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