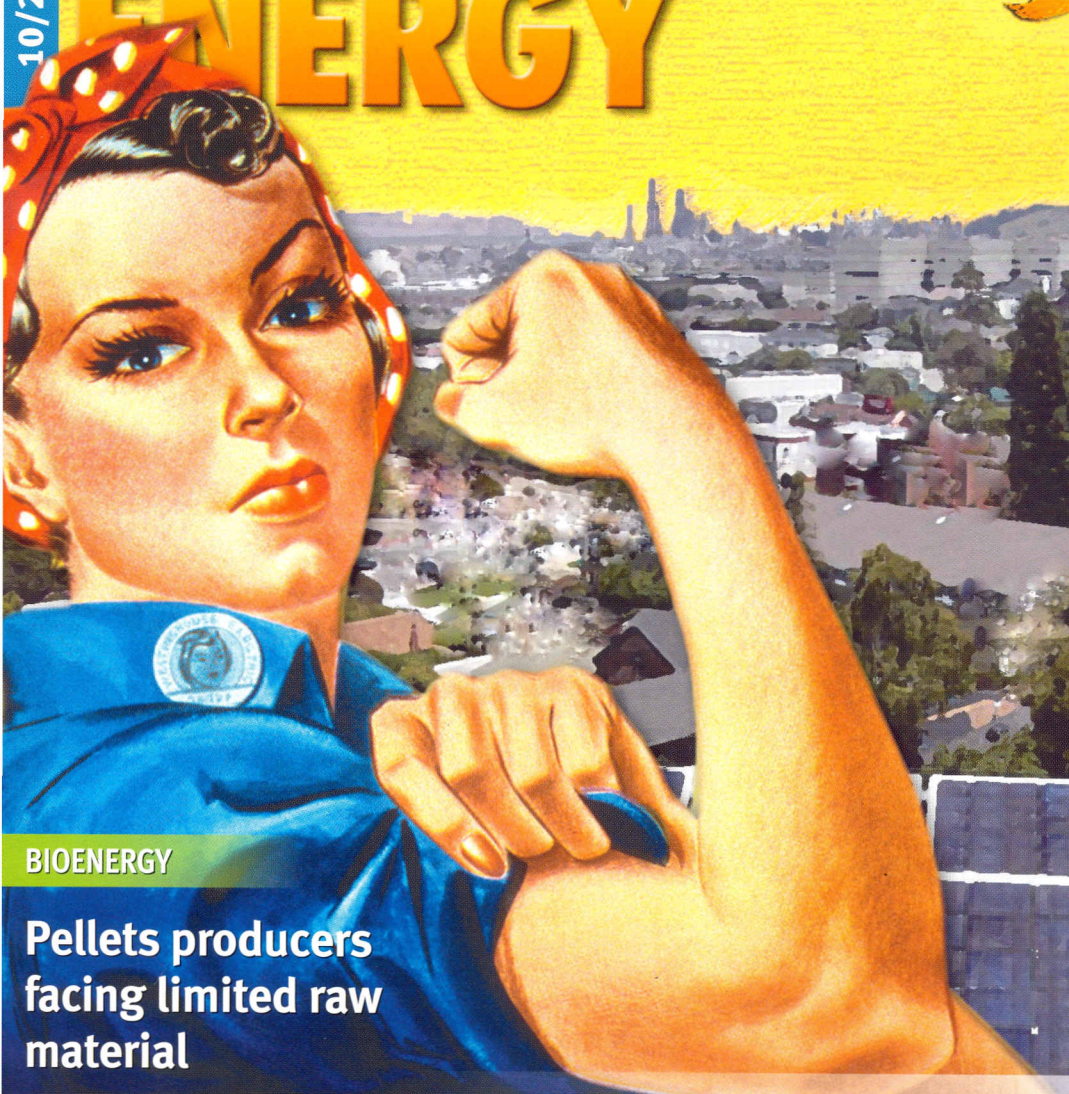


SUN&WINDENERGY  
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# SUN & WIND ENERGY



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**PV World Map:  
cell, module and  
thin-film producers**

**BIOENERGY**

**Pellets producers  
facing limited raw  
material**

**SOLAR THERMAL**

**Integrated  
manufacturing in  
absorber production**

**WIND ENERGY**

**Smooth offshore  
service in rough  
seas**

**SOLAR JOBS FOR RICHMOND**

# Cooling a hot spot

## World map of cell and module producers

Despite the financial and economic crisis, the cell and module manufacturing industries are continuing their expansion of production capacities. Especially players from Asia but also participants in the emerging growth markets such as in the United States, in Greece or in France are establishing new production lines.

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Photo: SolarWorld AG



## Integrated absorber manufacturing on the rise

No other manufacturing step in solar thermal is as consistently automated as absorber manufacture. No matter whether it is the guide roller of the laser head or the sonotrode which is rolling over the absorber. More and more suppliers of welding machines now also offer complete production lines for collector production.

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Photo: Wagner & Co.

Fast and effectively does it

## Jobs to cool a hot spot

Solar Richmond, a non-profit organization, brings green jobs, clean energy, and economic opportunity to Richmond, California, through solar installation training for low-income residents and innovative job creation and placement services to empower emerging leaders of the green economy.

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Photo: Solar Richmond

## Irland: idle potential on green meadows

Ireland is one of the strongest growth markets in Europe. Even though renewable energies are still only emerging, the country is considered to have a high potential for the future.

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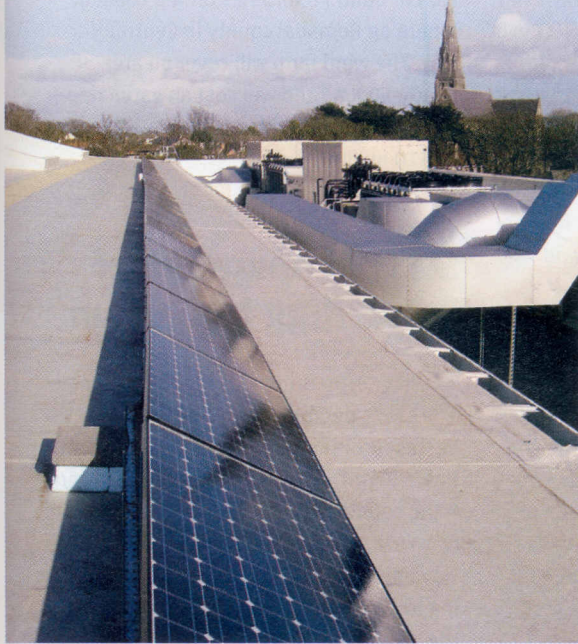


Photo: CGE Coolpower

Photo: Dong Energy



## Offshore logistics: "If I had a hammer..."

With the commencement of construction not only for European, but also for Chinese and American offshore parks, the installation trade is moving into the focus of the wind industry. No serious bottleneck threatens so far, but the situation with the cable layers is critical.

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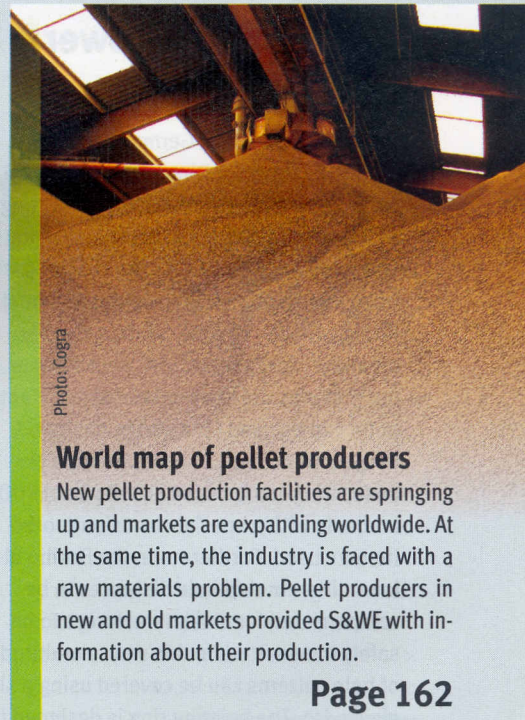


Photo: Cogira

## World map of pellet producers

New pellet production facilities are springing up and markets are expanding worldwide. At the same time, the industry is faced with a raw materials problem. Pellet producers in new and old markets provided S&WE with information about their production.

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