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SolarSuperState Association Press Release:

**SolarSuperState Association calls on Denmark to continue its successful historical support since the 1980s for renewables**

Zuerich (SolarSuperState Association), 12 December 2012 -

The SolarSuperState Association awards the annual SolarSuperState Prize to states for cumulative installed capacity per capita of wind energy and photovoltaics. The SolarSuperState Association furthers 100 % renewable energy economies at state level and lower administrative entity levels.

The Danish Parliament (Folketing) is currently discussing an amendment of the Danish legislation for renewable energy, in particular regarding net metering for photovoltaics and small wind turbines.

Internationally, the Danish net metering scheme is seen as a very effective and non-bureaucratic tariff scheme which is based on fostering self-supply from small wind and photovoltaics. In case that the owner of the photovoltaic installation or small wind turbine does not consume the electricity at the moment of its generation, the electricity is fed into the public grid and the household's electricity net meter turns backwards. In light of Danish electricity prices for consumers of up to 0,30 € per kWh, which includes approximately 65% taxes and VAT, this scheme has worked very well in Denmark and encouraged new investment in local generation.

In the SolarSuperState Association's viewpoint, the current scheme has made Denmark one of the leading countries in small wind power and one of the fastest growing photovoltaic markets of the world and an astonishing and promising new small wind energy industry has emerged in the country using efficient and reliable new technology. This can be seen in the actual SolarSuperState ranking of all states of the world in the category "Wind" [www.solarsuperstate.com/1/index.php/competition/competition2012/wind-2](http://www.solarsuperstate.com/1/index.php/competition/competition2012/wind-2) and in the SolarSuperState ranking in the category "Solar" [www.solarsuperstate.com/1/index.php/competition/competition2012/solar-2](http://www.solarsuperstate.com/1/index.php/competition/competition2012/solar-2) and in the estimates for the end of this year:

Wind power

Denmark end 2011 706 Watt / capita (world rank 1)

Denmark end 2012 780 Watt / capita (estimate)

Spain end 2011 459 Watt / capita (world rank 2)

## Photovoltaics

Denmark end 2011 3 Watt / capita (world rank 33)

Denmark end 2012 36 Watt / capita (estimate)

Germany end 2011 301 Watt / capita (world rank 1)

Germany end 2012 400 Watt / capita (estimate)

Czech Republic end 2011 185 Watt / capita (world rank 5)

However, in spite of this success in photovoltaics, the Danish government has proposed to stop net metering.

The SolarSuperState Association applauds Denmark for its achievement and in particular for setting up the successful net metering scheme not long ago, and recommends that Denmark does not suspend it but keep it, and keep it simple. The SolarSuperState Association expresses concerns about recent plans discussed by the Danish Parliament to change fundamentally the current rules and to abolish net metering or make it much more complicated and practically not feasible any more that may result in a slow down of the substitution of dirty fossil energy by clean renewable energy. The SolarSuperState Association reminds the Folketing that Denmark has a responsibility for accelerating global warming caused by greenhouse gas emissions mainly from fossil energies. Denmark has already emitted substantial amounts of carbon dioxide to produce electricity with natural gas and coal and still wants to continue for decades emitting substantial amounts of carbon dioxide from its electricity, heating and transportation sector.

The Danish 100 % renewable energy target for 2050 was a first step in thinking in the right direction. But this step is not sufficient to act in a responsible manner now. The Danish government and parliament should now remove all barriers against a fast ramp up of photovoltaics, on-shore wind and on-shore small wind in order to achieve 100 % renewable electricity. This is possible and could save jobs and create jobs in the actually threatened huge Danish wind energy industry in short-term. In long-term the Danish wind energy industry could also benefit from a Denmark operating at 100 % renewable electricity production with significant shares of wind and solar energy as a model that is attractive for every state of the world to copy fast.

The SolarSuperState Association welcomes every Watt of installed renewable energy production capacity including off-shore wind. Tax losses from the net metering for the state Denmark should rather be compensated by measures that help to accelerate the way to 100 % renewable energy in all economic sectors of Denmark, like the necessary taxation of fossil airplane fuel.

### **Background information:**

Denmark emitted since 1751 some 3860 Teragram carbon dioxide. The officially expected Danish carbon dioxide emission for 2013 to 2050 are estimated to be some 930 Teragram. The oil and gas reserves of Denmark are equivalent to some 2800 Teragram carbon dioxide. Denmark could avoid more than 3000 Teragram carbon dioxide globally by switching immediately to renewable energy and letting the remaining oil and gas in the ground under the North Sea.

The global mean surface temperature of the earth is some 0.8 degree Celsius above the preindustrial level of 1750. The threshold temperature for the

irreversible total melting of the Greenland ice sheet is likely to be in the range of 0.8 to 3.2 degree Celsius temperature increase for the mean surface temperature of the earth compared to 1750 (Robinson, A., R. Calov, A. Ganopolski 2012: Multistability and critical thresholds of the Greenland ice sheet, Nature Climate Change, published online 11 March 2012 doi:10.1038/nclimate1449).

Complete Greenland ice sheet melting means some 7 meter higher global average sea level than today. Then large areas of the mainland of Denmark and many other regions of the world like the Netherlands are flooded irreversibly. Also only 3 or 5 meter average sea level rise would cause huge land losses of the world where people live and work and produce food. Continued carbon dioxide emissions and waiting with the complete substitution of fossil energies with renewable energies are playing roulette with the whole world. Continued use of fossil energies causes already today in Denmark and or the world significant mortality by toxic emissions, droughts, storms and floods by rain due to global warming.

By the end of 2010, 700'000 small wind turbines with a total capacity of around 440 MW were installed around the world (World Wind Energy Agency: 2012 Small Wind World Report; [http://wwindea.org/home/index.php?option=com\\_content&task=view&id=348&Itemid=40](http://wwindea.org/home/index.php?option=com_content&task=view&id=348&Itemid=40) ).

The future annual growth rates can be above 30 % for the next years to come, so that by the year 2020, the world market for small wind turbines could be larger than 1 billion €. The leading small wind markets today are next to Denmark China, USA, United Kingdom, Germany and Italy – and soon many developing countries are expected to become huge markets, mainly for rural electrification.

Worldwide, more than 330 companies are manufacturing small wind turbines. Thanks to the net-metering scheme, Denmark has been able to become, like previously in large wind, also one of the world's leaders in small wind, boosting a new industrial sector which is seen as an example in many other countries. Denmark needs some additional 8 to 12 Gigawatt wind turbines to shift to 100 % renewable energy in all sectors. That is equivalent to 2000 to 3000 Watt per capita:

Wind power end of 2011 Denmark: 706 Watt per capita

Wind power end of 2012 Denmark: 780 Watt per capita (estimate)

Wind power SolarSuperState expectation for (almost) every state: 1000 to 10000 Watt per capita

Photovoltaics end of 2011 Denmark: 3 Watt per capita

Photovoltaics end of 2012 Denmark: 36 Watt per capita (estimate)

Photovoltaics end of 2012 Germany: 400 Watt per capita (estimate)

Photovoltaics SolarSuperState expectation for (almost) every state: 1000 to 10000 Watt per capita.

Photovoltaics complement very good to wind energy. Additional energy storage solutions should be installed soon too. Synergies of 100 % renewable electricity with 100 % in other sectors (transport, heating) are possible now and should be realized soon too and not be postponed to the 2030s, 2040s or 2050s.

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The SolarSuperState Association is the global voice of people and organizations that can benefit from rapidly increasing markets for decentralized renewable energy technologies (wind and solar energy, energy storage, ...)