

RENEWABLE ENERGY OVERTAKES NUCLEAR ENERGY IN THE U.S.

Is the United States converting itself to renewable energy? Perhaps, if two reports are to be believed which reveal that the production of renewable energy continues to grow in the United States. According to the latest report of the US Energy Information Administration, renewable energy represented 11% of American production in 2009, more than nuclear energy. With 1210 mw of renewable energy installed, the total capacity added in 2009 reaches 4,000 mw.

The United States is now the largest producer of wind energy in the world, ahead of Germany, according to the GWEC (Global Wind Energy Council), with a total capacity of 25,170 mw as opposed to 23,900 mw for Germany. But remarkably the United States should this year also take the lead in the solar energy sector. The American production of wind-energy electricity made possible a saving of 54 million tons of CO2 in 2009, reducing the carbon emission in the electricity sector by 2%, or the equivalent of the removal of 9 million cars, stated the AWAE.

Wind production of electricity is having significant transatlantic growth for several reasons: the overall price rise of petroleum, environmental awareness of Americans and the deliberate policies of certain states. New wind projects in the United States represented 42% of the total of the country's new capacity for the production of energy last year. Wind accounted in 2007 for 35% of all the new infrastructure for producing energy.

According to a report of the American Ministry of Energy (DOE), wind energy could furnish 20% of United States electrical energy by 2030, as opposed to the current 3%, permitting the avoidance of 7.6 billion tons of CO2 in that period. "To markedly reduce greenhouse gas emissions and to reinforce our energy security we will need to produce clean energy on a very large scale, and for that the capacity for the production of wind energy in the United States will have to be extended," emphasized Andy Karsner, DOE Under Secretary for renewable energy.

The report sets forth a potential scenario for having the current production of wind energy go from 16.8 gw to 304 gw by 2030. The costs of intermittent integration of wind energy into the distribution network are modest at less than 0.5% per kilowatt, adds the ministry.

The United States moreover could reach by 2030 production of 10% of its electricity thanks to solar energy. That's what is claimed in a March 9, 2009 report published by the independent ecological organization Environment America and presented to Congress. The report was presented at a press conference with business leaders and Senator Bernie Sanders, author of a bill designed to cover 10 million roofs in the United States with solar panels in 10 years.

A keen advocate of clean energy, Senator Sanders welcomed the publication of the report, which estimates that the United States has the potential to obtain 10% of its electric production through solar energy by 2030, as opposed to about 0.1% in 2008, according to the figures of the Energy Information Administration (EIA). The report examines a "large quantity of technologies and tools" to develop solar energy in the United States.

Mr. Sanders has just submitted a bill seeking to “increase the amount of photovoltaic electricity by offering reimbursement for purchase and installation” of 10 million solar electric supplying systems. The text also calls for an increase in the capacity for heating of water of 38 million liters by 2019. “We will spend \$350 billion to import oil from Saudi Arabia and other countries annually, the United States must switch from foreign oil to energy independence,” said Senator Sanders, who chairs the sub committee on green jobs and the new economy. The bill emphasizes the “enormous potential” of the United States to develop its production of electricity from solar energy. It proposes the reimbursement of \$1.75 per watt installed in 2010, a rate that will go down in about 10 years to 0.25 watt in 2019.

It is clear then that the new American administration, the scientific community but also business consider it realistic, without major technological innovations, to seek to produce by 2030 at least one-third of the consumption of electricity with the said of the gamut of renewable energies.

Longer term – 2050 – solar energy should overtake wind energy and become preponderant in the American energy picture. In 2008 several American scientists and entrepreneurs made a splash in publishing in “Scientific American” a long article in which they proposed a “great solar plan” of 80,000 square kilometers.

That gigantic infrastructure would combine photovoltaic and thermodynamic solar and would gain ground until 2050. At that date it would produce 3,000 gw, which would represent about 70% of the American consumption of electricity foreseen for that time. That solar electricity would be transferred to the sites of consumption thanks to a “HVDC” network transporting continuous, high tension current.

The United States, under the political drive of President Obama, is mobilizing all its capabilities of innovation and enterprise to free itself from fossil energy and to promote renewable energy, of which it possesses immense resources. Faced with this new American will, Europe must go into higher gear, notably in the framework of a Euro-Mediterranean partnership and of a project like “Desertech” to produce itself also the basis of its energy cleanly by the middle of this century.

According to the International Energy Agency nuclear power can only reduce worldwide emissions of CO₂ by 6% by 2050.....as opposed to 54% and 21% respectively for the energy savings and renewable energy. It is urgent to say it: we want neither nuclear energy nor the greenhouse effect!

Translated from the French.