

Green energy expected to push global job growth

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As the world struggles to curtail the impact of economic downturn and millions of people lose work, the renewable energy sector has the potential to create millions of green-collar jobs, says a report.

According to the report by European Renewable Energy Council (Erec) if the world were to switch to renewable energy, 2.7 million new green-collar jobs could be created. If the governments decided to phase out fossil fuels for energy and concentrate solely on renewable forms of energy then, globally, 11.3 million people would be working in the electricity sector, said the report.

It also pointed out that without the changes only 8.6 million people would be employed by the electrical industry and fossil fuel-based companies. Currently, these companies employ 4.7 million workers but are expected to lay off 1.4 million by 2030.

Sander Trestain, Enviromena Vice-President, Technical, told **Emirates Business**: "The growth of a clean energy sector can contribute substantially to job growth within a country. Examples of this type of growth can be seen in Germany, Japan and California that have implemented clean energy government incentive programmes which have triggered substantial economic growth. Germany, for example, has nearly half of the world's installed solar photovoltaic capacity – a remarkable fact given the size of the country and relatively modest amount of sunshine they enjoy. As a result, many of the world's leading solar developers and manufacturers are based there."

The Erec report says: "The global energy supply has to change as science has confirmed that to avert catastrophic climate change the world's most industrialised nations must cut carbon emissions by at least 40 per cent by 2020, compared to 1990 levels. To do this we need to make a massive and rapid switch to renewable energy to provide about 30 per cent of the world's energy by 2020.

"Greenpeace International's Energy (R)evolution sets out a vision of how to achieve this. The Energy (R)evolution scenario was developed to show how, technically and financially, the world could increase its production of renewable energy by nine times, replacing nuclear and a proportion of coal-fired power, to avoid catastrophic climate change.

"Greenpeace undertook this study to determine whether there would be jobs created by this nine-fold increase in renewable energy, and massive global energy efficiency measures required for the Energy (R)evolution by researching jobs in power generation and electrical efficiency (excluding heating, cooling and transport).

"We found that under the Energy (R)evolution scenario, there would be an overall increase of about two million power sector jobs over the next 20 years. But if we carry on without measures to make the shift to clean energy, we will see sector-wide job losses.

"Half a million energy supply jobs would disappear between 2010 and 2030. With policies to create an Energy (R)evolution, there would be more than eight million jobs in renewable energy and energy efficiency in 2030, more than three times as many than with a 'business as usual' approach."

By 2030 under the Energy (R)evolution, the whole power sector would be employing about two million more workers than its current strength, 2.7 million more people than the 'business as usual' scenario. Without the Energy (R)evolution, the coal sector would be providing most of the power, but not as much employment.

Under the business as usual approach, there would be about 500,000 jobs lost in the power sector, because the two million reduction in coal power jobs was not compensated by the rise in renewable and efficiency jobs. Coal, gas, oil and diesel sectors would provide about 2.5 million fewer jobs under an Energy (R)evolution scenario. The renewable sector would support 6.9 million jobs – about 5.3 million jobs more – under the Energy (R)evolution scenario."

Trestain said: "In the UAE, we will see similar alternative energy industry development as a result of government programmes such as Abu Dhabi's seven per cent renewable energy target and the Masdar Initiative. The renewable energy target alone is expected to generate \$6-8 billion (Dh22.02bn) in alternative energy infrastructure development, which will incentivise entrepreneurs and existing international companies to move to the emirate. These incoming and growing alternative energy businesses will result in some potentially substantial local job growth.

"Alternative energy is an excellent choice for economic diversification in the UAE, as the UAE is already an energy-based economy with much of the expertise and infrastructure required to create an alternative energy centre of excellence."

According to Enviromena as the world begins to move away from traditional sources of energy, the alternative energy sector will see enormous growth.

Many countries are already seeing the positive effects of government programmes on industry development, which becomes clear when one sees the number of leading alternative energy companies that are headquartered in California and Germany.

Additionally, the choice of alternative energy as a career path is becoming increasingly popular due to the recent expansion in educational options such as Abu Dhabi's Masdar Institute, the world's first post-graduate engineering programme in alternative energy. As the industry grows around the world many students are seeing the long-term potential for careers in alternative energy.

Trestain said: "Enviromena Power Systems is an excellent example of this type of job growth. The company has grown rapidly since 2007 hiring and training engineers, project managers, technicians and administrative staff. This corporate growth and resulting jobs would not exist without the Abu Dhabi Government's forward looking alternative energy initiatives."

The report says government support to renewable energy is sorely needed as are the basic policy incentives such as new global climate deal at the UN climate summit in Copenhagen in December 2009 that ensures global emissions peak by 2015, in response to the science of climate change.

"The need of the hour is national policies that enable the greening of countries' economies and phasing-out of all subsidies and other economic incentives that encourage inefficient use of energy or support activities that further contribute to climate change. No new investments into coal, oil or nuclear power plants.

"Renewable energy targets, tariffs and support for innovation to boost renewable energy volumes must get a priority."

Trestain agreed: "Government policy, particularly in the form of alternative energy incentive and tariff programmes, is essential to promoting industry growth in a region. This pattern of industry growth tied to government initiatives can be clearly seen in Germany, Japan and California. China, India and the Canadian province of Ontario have recently implemented similar policies and the Obama administration in the US is very vocal about the potential of green energy jobs as a method of boosting domestic US

employment

figures.

"The UAE is moving forward quickly with some very impressive government policies and programmes that are expected to have a similar effect on industrial growth. For an emirate with a relatively modest population, Abu Dhabi is pursuing what may be the most aggressive alternative energy programme in the world."

According to Enviromena, the Abu Dhabi-based solar integrator, renewable energy and clean energy sector will help revive and protect nations' environmental and economic health.

Trestain said: "Traditionally, economic development has resulted in increased pollution and carbon emissions, as a result of the manufacturing, transportation and other carbon-intensive activities associated with growth. However, the growth of the renewable energy sector will for the first time reverse this trend, so that economic development, in fact, contributes to reduced emissions and a cleaner environment.

"This positive environmental effect tied to real economic development is the key reason why alternative energy government initiatives are seeing such rapidly growing global support."

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