

# REAPING THE DOUBLE DIVIDEND - CLIMATE CHANGE AND JOBS

ACT NOW	OR	DELAY FURTHER?
<p><i>"...significant 'no regrets' opportunities are available in most countries"</i></p> <p>(Second Assessment Report of the Intergovernmental Panel on Climate Change, 1995)</p>		<p><i>"there is a need for a much more informed debate to take place before we plunge into adopting quick-fix policies that we may well regret later"</i></p> <p>(Keith Taylor, Esso chairman, Essoview November 1996)</p>

### THE CASE FOR IMMEDIATE ACTION: JOBS AND 'NO-REGRETS' OPPORTUNITIES

A number of industrialised countries, with the US at the forefront, have been dragging their feet in the current climate negotiations, refusing to come forward with proposals for numerical emission reduction targets. These countries have been strongly influenced by various lobby groups (especially fossil fuel industries and labour unions) who are claiming that emission reduction targets will have negative impacts on economic growth and jobs.

Their preference is for **action later rather than sooner**. The last session of the UN climate negotiations in June saw scare-mongering from the labour union movement; delegates were told that they had the power to *'destroy the jobs, incomes and livelihoods of millions of working people'*.

**These claims are false.** As the Intergovernmental Panel on Climate Change (IPCC) and many studies have repeatedly pointed out, there are plenty of measures which have zero or even negative costs [1]. This suggests that **early**

**action** to combat dangerous climate change would have economic as well as environmental benefits.

In particular, there is good evidence that climate change abatement, rather than threatening jobs, can actually **create jobs** - thus promising a **'double dividend'**.

- many abatement measures have a **good job creation potential**; in particular investments in energy efficiency, renewable energies and better public transport provision;
- amongst the possible abatement measures are carbon taxes. If these are linked to an 'ecological' **tax reform**, i.e. a move from labour taxes to pollution taxes, **employment benefits** ensue.

Climate change abatement will require a major reorientation in our energy and transport systems towards **sustainable development**. This will mean a **move away from fossil fuels** and will affect fossil fuel companies.

As the OECD [2] has pointed out, environmental policies can cause job losses in certain sectors, but what matters most is the **net global and longer-term** employment effect. If fossil fuel companies begin to reorient themselves now and start investing in renewable energies and efficient technologies, job losses will be **minimised and new jobs can be created**.

The Climate Change Convention's Annex 1 Expert Group found that removing support for coal does not necessarily mean job losses. They argue that removing government support for an uncompetitive sector, coupled with reducing the taxation burden on other, competitive, sectors is likely to increase employment in these sectors [3].

#### THE EMPLOYMENT BENEFITS OF CARBON TAX RECYCLING

Carbon taxes can raise huge revenues and most proposals (e.g. the EU's carbon/energy tax proposal of 1992) suggest **fiscal neutrality** to minimise overall economic costs. Such neutrality can be achieved through concurrent reductions in other taxes. Many studies have found that even large carbon taxes can have beneficial effects on employment, the so-called **double dividend**, if there are concurrent reductions in labour taxes, as part of an **ecological tax reform**. There is a growing recognition that such a tax reform is necessary to combat both unemployment and environmental degradation.

One study by UK researchers found that employment growth of around 3% for G7 countries for a carbon tax of \$275 per tonne, resulting in a 31% drop of CO<sub>2</sub> emissions by 2035 [4]. While there were initial GDP reductions (up to 1.5%), for most G7 countries there were GDP increases post 2000. Another study by Belgian government economists suggests the creation of 700,000 new jobs in the EU's 6 largest member states through the original EU carbon/energy tax (\$10/bbl of oil) proposal [5].

Recycling carbon taxes into labour taxes will

result in investment **shifts from improving labour productivity to increasing energy efficiency**, as labour costs fall and energy costs rise. While high labour productivity (usually achieved through greater mechanisation and computerisation) is generally seen as an indicator of economic health, it also means high unemployment. In recent years, there have been huge job losses in all industrialised countries through rationalisation, supposedly as a means to meet the challenges of **globalisation**.

Globalisation has become synonymous with the threat of job losses and a lowering of environmental standards, without many questions asked about its beneficiaries. This trend needs to be reversed and climate change action could become a catalyst for a move to a more sustainable development model.

#### CLIMATE CHANGE AND JOB CREATION

There are three clear areas where CO<sub>2</sub> emission abatement and job creation can be combined:

- improvements in end-use energy efficiency (demand-side management);
- greater investment in renewable energies;
- improved public transport provision.

#### Energy Efficiency

According to the Inter-Governmental Panel on Climate Change, there is a large potential for **cost-effective** energy conservation and efficiency improvements. These measures also have a good job creation potential, with jobs in manufacture, delivery, installation and advice provision. Home insulation programmes tend to be particularly labour intensive.

A study for the European Foundation for the Improvement of Living and Working Conditions [6] found that the adoption of energy conservation best available technologies could create 500,000 extra jobs in the EU.

A large proportion of these jobs are likely to be concentrated in areas of high employment as it is here where most of the remedial work is needed. Also, additional jobs can be created as the money saved on energy bills is respent in the economy and such programmes have enormous social benefits, especially in countries where fuel poverty is a serious problem.

Experience with Demand-Side Management (DSM) schemes in the US has shown that **dollar for dollar, investment in energy efficiency buys more direct jobs than investment in conventional energy supply options.**

The net employment gains of \$3.1 billion of investments in US DSM programmes has been estimated at over 75,000 jobs, while simultaneously saving 50 TWh[7].

A DSM pilot study under the EU SAVE programme for the Hannover local utility company in Germany suggested that 1850 jobs could be created for an investment of 1745 million DM, achieving a CO<sub>2</sub> reduction of 27% between 1990 and 2010 [8].

Taking the average job creation potential of 7 DSM studies, it has been suggested that every £20 million DSM investment could create 100-115 net jobs plus another 70 to 80 indirect jobs [9].

### Renewable Energies

According to the 1996 European Commission's Green Paper on renewable energies [10] (which calls for a doubling of the contribution from renewable energies in the EU by 2010 to 12%), the development of renewables can bring positive and tangible effects on regional development and employment. It can bring **employment to regions which are otherwise deprived of industrial development**, as well as a supply of energy resources necessary for development.

Realising half the EU's renewable technical

potential by 2020 (14% of primary energy demand) could create 515,000 jobs (net, allowing for losses in other energy sectors) and reduce CO<sub>2</sub> emissions by 16.2% [11].

160,000 new jobs could be created in the rural areas of the EU if 5% of energy was produced from biomass.

The impact of renewables developments on employment is, according to some studies, about five times higher than the employment impacts of further development of fossil fuels.

The renewable energy industry consists predominantly of small and medium size enterprises (SMEs) which are recognised as being a major source of new job opportunities in the EU. Furthermore, renewables are of particular interest for development in tourist areas, where energy demand is increasing.

A study by the American Wind Energy Association based on a comprehensive survey of wind plant operators in California showed a figure of 460 jobs per TWh/year for operation, support and maintenance. Another 88 to 146 jobs can be created in manufacture. Coal fired plants only generate 116 jobs per TWh (incl. mining) [12].

The emerging UK wind industry has already created over 3500 direct and indirect jobs. Employment in operation and maintenance activities per unit of electricity generated is 16 times greater for wind farms than for Combined Cycle Gas Turbines [13].

### Transport and Jobs

Climate change action in the transport field will require a greater **switch to public transport**, walking and cycling, as well as more efficient vehicles. There is evidence that investment in public transport is a good job creator.

Jobs can be created in the construction of railway, cycling and walking infra-structures. The manufacture of trains, buses and bicycles will also create jobs.

A study by the German Road League and the construction union IG Bau Steine Erden [13] found that investing DM 100 billion in road building would yield only 1,201 to 1,630 person-years of employment compared to 1,880 job-years in railway construction or 1,992 in local public transport such as light rail schemes.

These findings are reinforced by an EU study, which calculates a job gain of over 500,000 jobs associated with a 35.6% increase in rail passenger kilometres by 2010 (and a concurrent decrease in passenger car kilometres by 21.4%) [15].

A recent study by Friends of the Earth in England [16] shows net job gains of 130,000 in the UK through a reduction in passenger road traffic of 10% by 2010 (from 1990 levels) and a switch to public transport and cycling.

Considering the enormous health and economic problems caused by traffic congestion in all major urban centres, a CO<sub>2</sub> reduction policy for the transport sector has enormous side benefits.

## CONCLUSIONS

- ▶ sensible carbon abatement policies (including carbon taxes) can result in a 'free lunch';
- ▶ investments in energy efficiency, renewable energies and sustainable transport have a very favourable job creation potential;
- ▶ forward looking companies are already investing in renewable energy to gain a competitive advantage. Fossil fuel companies have to act now and invest in sustainable energies and transport if they want to ensure a dynamic business future.

## REFERENCES

- [1] Friends of the Earth International, Briefing 2,  
[13] British Wind Energy Association (1997)

*Putting Costs into Perspective*, June 1997.

[2] OECD (1997) *Environmental Policies and Employment*, Paris: OECD

[3] Annex 1 Expert Group on the UN FCCC (1996) *Reforming Coal and Electricity Subsidies*, Paris: OECD/IEA.

[4] Mabey, N., Hall, S., Smith, C. and Gupta, S. (1997) *Argument in the Greenhouse: the International Economics of Controlling Global Warming*, London: Routledge.

[5] Bossier, F. and Bréchet, T. (1995) 'A fiscal reform for increasing employment and mitigating CO<sub>2</sub> emissions in Europe, *Energy Policy* 23 (9), pp. 789-793.

[6] Ecotec (1994) *The Potential for Employment Opportunities from Pursuing Sustainable Development*, report to the European Foundation for the Improvement of Living and Working Conditions, Birmingham/Brussels: Ecotec.

[7] Krier and Goodman (1992) *Energy Efficiency: Opportunities for Employment*, prepared for Greenpeace by the Goodman Institute.

[8] Stadtwerke Hannover (1995) *Integrierte Ressourcenplanung: die LCP-Fallstudie der Stadtwerke Hannover AG*, by Öko-Institut and Wuppertal Institut.

[9] Ecotec (1997) *The Economic and Employment Impacts of Alternative Investment Scenarios for the West Cumbrian Economy*. A report for Friends of the Earth, Brimingham: Ecotec.

[10] European Commission (1996) *Energy for the Future: Renewable Sources of Energy; Green Paper for a Community strategy*. COM (96) 576.

[11] Energy for Sustainable Development (1997) *TERES II Study*, for European Commission DG XVII ALTENER programme.

[12] Figures quoted in Friends of the Earth (1995) *Working Future? Jobs and the Environment*, London: Friends of the Earth.

*Employment in the UK Wind Industry*, Fact Sheet

No.32.

[14] Renner, M. (1991) *Jobs in a Sustainable Economy*, Washington DC:Worldwatch Institute.

[15] Ecotec (1994) *op. cit.*

[16] Friends of the Earth (1997) *Less Traffic, More Jobs: The Direct Employment Impacts of Developing a Sustainable Transport System in the United Kingdom*, London: Friends of the Earth.

**© Friends of the Earth International, June 1997**

Contact Details:

Friends of the Earth Climate Campaign

Press Office

Tel: +44-171-5661649

*Friends of the Earth International (FoEI) is a federation of organisations from all over the world who are campaigning to protect the environment. FoEI is registered in Amsterdam under number V535338. International Secretariat: P.O Box 19199, 1000 GD Amsterdam, The Netherlands.*