

## Improving Environment by Managing Mobility

The transport of goods and people is a precondition if society, organizations and businesses are to work efficiently. At the same time, transport has a significant level of environmental impact and accounts for one third of our energy consumption and more than 28% of the CO<sub>2</sub> emissions. Various types of measures are needed that influence transports. Mobility Management is an innovative demand-oriented approach that affects our travel habits and road user behaviour.

### What is MOVE?

Move is a project built on the partnership of seven European energy agencies or similar, with a common interest to increase their skills and engagement in transports. During the project period, 2006-08, the partners will acquire the skills, the tools and the platform needed for the work with transports. By carrying out projects on local level they will give input to some Good examples and best practices for their future work.



## TEA and MOVE

Tipperary Energy Agency is in partnership with other energy agencies of six European countries presenting a variety of experiences in mobility management. The seven countries participating in the MOVE project are

- Sweden
- Germany
- Ireland
- Slovakia
- Spain
- Bulgaria
- Italia



Tipperary Energy Agency as part of the MOVE project has recently updated the Energy and Emissions Balance in Co. Tipperary. From the energy balance the Climate Change Strategy has been completed and the actions and measures aiming to achieve CO<sub>2</sub> reductions are established.

A Walking Bus in Cahir is one the projects the TEA whose target is to reduce CO<sub>2</sub> emissions through behavioural change in the travel to school. It promotes a modal shift from the use of the car to a more sustainable and friendly way - just walking!

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# Tipperary Energy and Emissions Balance in the Transport Sector

Under the MOVE project, Tipperary Energy Agency (TEA) has recently completed the “Energy and Emissions Balance” and the “Climate Change Strategy” for County Tipperary. The aim of the Emissions and Energy Balance is to produce an overview of the current energy consumption and energy related emissions by sector and fuel for the study area.

The Emissions and Energy Balance highlights the size of the Transport sector's share in the energy consumption and the CO<sub>2</sub> emissions. In 2005, Transport accounted for 2,472 GWh, 44% of the energy consumption in County Tipperary.

GWh	Industry	Transport	Residential	Commercial & Public	Agriculture
1990	690.0	1031.1	980.5	361.8	207.9
2005	1081.3	2472.7	1183.7	585.8	280.0
BAU 2010	1294.1	3209.1	1285.1	714.8	248.0
BAU 2020	1494.8	3621.9	1296.5	828.5	248.0

Table 1. Total Final Consumption by sector in Tipperary

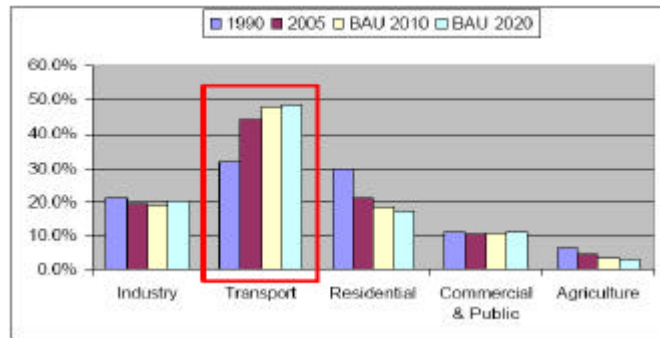


Chart 1: % of Total final Consumption by sector in Co. Tipperary

CO<sub>2</sub> emissions by sector in Co. Tipperary derived from energy consumption are represented below.

KT-CO <sub>2</sub>	Industry	Transport	Residential	Commercial & Public	Agriculture
1990	280.6	280.8	407.9	152.5	74.8
2005	378.9	837.5	418.1	238.4	84.5
BAU 2010	438.1	757.1	488.7	271.1	98.8
BAU 2020	445.8	798.9	483.3	315.2	109.2

Table 2. CO<sub>2</sub> emissions by sector in Co. Tipperary

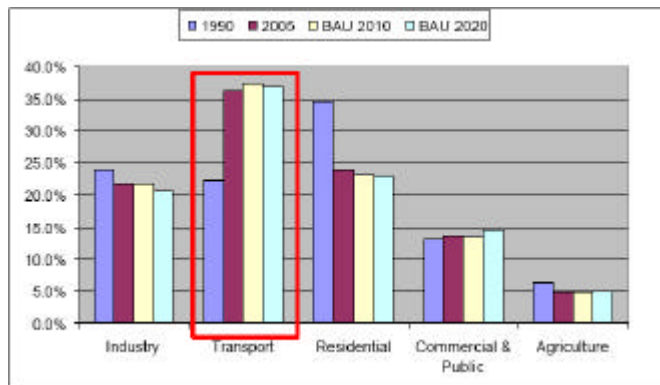


Chart 2: % of CO<sub>2</sub> emissions by sector in Co. Tipperary

As a consequence, oil is the predominant fuel. Oil accounted for 72% of the energy consumption in County Tipperary in 2005, and for 60% of the CO<sub>2</sub> emissions.

kt-CO <sub>2</sub>	Coal	Peat	Oil	Natural Gas	Renewables	Electricity
1990	122.0	122.0	515.7	25.2	0.0	391.6
2005	81.8	42.5	1080.2	63.8	0.0	528.9
BAU 2010	46.7	29.1	1286.4	82.3	0.0	609.1
BAU 2020	25.4	12.2	1336.0	98.2	0.0	691.5

Table 3. CO<sub>2</sub> emissions by fuel in Co. Tipperary.

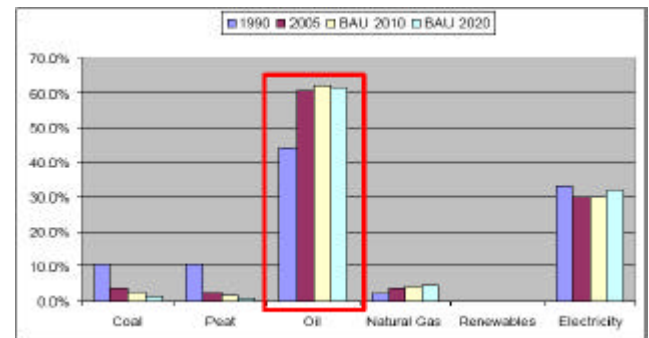


Chart 3. % of CO<sub>2</sub> emissions by fuel in Co. Tipperary

Transport has emerged as the dominant sector. There are significant challenges for Ireland to reach the Kyoto targets (County Tipperary will be 704,000 tonnes above Kyoto target in 2010 - according to the Business as Usual projections). But there is also a significant potential for action. Within the transport sector alone, the Tipperary Climate Change Strategy aims to reduce emissions by 88,990 tonnes of CO<sub>2</sub>- and the MOVE project will use this potential.

The proposed reductions in the transport sector by the Climate Change Strategy for Co. Tipperary are detailed below.

	2010			2020		
	QIR Proposed ('000 T-CO <sub>2</sub> )	Indicative Cost (€m)	Indicative Abatement Cost per Tonne CO <sub>2</sub> (€/T CO <sub>2</sub> )	QIR Proposed ('000 T-CO <sub>2</sub> )	Indicative Cost (€m)	Indicative Abatement Cost per Tonne CO <sub>2</sub> (€/T CO <sub>2</sub> )
Transport						
Car Efficiency	37.85	-	-	40.00	-	-
Unnecessary Trips	16.63	-	-	16.63	-	-
Car Pooling	5.87	2.00	340	5.87	2.00	340
Hybrid Cars	1.29	-	-	3.25	-	-
Walk/Cycling	6.46	2.00	309	6.46	2.00	309
Bus	1.96	-	-	1.96	-	-
Green Fuels	18.93	9.00	475	40.00	18.00	450
<b>Total</b>	<b>88.99</b>	<b>13.00</b>	<b>146</b>	<b>114.18</b>	<b>22.00</b>	<b>193</b>

Table 4. Quantified Indicative Reductions for transport sector in Co. Tipperary.



Picture 1. Our Lady of Mercy entrance – congested parking

“A Walking Bus in Cahir” is a project on sustainable mobility under the European project MOVE. The target is to set up a walking bus in Our Lady of Mercy girls School and Cahir Boys School on Cahir, Co. Tipperary. In the walking bus the children walk to school in a group along a set route picking up additional 'passengers' at specific 'bus-stops' along the way. Each walking bus has an adult 'driver' at the front and an adult 'conductor' bringing up the rear. The walking bus is a sustainable, healthy and fun way of travel to school.

The Walking Bus aims to increase the number of children walking to school each day reducing traffic congestion in the morning and at the end of the school day. The problem is obvious as represented in Figure 1.

An initial survey in both schools revealed the interest in set up the Walking Bus, 92 questionnaires has been filled in representing 112 children over 450 totals. The results are as follows

Walk	18	16%
Cycle	0	0%
Car	74	66%
Bus	20	18%

Table 1. Current means of travel to school.

Would use the WB	Yes	29	26%
Would probably use the WB	Maybe	33	29%
Wouldn't use the WB	No	50	45%

Table 2. Number of children who would use the walking bus.

In the initial survey, 18 parents answered that they may be volunteers.



TEA held a meeting of the interested volunteers to discuss the next steps to this project, the main issue was to involve more volunteers as the number of people showing interest in being volunteers had dropped significantly.

While working to promote and plan the start of the walking bus after the Easter Holidays, an article in local newspaper had been published, leaflets given to all the children and parents, a first draft of the routes defined and 2 information sessions organized. In both sessions the attendance was poor, only one of the volunteers and one parent came to the first information session. Only one parent came to the 2<sup>nd</sup> information meeting, fortunately this one was interested in being a volunteer.

Despite the low interest registered on the information session, one of the routes of the Walking Bus began to run on May with 3 volunteers driving the bus and 11 children taking part. The registration forms had been filled in and pedometers given to the children as an incentive.

The 15<sup>th</sup> of June, road safety training was held in the school with the Road Safety officer to increase awareness and learn pedestrian skills, reflective jackets and armbands were distributed among the children. Also displays about Walking Bus in both schools had been set up and a second route established.

At the end of the academic year 2005-06, two routes are established with a total of 13 children walking and 5 parents driving the Walking Bus. It is expected that the established routes would increase motivation among children and parents and more people get involved on the Walking Bus when children return in September.



Picture 2. Road safety training the 15<sup>th</sup> June, 2007

Energikontor Sydost, Sverige.



<http://www.energikontor-so.com>

Klimaschutzagentur, Region Hannover, Deutschland.



[www.klimaschutzagentur.de](http://www.klimaschutzagentur.de)

Tipperary Energy Agency, Ireland



<http://www.tea.ie>

Energy Centre Bratislava, Slovenska Republica



<http://www.ecb.sk>

EVE, Ente Vasco de la energía, España



<http://www.eve.es>

Energy Agency of Plovdiv, Bulgaria



<http://www.eap-save.dir.bg>

A.L.E.S.A, Italia



<http://www.alesachieti.it>

## Supporting Institutions

- [Tipperary Institute](#)
- [North Tipperary County Council](#)
- [South Tipperary County Council](#)
- [South Tipperary Co. Development Board](#)
- [South East Regional Authority](#)
- [Tipperary Leader Group](#)

## Tipperary Energy Agency is member of the following organisations



[Association of Irish Energy Agencies](#)



[Fedarene](#)



[Irbea](#)

## Useful links

- [Sustainable Energy Ireland](#)
- [Environmental Protection Agency](#)
- [Department of Transport](#)
- [ManagEnergy](#)