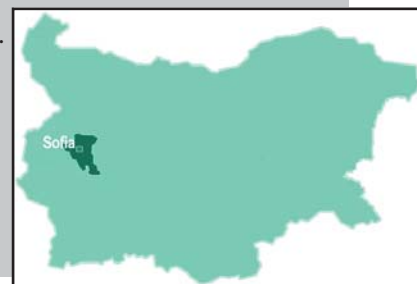


About Sofia, Bulgaria

Sofia, the national capital, accounts for a substantial portion of the nation's energy consumption and greenhouse emissions. Its total final consumption (TFC) in 2005 totaled 161,750 TJ, amounting to 131 GJ per resident, or more than double the per-person rate for the country as a whole. The transport sector in Sofia consumed 59,780 TJ of energy, or 37 percent of TFC in the city.

The number of vehicles on the road in the capital is expanding rapidly. At the beginning of 2007, there were over one million cars, or 720 per thousand residents. Problems related to transport

- Population expected to reach 2.5 million by 2020
- Flight to suburbs increasing car trips
- Employers also starting to move from centre
- Infrastructure not well-developed
- Low density of first-rate roads
- Lack of dedicated lanes for trolleys, etc.
- Incomplete metro infrastructure
- Traffic jams
- Lack of parking spots



Keywords for the regional project

Within MOVE, the Energy Agency of Plovdiv works mainly on two activities: a virtual mobility agency and preparation work for the introduction of a carpooling scheme in a selected pilot city in Bulgaria.

Virtual Mobility Agency

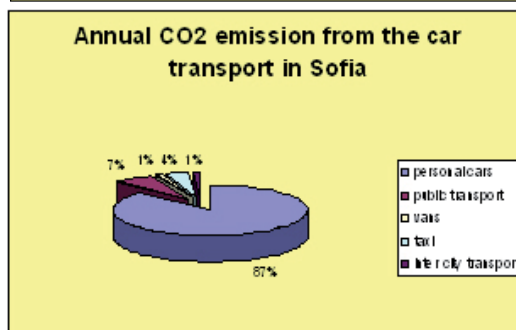
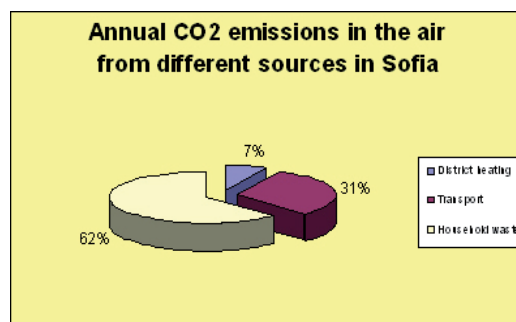
The virtual mobility agency is raising awareness of alternative modes of transportation, as well as changing people's behavior when they select transportation modes. It is building partnerships with local and regional authorities, companies, schools and NGOs.

The agency is disseminating information about European best practices, and encouraging citizens to shift towards sustainable transport modes in order to contribute to a reduction in traffic, energy consumption and greenhouse emissions at the local level.

The agency has carried out a comprehensive study of the energy consumption and CO2 emissions in the national capital, Sofia, in order to make an assessment of potential emissions savings through implementation of mobility management measures at the local level. And the agency is encouraging larger municipalities in Bulgaria to establish mobility centers.

Final Energy Consumption in Sofia (2005)

Population	1,238 595
Total FEC [TJ]	161,750
FEC of transport [TJ]	59,780
Total FEC/person [GJ/person]	131
FEC of transport/person [GJ/person]	48
Total CO2 emissions [t]	12,395,507
CO2 emissions of transport [t]	4,480 723
CO2 emissions /person [t/person]	10,0
CO2 emissions of transport/person [t/person]	3,6



A carpooling scheme

EAP is also actively working on a project to build the basis for the introduction of a carpooling scheme in a selected city within Bulgaria. The ultimate goal is to reduce traffic congestion and, in the process, reduce energy consumption and greenhouse gas emissions. Initial research quickly identified Sofia as the site where carpooling is not only most needed, but where there is the greatest potential to influence energy consumption and emissions.

As the work has proceeded, some conclusions have come rather quickly. In order to establish a successful scheme in Bulgaria, it would make sense to look at an open plan – one available to everyone, not just to employees of a particular company or students at a particular university. And, to hold costs down and, at the same time, offer the best possible plan, it should be Web-based.



Many questions have arisen, answers to which would have to be found. For example, was there in fact a problem that carpooling could address? Simply looking at the statistics depicting energy inefficiency in the country clearly indicated that the answer was yes. Other questions: Can a carpooling plan reduce, or at least slow the growth in, energy consumption? Does Bulgaria, or Sofia in particular, lend itself well to carpooling? What was the attitude of potential carpoolers toward the idea of riding with strangers? Were political authorities open to, or supportive of, the idea? Were major employers willing to get involved? And was funding available to launch and maintain a carpooling scheme?

To answer these and other questions, extensive research is being undertaken to try to determine whether carpooling can be successful in Sofia, and if so, what kind of scheme it should have and how it should be implemented. Data are revealing how people move around in Sofia, when they do it, where they go. Municipal officials are being consulted. Eight hundred large employers have been identified, and many commuters are being surveyed. Successful carpooling schemes elsewhere are being studied.

Cars in Sofia

- >1 million cars
- 720 cars / 1,000 inhabitants
- 300 000 cars enter city
- > 50% of cars without catalytic converters
- Biggest user of energy and fuel (30%)
- Greatest air polluter
- Car trips could grow to 45% by 2020

Transport infrastructure in Sofia

Metro	5 %
Tram	20- 24%
Trolley	13- 14%
Bus	30- 40%
Private cars	27%



The Energy Agency of Plovdiv, Bulgaria

The energy Agency of Plovdiv (EAP) is the first energy management agency established in Bulgaria under the SAVE II program of the European Commission (EC). It is now one of the few such agencies established in Central and Eastern Europe following the decision of the EC in 1999 to expand the program to our region of Europe. EAP is continuing its activities promoting energy efficiency and clean energies, as well as identifying and developing new energy

Main partners in Bulgaria

- Municipality of Sofia
- Municipality of Plovdiv
- Energy Efficiency Agency
- Association of Bulgarian Energy Agencies
- Environmental NGOs
- Transport-related companies
- Large employers

This process continues, but indications to date strongly suggest that carpooling can work in Sofia. Some of the data about Sofia can be seen in the presented graphics. In short, Sofia is large but compact, and a flight from center city to outlying neighborhoods is definitely under way. Most trips are made by bus and tram. As for cars, many are old and do not contain catalytic converters; cars are the greatest air polluter. The population is growing, and car trips are increasing in number and in length. The infrastructure is not well-developed. Traffic crawls, and there are no alternatives for most people to using the crowded roads. Buses are packed and you don't know when to expect one, so it's not surprising that attitudes toward public transport are negative.

While there is more work to be done, there is a developing consensus that it makes sense to proceed toward establishing a carpooling scheme in Sofia. About 120,000 people every day go to work there in cars – alone. If we could persuade fifteen percent of Sofia commuters to participate regularly in carpooling, we have calculated that CO2 emissions could be reduced by 50,000 tons annually.

projects. Within the transport sector, EAP is an active participant in MOVE, as well as e-TREAM.

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