

## The Team

- **AVERE** (BE), the European Association for Battery, Hybrid and Fuel Cell Electric Vehicles (Operating Agent); Frederic Vergels (avere@vub.ac.be).
- **CycleElectric** (USA), an international consulting group for the developing, selling and servicing electric two wheelers; Ed Benjamin (Edbike@aol.com).
- **ITRI** (TW), the Taiwanese Industrial Technology Research Institute, a non-profit R&D organization engaging in applied research and technical service; Bing-Ming Lin (bmlin@itri.org.tw).
- **NewRide** (CH), the Swiss association for the promotion of electric two wheelers; Urs Schwegler (urs.schwegler@newride.ch).
- **Tokyo R&D** (JP), a company specialized in research, planning, styling design, engineering design, prototype making, and evaluation of various kinds of vehicles; Masao Ono (mono@r-d.co.jp).
- **Arsenal Research** (AT), an enterprise of the Austrian research centres specialised in the Business field of Energy and Drive Technologies; Dr. Margit Noll MBA (noll@arsenal.ac.at).

## The International Energy Agency IEA

The International Energy Agency (IEA) is an autonomous body which was established in November 1974 within the framework of the Organization for Economic Cooperation and Development (OECD). The IEA headquarters are in Paris, France, and it carries out a comprehensive program of energy cooperation among twenty six of the OECD's thirty member countries. At its inception, the work of the IEA concentrated on issues related to oil, but since that time the Agency has broadened its work to include virtually all energy issues. An important objective of the IEA is to encourage the increased deployment of renewable energies, and to collaborate on research and development in this area.

The IEA provides support for over 40 international co-operation and collaboration agreements in energy technology R&D, deployment and information dissemination. The objective of the Implementing Agreement on Hybrid and Electric Vehicles is to help hybrid and electric vehicle technologies reach their full market potential, with attendant advantages for diversification of energy supplies and environmental protection.

An Implementing Agreement sets up a number of task forces, called "Annexes" in the terms of the Agreement, which work on particular topics within the overall subject of the Agreement. Current Annexes of the Hybrid and Electric Vehicle Implementing Agreement are: Information Exchange on EV Technologies and Programmes (I), Hybrid Vehicles Information Exchange (VII), Electrochemical Power Sources and Energy Storage Systems for Electric and Hybrid Vehicles (X), and Electric Cycles (XI).

For further information, please contact the Operating Agent,  
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## Annex XI Electric Cycles

### Promising Technologies and Markets Regarding Transport, Energy and Environment



Why should government support  
electric cycles?

## Introduction

Electric Cycles, namely power assisted bicycles and electric scooters, have a considerable potential as a sustainable means of transport in urban areas. Compared to cars and conventional motorcycles, they cause no pollution, they make no noise, and they require very little space. Favourable political conditions such as legislation, technology research, demonstration projects, information campaigns, public charging stations and financial incentives are important for a quick and successful market introduction.

The International Energy Agency IEA has set up a task force to provide governments at different levels and in different regions all over the world reliable advice on the justification of a governmental support and corresponding efficient measures. A special focus shall be put on country specific aspects.

## Objective

The overall objective is to identify barriers which hindered the market penetration until now and to develop and to test ways to overcome them. In this coordinated action, a wide range of synergies can be achieved.

The following list shows the key questions which will be subject of the Subtasks to be undertaken in this Annex:

1. Assessing the role that electric cycles can play in improving urban mobility, and their interaction with other transportation modes,
2. Identifying energy saving potentials in various countries as justification of governmental support,
3. Recommending market introduction strategies directed at manufacturers, importers, and dealers, as well as to authorities at all levels,
4. Identifying required technology improvements for different markets,
5. Identifying infrastructure requirements,
6. Sharing experience and information obtained from on-going and completed projects (extended dissemination).

## Five Subtasks

### **Subtask 1: Energy Saving and Market Potentials**

Subtask Leader: Ed Benjamin, CycleElectric (USA)

- Inventory on vehicles (market offer and prototypes)
- Successful application fields
- Benefits of electric cycles for users and the public
- Success factors regarding market introduction
- Justification of governmental support

### **Subtask 2: Market Introduction**

Subtask Leader: Urs Schwegler, NewRide (CH)

- Analysis of the role of market actors in different countries
- Recommendations for national and local governments as well as for manufacturers, importers and dealers regarding collaboration in market introduction
- Promising networks for the market introduction of electric cycles

### **Subtask 3: Technology Improvements**

Subtask Leader: Bing-Ming Lin, ITRI, (TW)

- State of the art of vehicle technology
- Requirements on electric and hybrid drive systems for two wheelers in different market fields

### **Subtask 4: Infrastructure**

Subtask Leader: to be appointed

- Public charging infrastructure for electric scooters
- Safe parking places and preferred parking facilities for electric cycles

### **Subtask 5: Sharing Experience**

Subtask Leader: Frederic Vergels, AVERE (BE)

- Implementation and coordination of sharing experience
- Technical visits