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November 2005

## **A word from the Chair**

Dear reader,

I am just sitting in the plane back from our successful Annex XI “Electric Two-Wheelers” workshop during the Tokyo Motor Show. This exhibition was a good cross-cut through our “daily work” in the Implementing Agreement “Hybrid and Electric Vehicles”. I have never seen so many hybrid and fuel cell vehicles at one place in the last 20 years. Even two convincing EVs from Mitsubishi and Subaru were on the spot.

The workshop we held together with the Japanese Automotive Research Institute (JARI) was a success. We had more than one hundred attendees. The new Operating Agent Frédéric Vergès (AVERE) expects to start Annex XI officially at the Taipei “Motor Cycle Show” in March 2006, after a formal vote of our Executive Committee (ExCo).

During our refreshing ExCo meeting in Rome last month, we have started initiatives for six (!) new Annexes and activities, in addition to our



Photo U. Muntwyler

Mitsubishi Lancer MIEV electric vehicle at the Tokyo Motor Show 2005.

four existing Annexes. This Newsletter is your opportunity to learn about the novelties. For more details please check our new website regularly: [www.transportation.anl.gov/ia\\_hev/](http://www.transportation.anl.gov/ia_hev/) Please provide us with your comments. - and even better - participate in the work. This gives you the chance to promote electric, hybrid and fuel cell vehicles in a fruitful really international collaboration!

Urs Muntwyler, Chairman

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## ***New IA-HEV activities***

The IA-HEV Executive Committee (ExCo) held its 23<sup>rd</sup> meeting at the ENEA headquarters in Rome, last October. The actual IA-HEV work is done in the Annexes, and these were the most important topic on the agenda. The ExCo had a very fruitful meeting and work on many new Annexes has started.

Currently four Annexes are active:

### **I Information exchange.**

See the article on the new IA-HEV web site in this Newsletter.

### **VII Hybrid vehicles.**

Contact the Operating Agent Mr. Rob Winkel at: [rob.winkel@tno.nl](mailto:rob.winkel@tno.nl) for more information about the work on hybrid vehicles and their technical components, or visit the Annex VII web site at [www.vito.be/ieahev](http://www.vito.be/ieahev). France and the Netherlands have now formally joined this Annex.

### **X Electrochemical systems.**

Take a look at the article on abuse testing of batteries in this Newsletter to learn about the upcoming activities and how you can participate in -and profit from- that work.

### **XI Electric two-wheelers.**

The article on the electric two-wheeler workshop in Japan elsewhere in this Newsletter updates you on the most recent activities in this Annex and the plans for the future.

The new Annexes now under construction address the following topics:

- Market deployment strategies - lessons learned.
- Clean city vehicles.
- Heavy-duty hybrid vehicles.
- Renewable energies for hybrid, fuel cell and electric vehicles.
- Fuel cells for road vehicles.
- Outlook for HEVs.

Today the commercial market for hybrid vehicles is taking off and in the future fuel cell electric vehicles may follow. These are exciting times for hybrid and electric vehicles and IA-HEV is bursting of activities. Please do not hesitate to contact the secretariat at [secretariat.ieahev@wanadoo.fr](mailto:secretariat.ieahev@wanadoo.fr) if you want to

receive more information about the running activities, the new Annexes and how you can participate.

Martijn van Walwijk, Secretary

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## ***Abusive testing of batteries and ultracapacitors - Invitation to participate***

Annex X addresses all of the issues related to Electrochemistry and Electrochemical Energy Storage Systems, from basic chemistry to the testing of systems. The Annex is organizing the first of a series of focused Working Groups.

The first Working Group will focus on issues related to the abusive (safety) testing of batteries and ultracapacitors. This group will meet twice in 2006. The first meeting is tentatively planned during the 2nd week of January in conjunction with the International Battery Association-Hawaii Battery Conference. The second meeting is planned for the 3rd week of May in Washington, D.C. This schedule would allow working group members to attend the Advanced Automotive Battery Conference, which is being held in Baltimore, Maryland. Each meeting will last about two days.

Participation in the Working Group will offer two types of benefits, one immediate and one later, in the form of published documentation. The meetings will allow the discussion of testing procedures and results in "real time." Only occasionally do individuals involved in abuse testing have the opportunity to discuss and debate the best approach to a particular test with experts from multiple organizations. The Working Group meetings will provide such an opportunity. Also, after the second working group meeting the Operating Agent will prepare a collection of published test procedures from participating organizations accompanied by notes capturing the ideas presented during the discussions. This collection of information will be available to all participants for use in their home organizations. The Working Group will collect and exchange information; it will not

attempt to prepare a single testing standard. Participation in the Working Group will help an individual decide what test procedures are best for his/her organization by providing data on what is being done by others.

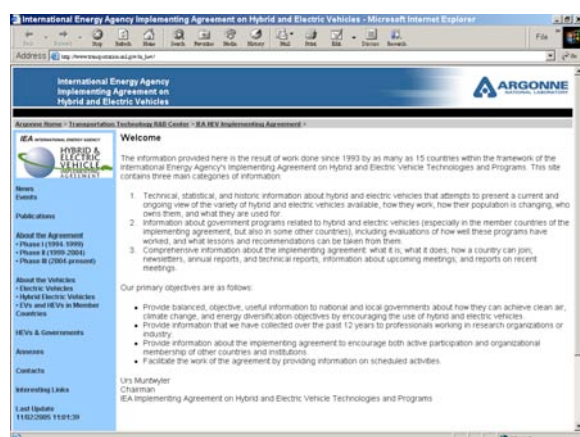
Individuals interested in participating in this Working Group are kindly requested to notify the Operating Agent of their interest at: [james.barnes@ee.doe.gov](mailto:james.barnes@ee.doe.gov) There is no fee to participate in the Working Groups of this Annex.

James Barnes, Operating Agent Annex X

## **New IA-HEV website now online**

Argonne National Laboratory -the Operating Agent for Annex I on Information Exchange- is pleased to report that the merged and updated web site for the Implementing Agreement and Annex I is now open for public access at [www.transportation.anl.gov/ia\\_hev/](http://www.transportation.anl.gov/ia_hev/)

The new site emphasizes the activities and developments taking place in the current phase (Phase 3) of the Implementing Agreement, already a very dynamic period in the commercialization of hybrid and electric vehicles. The welcome page for the new site is shown below.



Planning is underway to continue user-friendly improvements to the site, including IA-HEV participant- and member-only features such as restricted-access documents, presentations, and statistics.

Chris Saricks, Operating Agent Annex X

## **Electric two-wheeler Annex XI about to start after workshop in Japan**

On October 31, 2005, JARI, the Japanese Automobile Research Institute, organized a half day symposium with two connected workshops: one dealing with the state of the art of electric vehicles in general and the other one focusing on electric two-wheelers. This second workshop was dedicated to IA-HEV Annex XI and intended to increase participation from Asia. More than 100 experts attended, most of them coming from Japan.

The Annex XI workshop resulted in a strong interest from different Asian countries. These countries are not participating in IA-HEV yet, but it is still possible to have them participate in Annex XI.

The time schedule for Annex XI is:

- Dec 31, 2005. Expression of interest for Subtask Leader,
- Feb 15, 2006. Confirmation as Subtask Leader by sending a draft version of the task description,
- Feb. 15, 2006. Application as Full Partner (coming from countries participating in Annex XI) or as Associated Partner (coming from other countries).

Interested parties are most welcome to join Annex XI on electric two-wheelers. The interim Operating Agent can be contacted for more information and for participating in this Annex at: [urs.schwegler@bluewin.ch](mailto:urs.schwegler@bluewin.ch)

Provided that the ExCo will approve the workplan, the official launch of Annex XI will take place in the context of the Taipei Cycle Show, early March 2006.

Urs Schwegler,  
Interim Operating Agent Annex XI

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## ***Production of renewed IA-HEV annual report has started***

At the IA-HEV Executive Committee meeting in April 2005, it was decided to combine the future IA-HEV Agreement and the Annex I annual reports into a single document. The IA-HEV Secretary and the Annex I Operating Agent will share responsibility for compiling and editing this report from experts' contributions as well as their own efforts to assemble useful information on HEV developments in non-member countries. General HEV markets and fleet growth trends will also be included. The next annual report is scheduled for release in February 2006.

Chris Saricks, Operating Agent Annex I  
Martijn van Walwijk, Secretary

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## ***Your nominees for the 2006 IA-HEV 'Clean Vehicle Awards'***

Following the success of the 'Clean Vehicle Awards' ceremony at the exhibition of the Electric Vehicle Symposium EVS-21, IA-HEV has started preparing the next awards that will be granted during EVS-22 in Yokohama, Japan, October 2006. The awards are meant for people, teams and manufacturers that are committed to make HEVs a viable option for transportation. Three different awards will be granted:

- The 'Clean Vehicle Award' for a HEV manufacturer with large sales numbers.
- The 'Best Practice Award' for a clean vehicle fleet.
- The 'Personal Award' for a person that dedicated his or her life to HEV development.

The awards are meant to make the efforts of these dedicated people and teams visible to a larger public. Maybe you know a person or a team to nominate for one of the awards. In that case please contact the chairman Urs Muntwyler at [info@solarcenter.ch](mailto:info@solarcenter.ch) or the secretary at [secretariat.ieahev@wanadoo.fr](mailto:secretariat.ieahev@wanadoo.fr) Because the 2006 award ceremony will take place in Japan, we are this year looking for somebody from Asia for the 'Personal Award'.

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## ***Hybrid and Electric Vehicles at the Tokyo Motor Show 2005***

The Tokyo Motor Show 2005 exhibited more hybrid and electric vehicles (HEVs) than any other car show in the world, including the exhibitions at the electric vehicle symposia. The stars of the show were the hybrid models. It is obvious that the market breakthrough of hybrid vehicles has been achieved.

All Japanese car companies, e.g. Daihatsu, Honda, Lexus, Mazda, Mitsubishi, Nissan, Subaru, Suzuki and Toyota, showed production and prototype hybrid vehicles.

Toyota and Honda use their leading position in the market. They complete their product ranges by additional hybrid models. In case a model is offered with various propulsion systems, the hybrid model was presented as "top of the line". This creates a good image for hybrid vehicles in the market. Some sports models equipped with a hybrid drive train gave the impression that this technology is powerful. The company "Tokyo R&D" showed a hybrid racing car with a very compact drive train.

I had the impression that companies without production of hybrid cars tried to overleap this technology by fuel cell vehicles (FCVs). For example General Motors showed the big SUV "Squirrel" and Mercedes-Benz had the E350 hybrid and a F600 Hygenius FCV on display. The E350 was the only non-Japanese hybrid vehicle at the show. Car producers now can be split into two groups: "those with a hybrid in the market" and "those with a problem". The advantage of the Japanese automakers was obvious.

Perhaps the same strategy could be behind the two electric vehicles (EVs) from Subaru and Mitsubishi, which profit from high energy Lithium-batteries. This kind of battery gives EVs a new perspective, even in the light duty car segment. EVs will be back sooner than expected.

In parallel to the Tokyo Motor Show, a scooter and bike exhibition was held, which was dominated by big motorbikes. Only Yamaha showed three E-bike models, the EC-02 bike for male users and the "Passol-L" scooter for

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females. Yamaha additionally presented a prototype fuel cell scooter.

The Tokyo Motor Show 2005 demonstrated that the spearhead behind Toyota and Honda will become broader now. Good news for the customers! EVs and FCVs are still under development. EVs are announced for the coming years, but for FCVs there is still a long way to go. Whether customers want to wait for them or buy a hybrid car instead, will be a painful question for many car producers.

Urs Muntwyler, Chairman

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## ***New IEA 'Energy Technology' reports***

The IEA has produced two new reports on its Energy Technology activities:

- 'Energy Technologies at the Cutting Edge' presents the activities of all the Implementing Agreements. IA-HEV can be found on page 40.
- 'Mobilising Energy Technology' presents the activities of the IEA Working Parties and Expert Groups.

The reports can be downloaded from [www.iea.org/techagr](http://www.iea.org/techagr)

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## ***Climate change, clean energy and sustainable development: IEA's G8 Gleneagles program***

At their Gleneagles Summit in July 2005, the G8 leaders addressed the challenges of climate change and securing clean energy and sustainable development. Agreeing to act with resolve and urgency, they adopted a Plan of Action. A Dialogue was launched, open to other significant energy consumers. Brazil, China, India, Mexico and South Africa were also represented at the Summit.

The G8 leaders asked the International Energy Agency (IEA) to be a partner in this Dialogue

and to play a major role in delivering the Plan of Action. It will focus on six broad areas:

- Alternative energy scenarios and strategies,
- Energy efficiency in buildings, appliances, transport and industry,
- Cleaner fossil fuels,
- Carbon capture and storage,
- Renewable energy,
- Enhanced international co-operation.

The Implementing Agreements (IAs) of the IEA will provide their relevant activities and studies for the IEA G8 Plan of Work. In the IA 'Hybrid and Electric Vehicles', the strategic group will work out this paper by the end of the year. Many of our planned Annexes, e.g. 'Clean city vehicles', 'Electric two-wheelers', 'Renewable energies for HEVs' and the 'Outlook' are already following the direction of the G8 Plan of Action. The detailed report on IEA's G8 Gleneagles Programme of work will be presented at the next G8 meeting in 2008.

Urs Muntwyler

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## ***Switzerland: Toyota Prius purchases evaluated***

A market study by the Federal Institute of Technology Zürich comparing the buyers segments of Toyota Corolla, Aventis and Prius found that the lower motor vehicle taxes in some of the Cantons lead to 20% additional Prius purchases. In addition, Prius buyers had a less strong car brand binding than Corolla/Aventis buyers, and they drove greater car models before they bought the Prius. Especially the motivation to choose a model shows significant differences between Prius buyers and Corolla/Aventis-buyers: the advanced propulsion technology, lower fuel consumption and the gasoline price were important factors to choose a Prius while the most important criteria to choose the other Toyota models have been the engine power, the design, space for luggage and the air conditioning system.

Sigrid Kleindienst Muntwyler,  
Operating Agent Annex VIII

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## **Agenda**

First half of January, 2006

Annex X, Electrochemical systems.

Group meeting on abuse (safety) testing of batteries, Hawaii.

January 19 & 20, 2006

Annex VII, Hybrid vehicles.

Expert meeting in Vienna, Austria.

Early March 2006

Annex XI, Electric two-wheelers.

Launching of the Annex at the Taipei Motor Cycle Show: one-week programme with conference (2 days), guided tour through the "Motor Cycle Show", industrial visits, visit of ITRI-research facility and the 2-day launching workshop.

April 24, 2006

Annex I, Information exchange.

Expert meeting in the San Francisco area.

April 25, 2006

IA-HEV Executive Committee meeting in the San Francisco area.

April 26-28, 2006

Annex VII, Hybrid vehicles.

Expert meeting in Palo Alto, USA.

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### **Colophon**

This electronic Newsletter is produced by IEA's Implementing Agreement on Hybrid and Electric Vehicle Technologies and Programmes (IA-HEV). For information about the agreement and for contributions to this Newsletter, please contact the IA-HEV secretary Mr. Martijn van Walwijk at: [secretariat.ieahev@wanadoo.fr](mailto:secretariat.ieahev@wanadoo.fr)

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