

Conference

“Challenges & Opportunities in Electric-Powered Transport”



24th March 2009
Tecnoebro - Zaragoza

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R&D EU Programmes Dept.



CDTI

Centro para el Desarrollo Tecnológico Industrial (CDTI):

- Founded in 1977
- Public Company
- Under the Ministry of Science and Innovation

CDTI's Mission: Increase the competitive edge of Spanish companies by raising their technological level

Domestic level

RTDI project evaluation and funding (soft loans and grants)

Funding of new technology-based companies (NEOTEC y NEOTEC Venture Capital)

International level

Management of international technology cooperation programs (Framework Program, Eureka, Iberoeka, Chineka...)

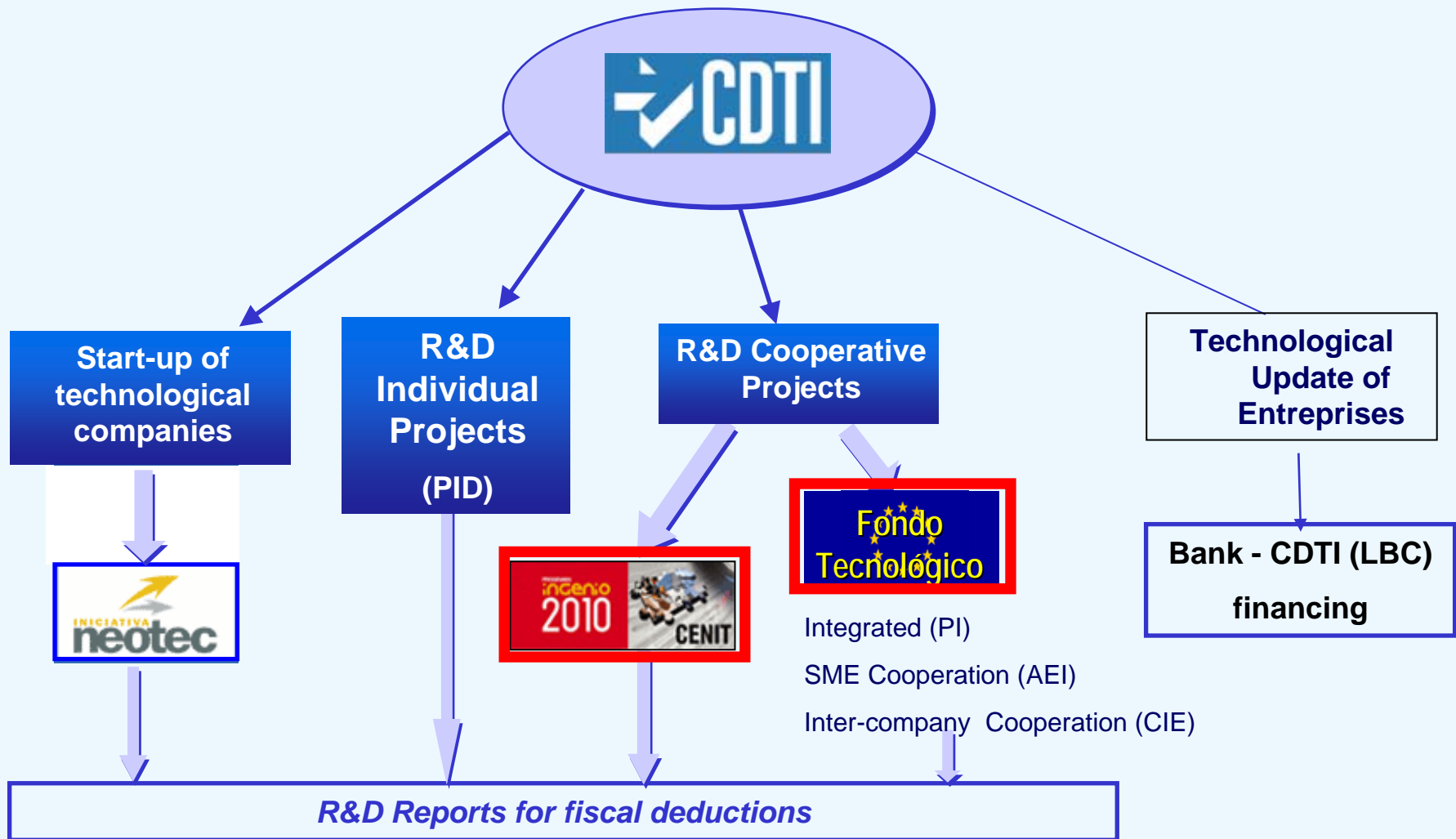
Support for transfer of technology abroad (External Network)

Aeronautics, Space, and Industrial Returns

Support instruments for RTDI in the aeronautics industry

ESA

Technology procurement (CERN/ESRF, Hispasat /Eumetsat/Spainsat)



- Intimate link with EU transport policy
- New products, services, standards... new solutions for mobility challenges
- Several DGs involved:
 - DG TREN
 - DG RTD
 - DG INFSO...

- Note: the following information was presented at the ERTRAC Plenary Session in Brussels on 25th February 2009 within the presentation "The European Green Car Initiative and next calls (Siegler 250209_for_publication.pdf - 153.39 KB)"
- The slides are available at (last checked on 15th April 2009):
http://ertrac.fehrl.org/?m=7&id_directory=58



EUROPEAN
COMMISSION

Community research



**ERTRAC Plenary
meeting**

25 February 2009

***The
European
Green Cars
Initiative***

Transport Directorate, DG Research - European Commission



Content/Key Points

- Research facet of the “European Green Cars Initiative”:
 - FP7 funds and instruments
 - Types of calls
- EIB loans for transport research & innovation





A European Economic Recovery Plan

- Adopted by the EC on 26 Nov 2008 and endorsed by the EU Council on 11-12 Dec 2008 *“To support innovation in manufacturing, construction and in the **automobile sector**, which have recently seen **demand plummet** as a result of the **crisis** and which face significant challenges in the transition to the **green economy**...”*
- The **European green car initiative** is one of 3 Public-Private Partnerships (PPPs) proposed, along with:
 - European energy efficient buildings initiative
 - Factories of the future initiative





European Green Cars Initiative

3 main streams of actions:

- **EIB loans** in support of research & industrial innovation Budget: **€4 billion** (in addition to existing loans)
- **Demand side measures & public procurements:** reduction of circulation & registration taxes for low CO2 cars
- **R&D** mainly through FP7. Budget: **€1 billion** (500 million from FP7 matched by €500 million from Industry and Member States)



Public-Private Partnerships

- **Objective:** to promote the convergence of **public interest** with **industrial** commitment and leadership in determining strategic research activities
- **Quick response:** use existing schemes & structures (**FP7** and **ETPs**)
- **Smart investments :** to improve **competitiveness** of European industries & **environmental protection**
- **Implementation approach: cross-thematic calls** and exploitation of other possibilities



European Green Cars Initiative: Focus on more than just cars!

- All road vehicles: passenger cars, buses, urban vehicles and trucks
- Infrastructure (smart grids, distribution & recharging of systems)
- Logistics, co-modality, and ITS



Forthcoming FP7 Calls

- 4 forthcoming calls in 2010

Overall budget: +/- €100 million

Opening Date: July 2009

1. DG RTD main call
2. DG INFSO main call
3. DG TREN main call
4. Joint Call on Electric Batteries
 - Budget: ca. €25 million
 - Emphasis on step change on advanced materials and on chemistry





Road and Urban Transport Electrification

System levels:

- Power generation and grid
- Power distribution
- Power usage: the electric car



Research needs (1)

A. Energy storage systems

1. Batteries
2. Management of storage systems

B. Drive Train

1. Electric motor/ machines
2. Power electronics
3. Active control units for electric motors and wheels



Research needs (2)

C. Vehicle integration

1. **Energy efficient auxiliaries**
2. **Integration of ICE range extenders**
3. **Smart controls to manage requirements to keep driving performance & comfort**
4. **Safety (active)**
5. **Advanced concepts for electrical architecture of the car with models and solutions for electrical & thermal management**



Research needs (3)

6. **Safety and robustness of communication, actuators, electronic controls, power electronics**
7. **Control methods and strategies related to different architectures**
8. **Advanced electric vehicle concepts**



Research needs (4)

D. Infrastructure integration

1. Advanced V2G interface
2. Deployment of charging infrastructure



Research needs (5)

- E. Electric car, integrated with the transport system
 1. Intermodality / interoperability
 2. Co-operative systems, connected car to improve safety and efficiency, car-in traffic control systems
 3. Deployment of public infrastructure in parkings (public, home, work)/curb side with demos



EIB Loans

- Can be used in addition to FP7 grants
- Best tool for R&D or innovation support that involves greater risk
- A new loan instrument (ECTF) has been designed specifically for the transport industry.





EIB Loans: RSFF “Risk-Sharing Finance Facility”

- What is RSFF?
*Loans for research, development and innovation.
A tool for implementing the Green Car Initiative.*
- What does it offer?
Loans of up to 50% of cost of research projects.
- Who can apply?
Entities of any size and ownership.
- What specific requirements?
Projects must be in line with FP7 objectives.
- How to apply?
Contact RDI@eib.org





EIB Loans: ECTF

“European Clean Transport Facility”

- What is ECTF?
*Investment support for research in emission reductions.
ECTF is in addition to the Green Car Initiative.*
- What does it offer?
*Loans of up to 75% of eligible project costs.
4 billion euro budget per year.*
- Who can apply?
*OEMs and Suppliers in the automotive industry.
Industries in other transport modes (rail, air, shipping)*
- What specific requirements?
Emissions reduction projects only.
- How to apply?
Contact: RDI@eib.org





European Road Transport
Research Advisory Council

European Technology Platform
on Smart Systems Integration

The Electrification Approach to Urban Mobility and Transport

Strategy Paper

(Draft Version 4.1, from January 23rd, 2009
Reviewed by Dr. Gereon Meyer, EPoSS Office, 2nd Review by EPoSS)

Preamble

This paper emphasizes a major topic of ERTRAC's and EPoSS' Research Frameworks aiming at the development of a smarter, greener, safer and more competitive road transport system. Recognising the growing concern about economic and energy security, climate change and air pollution, ERTRAC and EPoSS are convinced that the transition of road transport towards electric propulsion is inevitable. However, it will be a 'step change' of technologies, business models and user practice that requires strong efforts in terms of research and development. ERTRAC and EPoSS are calling Europe to take the lead and seize the unique economic opportunities of road transport based on plug-in-hybrid and battery-electric vehicles. From the in-depth expertise and knowledge of their members, ERTRAC and EPoSS have collated the research priorities in all related fields and derived a common strategy for joint actions of the involved stakeholder from both public and private sides.

1. Introduction

The apparent volatility of fossil fuel prices and the predictable shortage of crude oil are driving concerns about the future security of energy supply. At the same time, greenhouse gas (GHG) emissions are causing severe changes of the world climate that are posing a serious threat for the environment and the human health. This situation is increasingly calling for non-fossil generation and efficient use of energy.¹ Being both the major oil-consuming economic sector and the backbone of globally competitive industries in Europe, mobility and transport will thus soon undergo step changes of technologies, business models and user behaviour. Furthermore, fossil fuels will more and more be complemented by renewable, low-carbon alternatives like biomass, wind and solar power as sources of energy for transport.

¹ Intergovernmental Panel on Climate Change Assessment Report (2007).

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1. Are you interested in:

- The “Green Cars” initiative?
- In promoting a ERANET+ on “Logistics & Comodality”
- Or in taking part on a R&D mission of the upcoming 3rd Call Info-Day in Brussels in Septiembre 2009?

Then please send an e-mail to jmonclus@cdti.es

AVOID THAT THE "GREEN CARS" INITIATIVE "STOPS" IN SPAIN, WHAT IS TO SAY THAT "GREEN CARS" BENEFITS FROM AN ACTIVE SPANISH PARTICIPATION UP TO THE MAXIMUM OF OUR CAPACITIES



MORE ON R&D FP7 TRANSPORT PROJECTS:



LAST NOTE: SPANISH STRATEGY FOR SUSTAINABLE MOVILITY

Ministerio de Medio Ambiente y Medio Rural y Marino: Participación Pública: Calidad y Evaluación - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

Dirección http://www.mma.es/portal/secciones/participacion_publica/calidad_contaminacion/estrategia_movilidad_sostenibl

GOBIERNO DE ESPAÑA MINISTERIO DE MEDIO AMBIENTE Y MEDIO RURAL Y MARINO

Área de Medio Ambiente **Contacto**

Enlaces de interés | Mapa web | Temas A-Z

Sede Electrónica Búsqueda en www.mma.es

Buscar Búsqueda Avanzada

marm.es : participación pública : calidad y evaluación ambiental

El Ministerio **Medios de Comunicación** | **Noticias en la web** | **Licitaciones** | **Biblioteca y Publicaciones**

Normativa

Aguas Continentales y Zonas Asociadas

Aguas Marinas y Litoral

Biodiversidad

Cambio Climático

Calidad y Evaluación Ambiental

Red de Autoridades Ambientales

Información Estadística y Ambiental

Desarrollo Territorial

Ayudas y Subvenciones

Formación y Educación Ambiental

Entidades Ambientales

Servicio de Meteorología

Participación Pública

Estrategia Movilidad Sostenible

Borrador 15/01/09 Estrategia Española de Movilidad Sostenible

Uno de los retos de las sociedades desarrolladas en materia de movilidad es evolucionar hacia modelos económicos de bajo consumo de carbono y menor consumo energético, haciéndolo con criterios de equidad social y reparto justo de la riqueza. Es, en suma, el reto de la sostenibilidad. Por ello, una movilidad sostenible implica garantizar que nuestros sistemas de transporte respondan a las necesidades económicas, sociales y medioambientales, reduciendo al mínimo sus repercusiones negativas.

El Borrador se ha sometido a participación pública del día **16 de enero de 2009 al 7 de febrero de 2009 inclusive.**

Ver Borrador

Internet

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REFERENCES

Transport Research Knowledge Centre

www.transport-research.info



JTI Clean Sky

www.cleansky.eu



JU SESAR

www.sesarju.eu

JU FCH

<http://www.fchnewenergyworld.eu/>

Seventh Framework Programme

<http://cordis.europa.eu/fp7>



Calls for proposals

<http://cordis.europa.eu/fp7>



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THANK YOU VERY MUCH FOR YOUR ATTENTION

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