



## Internationale Forschungs-, Technologie- und Innovationspolitik

**Info-Service**

**20. November 2006**

### **Berichterstattung zu strategischen Entwicklungen auf den Politikfeldern des BMBF in führenden Industrieländern**

#### **Großbritannien**

##### **Hydrogen Network Helps North England Become Hub for Fuel Cell Technology Developers**

The North of England Inward Investment Agency (NEIIA), responsible for promoting direct business investment from North America into Northern England, announced that it expects the fuel cell technology sector to be an important part of the area's continued growth. This assessment has resulted from North England's ability to develop Europe's first Hydrogen Network, a 20 mile integrated system that pipes hydrogen, a key element in the creation of fuel cells, throughout the Tees Valley section of North East England.

A significant attraction for many energy companies investing in North England is the region's numerous research centers. Key among them is the Center for Process Innovation's Fuel Cell Application Facility which collaborates with many national and international groups in the industry and offers expert advice on how new investors can best maximize the commercial opportunities of low-carbon technology products. The region also has nine universities researching hydrogen and fuel cell development, catalysis and materials, giving investors a leg up on the competition.

Additionally, North England offers unparalleled R&D tax credits that allow qualifying companies to claim enhanced tax relief

for their qualifying R&D spending. If a U.S. company has less than 250 employees worldwide it can claim back 150% of the UK-related R&D expenses as a tax credit, while if there are more than 250 employees worldwide the company can claim 125%.

[http://home.businesswire.com/portal/site/google/index.jsp?ndmViewId=news\\_view&newsId=20061116005182&newsLang=en](http://home.businesswire.com/portal/site/google/index.jsp?ndmViewId=news_view&newsId=20061116005182&newsLang=en)

#### **Italien**

##### **Nobelpreisträgerin protestiert gegen Kürzungen der Forschungsausgaben im Haushaltsentwurf für 2007**

Die Nobelpreisträgerin und Senatorin Rita Levi-Montalcini spricht sich gegen die im italienischen Haushaltsentwurf 2007 vorgesehenen Kürzungen der Mittel für Hochschulen und Forschung aus. Die 97-Jährige drohte, sie werde in Erwägung ziehen, sich der Abstimmung im Oberhaus über den Haushaltsentwurf für 2007 zu enthalten, wenn die Änderungen bezüglich der Forschungsausgaben nicht rückgängig gemacht würden.

Laut italienischer Regierung werden in den kommenden drei Jahren 2,5 Milliarden EUR für Grundlagenforschung ausgegeben werden. Zusätzlich werden 177,5 Millionen EUR aufgebracht, um dem Problem des Brain Drain aus Italien entgegenzuwirken. Von dieser Summe werden 140 Millionen genutzt, um Forschern an Universitäten langfristige Arbeitsverträge zu bieten, während die übrigen 37,5 Millionen For-

schern an öffentlichen Forschungsinstituten zur Verfügung gestellt werden. Die Regierung hofft, mit diesen Fördermitteln einen Teil der rund 12 000 italienischen Wissenschaftler, die alljährlich ihrem Heimatland den Rücken kehren, um im Ausland Karriere zu machen, in Italien zu halten.

Bei näherem Hinsehen sieht die Lage allerdings weniger rosig aus. So plant die Regierung etwa, die administrativen Zwischenkosten von Hochschulen und Forschungsinstituten um 20 Prozent zu kürzen. Dekane und die Forschungsgemeinschaft begrüßen zwar die zusätzlichen Mittel zur Deckung des Mitarbeiterbedarfs, fürchten jedoch, die geplanten Einsparungen würden einem reibungslosen Funktionieren der Forschungseinrichtungen im Wege stehen.

[http://cordis.europa.eu/fetch?CALLER=DE\\_NEWS&ACTION=D&RCN=26651&DOC=1&CAT=NEWS&QUERY=1164013516098](http://cordis.europa.eu/fetch?CALLER=DE_NEWS&ACTION=D&RCN=26651&DOC=1&CAT=NEWS&QUERY=1164013516098)

## Norwegen

### Norway: First White Paper on Innovation Policy Announced

Although the new Norwegian centre-left government has signalled that it will pursue an “active” industry and innovation policy, only a few initiatives that would indicate a novel and determined approach to innovation policy were launched during its first year in office.

The outgoing centre-right government had put together an action plan for a comprehensive policy and set up two consultative bodies to assist in developing innovation policy. These bodies were abolished when the new government took office in October 2005. A few days after the new Minister for Trade and Industry took over, however, it was announced that work would start immediately on a new White Paper on innovation policy. No firm deadline was set.

While the 2004 action plan was an intra-governmental action plan co-signed by five ministers, the incoming Minister of Trade and Industry indicated that he had chosen to produce a White Paper to create a long-term framework for policy development to which all parties in parliament could be committed. This will be the first Norwegian White Paper ever on innovation policy.

The White Paper will adopt a “comprehensive approach”, addressing i.a., R&D, innovation in services and in the public sector, and immaterial property rights. The latter is a policy field in which this government has already taken new initiatives, including preparations for the ratification of Norway's membership in the European Patent Convention, and the establishment of a joint Nordic Patent Institute. The White Paper will, according to the government, provide the framework for developing a policy for an economy which is “diverse and inclusive”, and which should be based on “regional competitive advantages”.

[http://trendchart.cordis.lu/tc\\_article.cfm?ID=3462&NEWSID=20](http://trendchart.cordis.lu/tc_article.cfm?ID=3462&NEWSID=20)  
<http://odin.dep.no/nhd/norsk/aktuelt/pressemater/pressem/024141-070025/dok-bn.html>

## Portugal

### Portugal: 2007 budget increases science expenditure by 60%

In mid-October 2007, the Portuguese government tabled its draft budget for 2007 in the parliament. The budget restricts expenditure in most areas to achieve a cut in the public deficit of 0.9 percentage points, to 3.7% of GDP. However, allocations for the Science budget were increased considerably. The rise in funding for science, which boosts science budgets by 60% or EUR 133 million compared to 2006, is remarkable in view of the general tendency to cut expenditure. These allocations are generally consistent with the objectives defined

by the government in its "Commitment to Science" document in April 2006.

The budget for 2007 is characterised by some austerity as Portugal intends to meet the criteria of the Stability and Growth Pact by 2009. To this end, the public deficit must be reduced to 3% of GDP or less. 2007 is the third consecutive year that public expenditures as a percentage of GDP are expected to decline. The budget for most ministries will decline to curb public expenditure. The Ministry for Public Works, Transportation and Communications has to cope with the largest cut.

[http://trendchart.cordis.lu/tc\\_article.cfm?ID=3462&NEWSID=20](http://trendchart.cordis.lu/tc_article.cfm?ID=3462&NEWSID=20)  
<http://www.portugal.gov.pt>

## Japan

### Advanced Technology Examples in Japan

Japanese technologies are at world-class levels in many sectors. Japanese technology development is driven primarily by commercial and social needs. This is significantly different from the situation in the United States (US), where national defense is a key driver in many science and technology (S&T) fields, with the possible exception of the medical field. Pure curiosity-driven research is important in both Japan and the US, but in Japan, researchers often cite either products or social benefits as long-term goals. Japanese technology is rapidly transitioned from R&D laboratories into products, and readily absorbed by a public that is largely accustomed to utilizing technology in everyday life.

This report by the Asian Technology Information Program (ATIP) describes examples of a variety of technology applications currently under development in Japan, including the following topic areas:

- Instrumented transportation
- Microelectronics and sensors
- Wireless applications and devices

- Human interfaces
- Robotics
- Fuel cells
- Advanced computers
- Radio frequency identification (RFID) applications
- Residential safety structures
- Medical technology

Japan is a world leader in nearly all aspects of semiconductor manufacturing (with the exception of general-purpose processors), including highly advanced system-on-chip (SoC) technology, which combines different devices in one semiconductor package. Asia (particularly Japan) currently leads the world in mobile technology R&D. Japan has been the world leader in the development of robots to perform manufacturing-related task in a factory environment.

Japan is the world leader in the development of hydrogen fuel cells. The primary applications are large fuel cells for vehicles and small fuel cells for mobile portable devices such as cell phones, laptop computers, etc. All Japanese vehicle companies have vehicle fuel cell programs, and a national effort is well underway to develop not only the basic technology, but also the infrastructure required for generation and distribution. For small fuel cells, Japanese electronics companies as well as chemical and related companies are aggressively engaged in prototype development.

<http://www.atip.org/pubs/reports/atip06.047r.pdf>

## China

### Nanotechnology Infrastructure in China

According to statistics from China's Ministry of Science and Technology (MOST), the Chinese government assigned ~US\$300 million to nanotechnology-related projects during the time period from 2001-2006. Approximately 70 academic institutes of the CAS and more than 100 industrial establishments currently

participate in this research and development (R&D). Nanotechnology will be used as a tool to nurture industries to develop products aimed at improving the quality of life of China's huge population, as well as reducing the politically unacceptable socioeconomic gap between the country's urban and rural areas. The emphasis is on the utilization of nanotechnology in generating solutions to problems related to energy supply and distribution, maintaining a clean environment, and diseases such as SARS and Avian Flu.

China is currently in the process of constructing centers for the exploitation of nanotechnology in Beijing, Shanghai, Tianjin, and elsewhere. With the completion of these new centers, which is scheduled to be in the near future, China will have the infrastructure in place to begin challenging the West's lead in the field of nanotechnology.

<http://www.atip.org/pubs/reports/atip06.046r.pdf>

## Südkorea

### Korean S&T Overview

Korea aims to be one of the top seven technologically advanced nations by 2025. The Government has announced 'Vision 2025,' an ambitious plan for reforming the somewhat convoluted S&T infrastructures and policies within the government, as well as significantly increasing the powers of S&T agencies, such as the Ministry of Science and Technology (MOST). Along with these changes come substantial increases in funding. Over the next 20 years, investments will be focused on key areas such as information technology, biotechnology, environmental technologies, new materials, nanotechnology, space technology, and atomic energy.

Specifically, the Korean government has increased R&D expenditures from 2005 to 2006 by 15%, and announced that they will increase this amount for 2007 by an

additional 6.8% (to a total of US\$9.518 billion). Government will provide 81% of the funds, and the remaining 19% will come from public R&D funds (industry). The 2006 government R&D budget represents 4.7% of the total government budget (it was 4.57% in 2005). The government will focus more on basic research by increasing the budget for basic science research to 23.7% of the total government R&D budget (up from 21.5% in 2005), and by increasing the budget for regional R&D activities to 36.5% (up from 33.7% in 2005).

The Korean government's current key strategy for national development is the Regional Innovation System (RIS), which aims to reinforce each local region's competitiveness by networking and balancing local government organizations, universities, and industries. The RIS forms the basis of the National Innovation System (NIS), which is more integrated, synthetic, and countrywide.

<http://www.atip.org/pubs/reports/atip06.045r.pdf>

### Impressum

#### Herausgeber:

VDI Technologiezentrum GmbH  
Abteilung Grundsatzfragen von Forschung,  
Technologie und Innovation  
Graf-Recke-Str. 84, 40239 Düsseldorf

**Im Auftrag** des Bundesministeriums für Bildung  
und Forschung, Referat 211

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**Erscheinungsweise:** 14-tägig,

online unter  internationale -  
**kooperation .de**

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