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Minister Wan Gang Talks About the Reform of S&T Management System

On March 7, at a science community's meeting of the 2nd session of the 12th National Committee of the Chinese People's Political Consultative Conference (CPPCC), Wan Gang, Vice Chairman of the National Committee of CPPCC and Minister of Science and Technology, discussed with the members about the government work report and listened to their views and comments. Relevant officials including Zhang Laiwu, Vice Minister of Science and Technology, Du Zhanyuan, Vice Minister of Education, Zhai Qing, Vice Minister of Environment Protection, and Zhang Yuqing, Deputy Director of the National Energy Administration were also present at the meeting.

Minister Wan said that the reform of S&T management system is high on his agenda. The Science and Technology Innovation Conference held in 2012 proposed to deepen the reform of S&T management system and speed up the building of a national innovation

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system, and then the plenary session of the 18th CPC Central Committee made arrangement for this vision. Against the background, the minister noted four major issues should be studied for solutions.

First, the government role needs to be improved to adapt the market mechanism. In 2013, the total spending on R&D was about 1.18 trillion yuan, more than 2% of GDP, and 76% of which came from enterprises. Therefore, enterprises have become a dominant contributor in total R&D spending. In this context, the government should do more in promoting institutional innovation, facilitating basic research and generic technologies with public benefit, and speeding up development of agricultural science, emerging industries with strategic importance, and environment protection. In the meantime, enterprises will enhance their original innovation capacity.

Second, efforts should be made to facilitate the translation of research results into productivity, bring into full play the role of universities and research institutes, and mobilize the enthusiasm and creativity of researchers. According to Minister Wan, translation of research results usually takes three types: one is knowledge dissemination, which is spreading with scientific publications; the second type is translation of social-benefit technologies, such as technical standards, and technologies for agriculture, resource conservation and environmental protection, which need support from government; the third is translation of industrial technologies, which is realized mainly through industry-university-research institute collaboration. In 2013, the transaction volume in China's technology market totaled 746 billion yuan, and 80% of which were from enterprises. Therefore, actions should be taken to increase the amount of translation of research achievements from universities and research institutes.

Third, an open and transparent management mechanism for scientific project and funding should be put in place and the efficiency in the use of the public funding should be improved. At present, the public funding for civil R&D is allocated to over 30 ministries and agencies, which caused inefficient management, overlaps of R&D, and repetitive submissions of similar project proposals. MOST will team up with the Ministry of Finance and other relevant ministries to improve the project-and-funding management by enhancing coordination, giving differentiated directives, streamlining assessment processes, managing the public funding in a fair and transparent manner, and boosting surveillance and integrity. The misconduct, in both management and the ues of funding , will be punished, and scientific ethics and academic integrity should be taken seriously.

Fourth, the role of technological advances in promoting economic growth and social development should be studied and relevant institutional barriers should be eliminated through the reform of S&T management system. Meanwhile, much attention should be paid to new progress in business such as e-commerce and online shopping, and the government should quickly respond to the new things and carefully study new rules and regulations, so as to support new business, protect IPR, and punish fraudulent practices.

Minister Wan said that new technologies and products are cropping up every day in the new era of innovation-driven development, and higher productivity will give a strong boost to new change in relations of production. Challenges will always emerge on the way forward, which are not only the technical or managerial problems, but institutional barriers. Therefore, we must study them seriously and find solutions by deepening the reform of S&T management system.

(Source: Science and Technology Daily, March 7, 2014)

Management over Central Budget-funded Research Projects Strengthened

The State Council recently issued a document to improve management over central budget-funded research projects and their fundings.

According to the document, China's science and technology have seen robust development as a result of the rapid increase of government spending on R&D and improved management over research projects and funding over the years. However, problems such as decentralized planning and repetitive launch of projects, lack of transparency in management and inefficiency in the use of funding, need to be addressed.

The document proposed to:

1. strengthen coordination over research projects and funding allocation. Given the nation's strategic needs and S&T development, research programs, projects and funds will be reorganized, and a mechanism will be in place for performance evaluation, dynamic adjustment and termination of projects. An inter-agency coordination mechanism will be in place to identify priorities and split responsibilities among the involved institutions. Major issues will be reported to the State Council for a decision. An uniform information system for S&T management will be built to address repetitiveness, decentralization and inefficiency in allocating R&D resources.

2. adopt an approach with classified management over research projects. For frontier research projects, innovation will be highlighted, experts' views will be respected, and an environment will be created to encourage explorations and tolerate failures. For social-benefit projects, the needs for social development should be catered, and the governing body should play their due role to make the projects more practical. For market-driven projects, the industry should be the main player and the market should play its role in driving technology development and allocating resources. Major projects are designed to meet the nation's development goals, and the project contractors will be selected based on merit.

3. improve project management. Project guidelines will be developed based on the project type and requirement. It should be better regulated in some aspects, including project submission period, project approval, review period, review process, and feedback of review results to make sure the whole process of project approval is traceable and complaints and queries can be made. Finished projects and their concluding reports will be carefully checked.

4. improve research grant management. Except projects funded with lump-sum grant, competent authorities must not decide the amount of the grant before the submission of the project proposal. Research institutes must prepare the project budget in light of the needs, and will be given more power to approve budget adjustments and use surplus funds.

5. strengthen surveillance over research projects and funding. Forbidden practices will be made clear. More inspections and audits will be organized and malpractices will be punished. Credibility will be graded and a black list will be developed. The evaluation system will be improved to hold people accountable for their actions. This will ensure the establishment of a long-term surveillance system.

6. share information and establish an S&T reporting system. A national S&T reporting system will be in place to better review R&D activities. Experts will join the review on a rotating basis and the composition of the review panel will be adjusted as necessary. This will make sure the participation of the best researchers and overseas high-level experts. The ratio of the researchers in the panel should be more or less 75%.

7. mobilize researchers' enthusiasm and motivation. Incentives will be introduced to link researchers' income with their responsibilities, roles and performance. R&D evaluation and reward system will be reformed, and exchanges between researchers of research institutes, universities and enterprises will be encouraged. Policies on remuneration from part-time research and on distribution of proceeds from translation of research results will be improved. Tax incentives on innovation activities will be put into practice.

8. boost responsibilities of project contractors and relevant authorities. Project contractors should fulfill their responsibilities in project application, implementation, checkup and the use of funds. Better services for research activities and support in scientific facilities will be available to researchers.

(Source: China High-tech Industry Herald, March 17, 2014)

National Science and Technology Report Service Launched

On March 1 when the National Science and Technology Report Service (NSTRS) was officially launched, over 10,000 S&T reports became accessible to the public. This symbolized that the reform of S&T management system has made tangible progress in terms of S&T reporting system.

S&T reports are important documents for scientific research. What distinguishes them from science papers stating scientific ideas and findings is that S&T reports are detailed record of research process, which consists of a great deal of technical details, basic data as well as personal experience and lessons. Scientists and engineers can repeat experiment processes and learn about research findings according to these reports.

The accessible reports are written reports of major national S&T programs and part of the concluded projects. At the website “www.nstrs.cn”, users can read the whole version of reports after real-name registration, while administrators can search, browse and gain access to statistics within the approved range.

Meanwhile, not all the reports were open to the public due to confidentiality and IPR. The reports are categorized separately as open, to-be-open and non-open ones. Open reports is a kind accessible to all social sectors. Scientists and engineers can apply for a delay of no more than 5 years when it comes to paper publishing and patent application.

Experts said that S&T reports, the significant resources of S&T information, are the outcomes of S&T projects as well as the media of knowledge sharing. For S&T departments, NSTRS can avoid repeated project initiation in different S&T management systems, and examine the authenticity and innovativeness of research findings in a real-time manner; provide scientific personnel with rich information for innovation activities; ensure that the public have the right to know government input and output in scientific research, thus increasing government transparency.

At present, MOST is taking the lead to study and formulate an opinion on the report system.

(Source: High Tech Industry Herald, March 3, 2014)

Opinions Solicited on Law of Promoting Transformation of S&T Achievements (Draft Revision)

Recently, the Legislative Affairs Office of the State Council issued a notice, planning to solicit opinions from various social sectors on the Law of Promoting Transformation of S&T Achievements (Draft Revision), with a view to submitting a report to the State Council executive meeting for deliberation.

Promulgated in 1996, the Law has played an important role in standardizing transformation of research findings and facilitating application and commercialization of research findings by science community, industrial sector and social organizations. With the expansion and deepening of reform and development, economic and social development has resulted in new demand for the transformation of research findings: research institutes and universities should speed up the transformation of research findings into productivity; the asset management and revenue distribution of research institutes should be facilitated for the transformation; new measures should be taken to stimulate the transformation; long-term mechanisms in cooperation among enterprises, universities and research institutes should be established; pricing mechanism of research achievements should be set up; scientific and technological intermediary services should be expanded and improved; financing mechanisms for the transformation should be established. The revision of the Law will further remove the barriers impeding the transformation of research results into economic and social benefit and provide legal means to facilitate the transformation process. All this is of utmost importance to promoting the integration of S&T with economy and implementing the innovation-driven development strategy in line with the conclusions drawn by the 18th CPC National Congress and the 3rd Plenary Session of the 18th CPC Central Committee.

According to the Draft Revision, many new contents have become the focal points of various social sectors. For example, research institutes and universities could manage on its own the transfer, application permission and investment of their research findings, and determine the price through coordination and listing in the technology market; the government will strengthen the public services in converting research findings into products, encourage the development of technological service agencies, and facilitate the building of professional, network-based and standardized technological service system involving all social sectors; the country encourages cooperation between technological service agencies and other institutions, providing comprehensive services for the transformation of research findings. In addition, the government will encourage investment institutions for entrepreneurship to invest in such transformation projects, and offer tax preference to the investment institutions that support to-be-listed tech-based SMEs; government departments above county level are allowed to set up special fund for entrepreneurship to guide and encourage social investment in start-up SMEs.

Moreover, the Draft Revision states that the country encourages banking sector and financial institutions to deepen reform and adopt new approaches in their structure, management, financial products and services; and that some financial institutions should support research-transformation projects as a policy focus according to its business range; regulations should be made on various financial assistance such as direct financing, entrepreneurship investment, insurance and credit guarantee; and governments above county level are allowed to establish “risk-compensation fund”, which offers a certain amount of compensation to the local financial institutions, entrepreneurship investment institutions, insurance companies and guarantee institutions, supporting the local transformation of research results into productivity.

(Source: High Tech Industry Herald, January 6, 2014)

How China Promotes Transformation of Research Achievements

The 18th National Congress of CPC, confirmed the central role of science, technology and innovation in the overall national development pattern. Recently the policy on science, technology and innovation is primarily focused on deepening reform of S&T management system, improving research and innovation capacity, fostering emerging industries through developing hi-tech zones, and promoting transformation of research achievements through expanding technological services and financial support.

In the new phase, economic and social development has led to higher requirement for the transformation of research achievements. In 2013, the National People's Congress (NPC) put the revision of the Law on Promoting Transformation of S&T Achievements on its agenda, highlighting the significance of the transformation of research achievements to carrying out the strategy of innovation-driven development in the new phase. In recent years, various localities have explored some new measures to promote the use of research results, aiming to speed up regional development and industrialization.

Some practices and measures are summarized as follows:

Firstly, to mobilize various sectors to promote transformation of research findings by giving play to technological service agencies based on industry-university-research institute collaboration and getting financial support from financial institutions. A six-party collaboration, which has the government, enterprises, universities, research institutes, financial institutions and technological service agencies involved in support, generated based on regional practices. The collaboration is functioning to enhance the central role of government, help integrate innovation resources, share innovation achievements, and speed up transformation of research findings. The earliest model of translating research findings which involves enterprises, universities and research institutes was established in Deqing, Zhejiang Province. With the development of market economy, a New Deqing Model, six-party engaged collocation, collaboration was created for building a comprehensive regional innovation service system.

Secondly, to boost regional development by key technologies. Some research institutes with strong competence have commercialized a number of mature research achievements, facilitating local development of relevant industries. Meanwhile, research institutes are working to offer public services to local SMEs, improve the converting rate of research findings into products and upgrade industrial technologies. For instance, Northwest Industrial Technology Research Institute in Shaanxi Province has been carrying out multiple forms of cooperation with local enterprises in electronic information, new material, energy and chemical industry as well as equipment manufacturing, contributing tremendously to local industrial development.

Thirdly, to promote the transformation of research achievements with the orientation to industrial clusters. What has been done was to develop products and increase market share with technical strengths of local industries, combining scientific projects with development of industrial clusters. All this has facilitated upgrading of regional industrial structure and development of industrial clusters. For example, in 2013, by participating in the technical project of Earth Observation and GPS Technology funded by the National 863 Program, local universities, research institutes and enterprises jointly developed geospatial Wuhan Eastlake industrial cluster and provided information and positioning services, becoming a role model in transforming achievements of scientific projects to local industrial clusters.

Fourthly, to promote private research institutes to work with requirements of local enterprises in product development, encourage applied research, so as to

accelerate the transformation of scientific results.

By giving play to the role of private research institutes, local authority selected some projects combining demands of enterprises with strength of private institutes in technology transfer, technology service, and jointly carrying out the pilot project for a new product. For example, Beijing Zhongke Qianfang Biotechnology Institute established a testing base, which bridges research institutes with enterprises, further develops research results and ensures smooth transformation of such results into a new product.

With two decades' efforts, relevant work in the transformation of research achievements has made remarkable progress in China. In the coming years, the government will further deepen the reform of S&T management system, continue to promote the transformation of scientific results, and push forward the implementation of the innovation-driven development strategy.

(Source: High Tech Industry Herald, January 6, 2014)

(Editor's Note: All news in the issue are translated from Chinese texts for your reference. They are subject to checks and changes against official release of original Chinese or English texts.)