



WISCONSIN LEGISLATIVE COUNCIL

NANOTECHNOLOGY

Room 413 North
State Capitol

October 26, 2010
10:00 a.m. – 3:45 p.m.

[The following is a summary of the October 26, 2010 meeting of the Special Committee on Nanotechnology. The file copy of this summary has appended to it a copy of each document prepared for or submitted to the committee during the meeting. A digital recording of the meeting is available on our Web site at <http://www.legis.state.wi.us/lc>.]

Call to Order and Roll Call

Chair Benedict called the committee to order. The roll was called and a quorum was present.

COMMITTEE MEMBERS PRESENT: Rep. Chuck Benedict, Chair; Sen. Mark Miller, Vice-Chair; Reps. Terese Berceau and Pat Strachota; and Public Members Michael Cronin, George Gruetzmacher, Robert Hamers, Doug Hansmann, Pamela Owen, and Richard Peterson.

COMMITTEE MEMBERS EXCUSED: Sen. Sheila Harsdorf; and Public Members Jeff Cernohous, James Hamilton, and George Lisensky.

COUNCIL STAFF PRESENT: Mary Matthias and Pam Shannon, Senior Staff Attorneys, and Larry Konopacki, Staff Attorney.

APPEARANCES: Charles B. Hoslet, Managing Director, University of Wisconsin (UW)-Madison, Office of Corporate Relations; Brian Doudna, President, Wisconsin Economic Development Association; and Maliyakal John, Managing Director, WiSys Technology Foundation.

Approval of the Minutes from the September 30, 2010 Meeting

The minutes from the September 30, 2010 meeting were approved by unanimous consent.

Description of Material Distributed

- **Memo No. 2, *Recommendations for Legislation* (October 19, 2010)**

The Legislative Council staff explained that Memo No. 2 is a compilation of the recommendations that were made to the committee at its first two meetings, prepared to assist the committee in determining which recommendations it is interested in pursuing. Staff said that if the committee identified items of interest, staff could gather more information or prepare a bill draft on each of those items for the committee to consider at future meetings. Chair Benedict opened the meeting up to the members to discuss items in the Memo.

The committee discussed the recommendation to require safety protocols for labs working with nanomaterials. It was suggested that “best practices” be substituted for “safety protocols” throughout the Memo, since no agreed-upon protocols have been developed for working with nanomaterials. Representative Berceau said companies working with nanomaterials should be informed of best practices to protect employees from potential harm.

The committee discussed the differences between medical surveillance and exposure monitoring of workers who handle nanomaterials. Under exposure monitoring, a registry of people who work with nanomaterials would be created and their health would be monitored over time in an attempt to detect unusual health trends that may be linked to their exposure to nanomaterials. Several committee members said that establishment of an exposure registry would be useful.

The committee discussed whether the state should pursue general research on safety of nanomaterials or leave that to federal agencies such as the Environmental Protection Agency.

Representative Berceau discussed the need for establishment of a nanomaterials registry. She said since the effects of an unintended release of nanomaterials is unknown, state agencies should know where the nanomaterials are located in case there is a need to respond to an accidental release. She pointed out that the location of other toxic materials must be reported to the state. Mr. Hamers questioned the state’s purpose in gathering information through a registry and whether providing information would be mandatory or optional. Senator Miller said it was beyond the ability of the committee to determine which nanomaterials should be included in a registry program, but that the committee could direct a state agency to make this determination.

The committee engaged in a lengthy discussion of the possible elements of a nanotechnology clearinghouse. Senator Miller said a clearinghouse would be a good resource for businesses to learn about best practices for worker safety and the availability of grant funding. He said the Clearinghouse could also be tasked with providing the Legislature and the public with certain information.

Mr. Peterson said the clearinghouse could connect industry with the UW. He said his lab could provide low-cost confidential testing of nanomaterials for industry. Representative Berceau said this type of testing could potentially help companies obtain insurance coverage. Ms. Owen said the Wisconsin Technical College System (WTCS) is already familiar with the sort of clearinghouse entity envisioned since it has a lot of experience working with local businesses.

Mr. Hansmann said that some of the funding for NSEC (Nanoscale Science and Engineering Center) and MRSEC (Materials Research Science and Engineering Center on Nanostructured Interfaces) is targeted for research into fate and assessment. He raised concerns that since the UW is involved in

commercializing nanotechnology research, UW-based organizations may face conflicts of interest regarding promotion of safety. He suggested that the Department of Natural Resources (DNR) or State Lab of Hygiene (SLOH) have a role in this aspect of a clearinghouse since they have no business interests at stake.

Presentations by Invited Speakers

- ***Charles B. Hoslet, Managing Director, University of Wisconsin (UW)-Madison, Office of Corporate Relations***

Mr. Hoslet described the history and objectives of the UW-Madison Office of Corporate Relations (OCR) and described the types of assistance UW-Madison provides to businesses. He also described some of the major research centers on campus as well as the nanotech-focused research centers: the Advanced Materials Industrial Consortium; CNTech (the Center for Nanotechnology) MRSEC and NSEC.

Mr. Hoslet said the Legislature could assist development of the nanotech sector by providing support to existing programs, collaborations and networks that connect Wisconsin businesses with research and resources and supporting angel and early stage venture capital tax credits. Mr. Hoslet said small business innovation research assistance grants are very important and the Legislature should continue to fund them. He also urged support for the Wisconsin Entrepreneurial Network and the Wisconsin Technology Council.

He cautioned the committee against recommending Wisconsin-specific nanotechnology regulation because he believes these would put Wisconsin businesses at a disadvantage. He stated regulation is not necessary because federal regulation of nanotechnology is forthcoming and the Environmental Protection Agency (EPA) is adequately addressing health and safety issues.

Mr. Hoslet said a clearinghouse devoted specifically to nanotechnology is a good idea and discussed the possible role that OCR could play in a nanotechnology clearinghouse. He said OCR could leverage existing knowledge of campus resources and connections with the business community, partner with the clearinghouse to showcase state-of-the-art research at UW campuses and other educational institutions, and encourage and support academic-industry partnerships. He said if NSEC or MRSEC were provided adequate funding, either of them could operate the clearinghouse. He also said that private educational institutions such as Marquette University and the Milwaukee School of Engineering, should be included. He commented that OCR is not sufficiently connected with state agencies to carry out some of the clearinghouse functions that have been discussed and noted that OCR does not currently work on any safety or public health-related issues.

- ***Brian Doudna, President, Wisconsin Economic Development Association (WEDA)***

Mr. Doudna described WEDA and its activities. He said Wisconsin needs transformational changes to get beyond its pattern of incremental growth. He said Wisconsin should not enact regulations on nanotechnology since this will put the state at a competitive disadvantage. He said the EPA will need extensive data and research on nanomaterials to develop upcoming regulations, and suggested this could be an opportunity for the UW to bring in federal research money. He urged the committee to ensure that Wisconsin is at the forefront for conducting this research.

Mr. Doudna said a clearinghouse may be a challenge to implement since it may be difficult to get all the desired groups to participate. He said a clearinghouse should play an educational role for workers and consumers and should provide workplace safety information for industry.

Mr. Doudna presented survey data on stakeholder opinions about economic development in Wisconsin compiled by the Wisconsin Competitiveness and Positioning Study. The study proposed nine recommendations, including creation of a single-focus entity to oversee Wisconsin's economic development efforts. He said this entity should not be responsible for the regulatory functions currently performed by the Department of Commerce. The study also recommended creation of a nonprofit entity, managed by staff with investment expertise, to centralize and oversee state innovation programs and investment strategies.

Mr. Doudna described the Kansas income TID (tax increment district) model for economic development and suggested this model be considered for Wisconsin. He also discussed the Ohio Third Frontier program. In response to questions, Mr. Doudna said the State of Kansas does not assess risks of the technologies in which it invests. He said Wisconsin could be in the forefront of risk research if it were to incorporate this element into its development strategy.

- ***Maliyakal John, Managing Director, WiSys Technology Foundation***

Mr. John described the goals and activities of WiSys. He said the mission of WiSys is to help commercialize the ideas of professors and students at the UW comprehensive campuses in the same manner the Wisconsin Alumni Research Foundation (WARF) does for UW-Madison. He described three WiSys initiatives that successfully transferred research in emerging technologies from the UW System comprehensive campuses to the marketplace. He described activities of the Nanotechnology Center for Collaborative Research and Development at UW-Platteville. He said the center is currently working with Honda to develop a composite using graphene for use in building cars. He described six projects that have been funded through the Small Company Advancement program, which was created as part of the CORE Act in the past legislative session.

Mr. John said companies in Wisconsin may not be aware of how nanotechnology could be used to enhance their products. A database would be helpful to link up UW researchers with these companies. Mr. John told the committee that WiSys made a proposal to the National Science Foundation (NSF) to create a network to connect companies with researchers but NSF did not fund the proposal. WiSys had asked for \$100,000 per year for five years, to provide workshops, internships, and safety testing related to nanotechnology. Mr. John said he would provide a copy of the proposal to the committee.

Discussion of Committee Assignment

The committee resumed its discussion about establishment of a clearinghouse for nanotechnology in Wisconsin. The committee discussed possible functions of a clearinghouse, including preparing periodic reports and recommendations for consideration by the Legislature, providing safety testing, and connecting industry with UW researchers. The committee also discussed which organization would be best suited to run a clearinghouse. Options discussed were to link it with UW-Madison, UW-Extension, the WTCS, a state agency, or a private organization. Senator Miller commented that if the clearinghouse were a statutorily created entity, its composition and responsibilities could be specified in legislation.

Mr. Gruetzmacher said it is important for workers to be informed that they are working with nanomaterials, and suggested that the committee recommend to OSHA that it require notification to be provided to workers. He said the downstream environmental effects of nanomaterials should also be addressed. He said the committee should ensure that UW labs are following proper safety procedures so that students learn good safety habits. He pointed out that the UW-Madison Safety Office currently has a number of unfilled staff positions.

Mr. Hamers suggested that specialized nanotechnology safety training could be provided to a cadre of staff from throughout the UW System who could then train others at their institutions in proper procedures. Senator Miller commented that the Solid and Hazardous Waste Education Center (SHWEC) has a similar program for hazardous waste disposal training.

Representative Berceau said the committee's recommendation should have a public health and environmental component. She said it is imperative to gather the data that is needed for risk research to be appropriately directed. She commented that the UW-Madison Safety Office does not maintain an inventory of campus labs using nanomaterials.

Representative Strachota said it is important that the clearinghouse address the needs of private businesses.

Mr. Hamers described the functions of the UW Advanced Materials Consortium, which businesses must pay a fee to join, and said this could be a model for the clearinghouse. He said locating the clearinghouse within either NSEC or MRSEC would utilize existing connections and expertise. Mr. Peterson agreed that the Consortium is a good model, and said that for a nanotechnology clearinghouse, an interface between the physical and biological sciences is needed.

The committee acknowledged the tension inherent in the dual goals of facilitating the development of the nanotechnology industry in the state and protecting the public health and environment from potential effects of nanotechnology. Mr. Gruetzmacher said it would be beneficial for the clearinghouse to bring people from the industry and public health sectors together periodically in meetings or workshops, to facilitate collaboration in these two aspects of nanotechnology development.

Several members commented that the health and environmental impacts of nanotechnology will become areas of heightened interest in the near future, and the federal government will likely be directing significant funding to institutions that are capable of conducting research in these areas. Wisconsin would do well to position itself as a leader in nanotechnology safety research to avail itself of these funding opportunities.

Mr. Hansmann commented that if a business is provided public money through tax credits such as those provided under the Kansas program, the public should be assured that the products being supported are not hazardous to the public.

Senator Miller suggested that a five-year grant could be provided to an entity to establish and operate the clearinghouse with the expectation that it would eventually become self-sustaining. Ms. Owen said there should be multiple points of access to the clearinghouse so that entrepreneurs all around the state have access to it.

Representative Benedict reminded the committee that the next meeting will be held on *December 7, at 10:00 a.m. in the State Capitol*. He said the subsequent meeting, which may be the final meeting of the committee, would likely be held in late January.

Adjournment

The meeting was adjourned at 3:45 p.m.

MM:jal