



State Of California
ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION

Governor Edmund G. Brown Jr.

Meeting Minutes
State Capitol, Room 4202
Sacramento, California
March 8, 2012

Members Participating

Michael Gardner, Chairman
Mike Dayton (arrived at 10:20 a.m.)
Helen Knudson
Emir Macari
Jim McGowan
Mathew Ortiz
Mark Pazin
Chester Widom

Members Absent

Peggy Hellweg
Kit Miyamoto
Kathy Smith
Timothy Strack

Staff Present

Richard McCarthy, Executive Director
Karen Cogan, Administrative Manager
Robert Anderson, Senior Engineering Geologist
David King, Legislative Director
Henry Reyes, Senior Structural Engineer
Fred Turner, Senior Structural Engineer

I. WELCOME AND INTRODUCTIONS

Commission Chair Michael Gardner called the meeting of the Alfred E. Alquist Seismic Safety Commission to order at 10:04 a.m. and welcome everyone. Administrative Manager Karen Cogan called the roll and confirmed the presence of a quorum.

II. APPROVAL OF JANUARY 12, 2012 MINUTES

Commissioner Helen Knudson pointed out a typographical error on Page 10, noting the word "Mark" should actually be "March."

ACTION: Commissioner Emir Macari made a motion, seconded by Commissioner Mark Pazin that:

The Commission approve the January 12 minutes as amended.

* Motion carried, 7 - 0 (Commissioner Mike Dayton absent during voting).

III. CHAIRMAN'S REMARKS

Chairman Gardner invited Commissioner Knudson to report on the Nominations Committee's activities.

Nominations Committee

Commissioner Knudson said nominations for the vice chair position had been closed, and the Nominations Committee would be interviewing candidates and reporting to the Commission at the next meeting.

IV. EXECUTIVE DIRECTOR'S REPORT

Budget Update

Executive Director Richard McCarthy advised that although funding for the Commission was included in the governor's proposed budget for 2012-13, state agencies are expecting further reductions to offset the ongoing state budget deficit.

Legislative Director David King reported that the Commission's budget was generally in good shape for the current fiscal year. He said the Commission has had to absorb nearly \$100,000 in cuts over the past few years, so there was little leeway left to deal with further cuts. He referred to the written budget report for more detailed information about the status of expenditures.

Chairman Gardner confirmed that the staff has brought the Commission's situation to the attention of the Department of Finance, but the state as a whole is trying to reduce expenditures.

Mr. McCarthy advised that the Commission's funding will be scrutinized at budget hearings in April. He said the most critical issue will be the extension of the funding sunset date, allowing the Commission to continue operating after July 1.

Mr. McCarthy noted that the Commission has not yet charged any overhead for administering its research projects, so those funds can be applied at some point in the future. He explained that the gift agreement authorizing use of research funds allows the Commission to charge 10 percent for overhead.

Meeting Dates and Locations for 2012

Mr. McCarthy informed the Commission that the Mexican consulate has invited the Commission to a joint meeting at its Sacramento office in May to mark the two-year anniversary of the devastating earthquake in Baja California. He said the proposed meeting date is Wednesday, May 2, and the consulate will hold a reception that evening. He asked commissioners to check their calendars to confirm their availability on that date.

Mr. McCarthy noted that Commissioner Kit Miyamoto was currently in Japan and would report at the May meeting on Japan's progress in recovering from the April 2011 earthquake and

tsunamis. He added that representatives from Japanese businesses expressed interest in the Deloitte report's findings and recommendations about economic recovery, a later agenda topic, and the Commission has been invited to send a team to Japan to observe conditions firsthand.

Agricultural Summit

Mr. King advised that Assembly Member Fiona Ma is organizing a summit to discuss potential seismic risks and preparedness issues affecting California's vitally important agriculture section. He said he would keep commissioners apprised of the date and time once the arrangements have been made.

FPPC 700 Form

Ms. Cogan reminded commissioners to submit their annual conflict of interest reports to the staff by March 23. Chairman Gardner noted that the Fair Political Practices Commission Form 700 can be filled out online.

Spanish Yellow Pages

Ms. Cogan drew attention to a draft letter in the meeting packet expressing the Commission's appreciation to the Spanish Yellow Pages for including a section on earthquake preparedness. She said the Commission has a great relationship with the Spanish Yellow Pages, but has been unable to contribute funding for the past several years due to the state's budget constraints. She noted that the Spanish Yellow Pages has continued to incorporate a two-page centerfold with tips on earthquake safety.

ACTION: Commissioner Pazin made a motion, seconded by Commissioner Knudson, that:

The Commission approve sending the letter of appreciation as proposed.

* Motion carried, 8 - 0.

Commissioner Macari suggested sending similar preparedness information to the Latino Business Journal and the California Hispanic Chamber of Commerce for inclusion in their publications and Websites.

Mr. McCarthy said the Commission will know more about the fate of its budget at the May meeting. He indicated that he would try to obtain authorization from the State and Consumer Services Agency to support this kind of outreach.

Performance of Hospitals in Earthquakes and Fire

Senior Structural Engineer Fred Turner reported that shake table testing of the five-story building in San Diego designed to test the seismic performance of nonstructural components of hospitals was scheduled to take place in April, followed by burning of the structure on May 1. He said this \$5 million project includes a base isolation system as well as two floors equipped with

typical components found in hospital intensive care units and patient care sections. He advised that the Commission provided funding for the base isolation system, an educational video, and research on fire following earthquakes.

Mr. Turner noted that State and Consumer Services Agency Secretary Anna Caballero visited the site in February, and Chairman Gardner was interviewed for the video. He stated that a Media Day will be held sometime during April, and he recommended that some commissioners attend.

Mr. McCarthy introduced Ms. Melissa Figueroa, the Agency's Deputy Secretary of Communications. He noted that Ms. Figueroa is responsible for media relations and outreach. He proposed sending her, Chairman Gardner, and a staff person to the Media Day event.

Mr. Turner indicated that he had some pictures and the latest version of the educational video to show the Commission at the end of the meeting.

V. TSUNAMI PREPAREDNESS WEEK - MARCH 25-31

Ms. Johanna Fenton, Earthquake/Tsunami Division, California Emergency Management Agency (CalEMA), announced that CalEMA was organizing a Tsunami Preparedness Week from March 25-31, featuring a number of workshops, live exercises, school activities, and outreach events. She referred to a flyer showing some of the public education materials and resources to help people prepare. Ms. Fenton said there would be a press conference on March 9 at the Santa Cruz Harbor announcing the event, and at least ten counties would be issuing proclamations publicizing Tsunami Preparedness Week.

Ms. Fenton indicated that this will be the fifth year that CalEMA will work with the National Oceanic and Atmospheric Agency (NOAA) to test the tsunami warning and emergency alert system. She noted that the effort started in Humboldt County, but this year's exercise will include Del Norte and Mendocino Counties as well. She said Santa Barbara and Santa Cruz Counties are installing tsunami warning signs along their coastal areas, and CalEMA continues to work with maritime communities to promote greater public awareness.

ACTION: Commissioner Knudson made a motion, seconded by Commissioner Macari, that:

The Commission authorize the staff to prepare a letter of support as proposed.

* Motion carried, 8 - 0.

Ms. Cogan recommended that commissioners review the Commission's 2005 report on the state's tsunami hazards. She asked if CalEMA had a more comprehensive list of the events being planned so interested commissioners could participate. Ms. Fenton said she would provide a more detailed list of the special events. Ms. Cogan also suggested that the Commission and CalEMA issue a joint press release publicizing Tsunami Preparedness Week. She added that the staff will work with the State and Consumer Services Agency's outreach office.

VI. ECONOMIC RECOVERY PROJECT

Ms. Julie Quinn, managing partner, Sacramento office, Deloitte Consulting, LLP, presented a draft report on the effects of disasters on California businesses and ways to facilitate rapid economic recovery. She said Deloitte representatives began meeting with the Commission last fall to discuss steps that would help California businesses recover more quickly after major disasters. Deloitte then volunteered to interview large and small businesses to identify their critical needs, conduct research on lessons learned from past disasters, and compile a report with recommendations.

Ms. Quinn stated that California is the ninth largest economy in the world, so speedy recovery and restoration of business services affects not just the state, but the nation as a whole. She observed that although small businesses account for 75 percent of California's gross product, about 25 percent of small businesses remain closed after major disasters. She said business recovery is dependent upon a number of factors, including restoration or relocation of physical facilities, workforce availability, viability of supply chains, continuity of community services and tourism, and ongoing access to capital. In conducting this study, Ms. Quinn noted, Deloitte interviewed different size businesses in a range of industries and sectors to determine the primary obstacles to recovery. Some of the key ingredients cited by businesses were having written plans and procedures in place before disasters strike, and having the ability to maintain supply chains.

Ms. Quinn reviewed highlights of the Deloitte report. She said case studies of disasters in Japan, Florida, Louisiana, and New Zealand show the importance of involving local citizenry in response efforts and training individuals to take care of themselves. She noted that businesses identified electrical power, transportation infrastructure, accurate communications, and access to capital as critical elements in rapid recovery. Ms. Quinn discussed recommendations for improvements in each of these areas. She identified ways government agencies can intervene to streamline building inspections and permitting processes, restore lifelines, and help businesses plan and prepare for disasters.

Ms. Quinn expressed appreciation to the Commission for providing this opportunity for Deloitte to contribute pro bono efforts for the benefit of the state's businesses.

Mr. McCarthy thanked Deloitte for the research and report. He commended Deloitte for developing productive partnerships with various sectors and industries. He noted that the Governor's Office has expressed strong interest in recovery issues, so the Commission will continue to work with other government agencies, local governments, and businesses to improve seismic safety and promote disaster preparedness.

Chairman Gardner commended Deloitte for its work. He noted that allowing businesses to tell government what they need is a unique approach to improving and restoring California commerce after disasters. Commissioner Dayton added that CalEMA also appreciates Deloitte's work, and he thanked Ms. Quinn for spearheading this project.

VII. SMART GRID

Commissioner Macari, Dean of the College of Engineering and Computer Sciences at Sacramento State University, gave a presentation explaining the concept of a “smart grid” and talked about the Smart Grid Center at Sacramento State.

Commissioner Macari noted that before the Japanese earthquake and tsunamis last year, Japan’s strategic plan had called for 75 percent of its electrical power to come from nuclear power plants, but public opinion has shifted considerably since the disaster. He showed a map of Japan identifying the areas affected by the earthquake and tsunamis, and he displayed a series of images depicting the resulting devastation. He stated that the Fukushima nuclear power plant was severely damaged when the area housing much of its electrical equipment flooded, and the subsequent explosion led to widespread opposition and decommissioning of many other nuclear power plants in Japan. Commissioner Macari advised that three quarters of Japan’s nuclear power plants were shut down in the six months after the earthquake, creating significant power shortages. He said 13 nuclear power plants remain operational, but the Japanese government is now focusing on improving efficiency, developing renewable energy resources, and distributing power generation through use of a smart grid.

Commissioner Macari noted that a smart grid system allows greater energy conservation and peak power management using automated computer systems to mix renewable energy with other sources and distribute power where it is most needed. He displayed a diagram of a conventional power distribution system, showing the flow of energy from power plants through a grid to end customers, and he contrasted that structure with a smart grid that integrates wind, solar, and biofuels, as well as rooftop solar units and plug-in chargers at customer sites. He pointed out that a smart grid system uses sensors and controls to integrate various sources, and communications are embedded in the network to manage routing and flow of power. For example, he noted, smart meters installed at customer sites allow customers to manage their own power usage more efficiently.

Commissioner Pazin asked whether Sacramento State was working with the Department of Homeland Security to protect the power distribution grid. Commissioner Macari responded that protection of the grid was a major national effort. He stated that the National Institute of Science and Technology was in the process of developing new standards and protocols to improve these capabilities. Commissioner Pazin urged the Seismic Safety Commission to participate in this work, noting that as the U.S. becomes more dependent on wireless technology, the system is also more vulnerable to sophisticated hackers. He pointed out that a cyber attack on the grid could cripple the entire power distribution network.

Chairman Gardner thanked Commissioner Macari for his presentation. Commissioner Macari said he would provide a copy of his presentation in .pdf format to the staff.

VIII. CALIFORNIA EARTHQUAKE LOSS REDUCTION PLAN UPDATE

Mr. McCarthy informed the Commission it was time for the five-year update of the California Earthquake Loss Reduction Plan. He said some of the 146 initiatives in the plan had been

completed, and it might be advisable to revise others and add a few more. He introduced Dr. Guna Selvaduray, San Jose State University, and invited him to discuss the process. He noted that Dr. Selvaduray would be back at the May meeting to review the scope of the update.

Dr. Selvaduray observed that the 2007 Earthquake Loss Reduction Plan was a comprehensive document that identified a series of programs and initiatives for the state to accomplish to address seismic safety issues. He said the current initiatives are divided into a series of elements reflecting a wide range of concerns in physical sciences and social sciences. He suggested updating the tables and text to incorporate lessons learned in recent earthquakes, revising the introductory sections to each element, and renumbering and simplifying the initiatives. He noted that the Commission should also consider adding new sections on topics such as economic recovery, agribusiness, fire following earthquakes, and mechanisms for supporting retrofits. Dr. Selvaduray recommended that the Commission appoint an ad hoc oversight committee to work with the project team and complete the update by December 31, 2012.

Chairman Gardner recommended that commissioners review the 2007 document and submit comments to Mr. McCarthy within the next two or three weeks.

IX. LAKE TAHOE PROJECT

Mr. McCarthy advised that the Commission-sponsored research project to explore the geohazards under Lake Tahoe was progressing, with test dives scheduled in April. He introduced Ms. Liz Taylor, Deep Ocean Engineering Research (DOER), the company building the remote-operated vehicle (ROV), and Mr. Gordon Seitz, California Geological Survey (CGS), and invited them to discuss their work.

Ms. Taylor explained that DOER specializes in developing submersible vehicles, infrastructure inspection tools, and mission modules to support scientific research. She said this project entails building a ROV that will eventually be deployed in Antarctica to help scientists collect core samples and study the ice shelf beneath that continent. She showed slides depicting the percussion hammer system, sensory arrays, and ROV, and using a map of Antarctica, she identified the area to be studied. Ms. Taylor noted that the ROV needs to be narrow enough to fit down a bore hole and unfold so the hammer system and sensory arrays can operate. She stated that Lake Tahoe was selected as a testing site, and she thanked the Commission for supporting this research. She added that during the ROV tests in Lake Tahoe, the vehicle will send a live video feed to the Commission and other interested parties.

Mr. Seitz described the scientific objectives of the Lake Tahoe research. He said CGS will work in collaboration with Scripps and the University of Nevada at Reno to map the bottom of the lake and collect samples of the lake floor that will help establish a more accurate date for the megaslide that occurred at McKinney Bay on the side of Lake Tahoe. In addition, the research will provide more data about other subsurface faults and the potential for future megaslides. He displayed a map and pointed out target areas where core samples will be collected. Mr. Seitz said the study will help update CGS's fault and seiche information and produce more accurate inundation maps of the area around Lake Tahoe.

Chairman Gardner thanked Ms. Taylor and Mr. Seitz for their presentation.

X. LEGISLATIVE UPDATE

Mr. King advised the Commission that about 1800 bills were introduced before the February 24 deadline for this two-year bill cycle, and the staff will continue to monitor bills of potential interest to the Commission. In particular, he highlighted SB 1065 (Alquist), regarding fire following earthquake, and SB 1271 (Corbett), a proposal to review the Division of the State Architect's Field Act process. He also noted that Assembly Member Monning introduced ACR 2100, a resolution declaring March 25-31 Tsunami Awareness Week.

XI. INDEPENDENT PEER REVIEW PANEL FOR DIABLO CANYON NUCLEAR POWER PLANT UPDATE

Senior Engineering Geologist Robert Anderson reported that the Seismic Safety Commission, along with CGS, the California Energy Commission, and the Coastal Commission has entered into an agreement with the California Public Utilities Commission (CPUC) to participate on a peer review panel to evaluate the seismic hazards assessment done by PG&E's contractor for the Diablo Canyon nuclear power plant. He noted that the CPUC has allocated \$30,000 for the costs of the peer review, and he and Mr. McCarthy were representing the Commission. He said the group last met on February 23, and a number of stakeholders and interveners expressed concern about the contractor's capabilities and qualifications. In response, the CPUC broadened the original scope of the peer review to include an evaluation of the research vessel and the individuals and contractors who will be processing the data collected.

Mr. McCarthy advised that he was uncomfortable with the expanded scope of the work because the Seismic Safety Commission lacks expertise to evaluate the PG&E contractor's capabilities, especially given the fact that the State has no established standards regarding the ship or processing. In addition, the CPUC also wants the peer review panel to audit the \$64 million PG&E contract, another task the Commission is unqualified to perform. Mr. McCarthy asked for direction as to whether the Commission should abstain or withdraw from the process.

Chairman Gardner commented that this was truly a dilemma for the Commission because of its limited staff and expertise. He suggested finding out if the Commission could remain on the peer review panel but be excused from the deliberations about the contract expenditures and the contractor's qualifications. He observed that the process is likely to result in political and economic arguments rather than focusing on scientific issues.

Mr. McCarthy indicated that some participants have questioned whether PG&E's contractor would be using state-of-the-art equipment and methods. He said there are no established state guidelines for determining the best and most appropriate types of assessment for this project. He clarified that he would feel comfortable submitting comments on the narrower issue of PG&E's proposed seismic hazard targets.

Mr. Seitz stated that CGS is concerned about the same issues. He noted the research ship is considered state-of-the-art for academic research purposes, but more sophisticated vessels are

used for oil exploration. He said informal discussions with experts and people at the U.S. Geological Survey indicate that although industrial-use equipment is better, the cost would likely be five to ten times more than provided in the current contract.

Mr. Anderson advised that AB 1632 calls for costs of the study to be absorbed by PG&E ratepayers. He said the CPUC already approved more than \$16 million for the study, but the scope now includes more offshore work, so costs have crept over \$64 million.

Mr. McCarthy recommended that he and Mr. Anderson attend the next meeting, find out more about the proposed scope of the review, and register the Commission's concerns about the process. He said he would report back to the Commission at the next meeting with a recommendation about how best to proceed. Commissioners expressed support for this approach.

XII. PUBLIC COMMENT

There were no members of the public who wished to address the Commission.

XIII. GOOD OF THE MEETING

Chairman Gardner asked the staff to provide a current roster of Commission members and committee assignments.

Mr. Turner showed a short educational video about the Commission-sponsored research project on the performance of nonstructural hospital elements subjected to shake table testing in San Diego.

XIX. ADJOURNMENT

There being no further business, Chairman Gardner adjourned the meeting at 1:15 p.m.

Sue Celli
Office Manager

Approved by:

Richard McCarthy
Executive Director