Energy Minerals Division

The members of the AAPG Energy Minerals Division strive to be an important source for geological science-based technical information and for professional development in 10 different commodity areas: coalbed methane; gas shales; gas hydrates; oil sands; oil (kerogen) shales; tight gas sands, and coal; uranium (nuclear minerals); geothermal energy; renewable energy; and the energy economics and technology committee that deals with all of the above energy resources. Fundamental information on these technical fields can be accessed by all AAPG members on the EMD website (http://emd.aapg.org/).

Achievements

An AAPG member can now elect at any time, at no added cost, to become an AAPG EMD member by simply checking off the appropriate box on their membership profile. With this checkbox, much more detailed information becomes available by logging in using their AAPG member number and unique password to the EMD Division's Members Only site at http://www.aapg.org/members_only/. The reason for an EMD membership requirement is to allow the member to express their relative interest in becoming part of the observing or Active committees dealing in some or all of the EMD commodity fields, depending upon how active the member wishes to be. A new AAPG Profile is under development to assist the prospective members in making their selections.

This added AAPG member benefit, where an AAPG member can obtain additional technical and geological information as well as direct participation opportunities in their specific field of interest, is a milestone event for the AAPG and the AAPG EMD. The added member benefit created by the elimination of the EMD annual dues, was achieved in early 2010, through the support of the AAPG Executive Committee, the AAPG executive director, and the EMD Executive Committee with input from the EMD Commodity Committee Chairs and many councilors and other EMD members.

In 2009, it was recognized by AAPG Executive Director Rick Fritz, the AAPG Education Committee, and AAPG Education Coordinator and Developer Susan Nash, that there was a need for the AAPG EMD to more fully participate in developing new education opportunities for our AAPG membership. These member service opportunities included E-Symposia, Geoscience Technology Workshops, and additional conferences that could provide education content for the AAPG-EMD membership and to provide additional revenue for the AAPG.

The EMD Executive Committee responded to these concerns for the needed additional member services of science-based information by creating, through a structural enhancement of the EMD Technical Committees, a three-tiered structure under the committee chair of three vice-vhair leadership positions, each representing the center of expertise and leadership of (1) industry, (2) university (academia), and (3) government. Vice-chair representation from the AAPG's sister Divisions (DEG & DPA) were also added to more fully integrate components from the complementary fields of environmental geosciences and geoscience professional development. These positions represent additional opportunities for AAPG members to become engaged for their own professional development but also for the greater benefit of the AAPG membership at large.

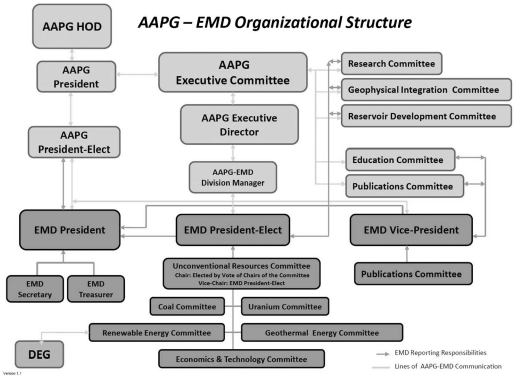
An important enhanced communication structure between the EMD and the AAPG Executive Committee, AAPG executive director, and the AAPG standing committees was also developed at the request of the AAPG Executive Committee (see figure below). This structure involves the newly created Unconventional Resource Committee (URC), which allows for a single, combined representation (vested in the EMD vice-president, with guidance from the URC Chair and others), to a least three of the AAPG standing committees from the six EMD committees now housed within the URC. These consist of the Committees on Coalbed Methane, Gas Hydrates, Shale Gas, Tight Gas Sands, Oil Sands, and Oil Shales. The new structural realignment also includes new formal lines of communication between EMD and AAPG regarding matters relating to outreach and education, and to EMD publications, which is vested in the EMD vice-president.

With the agreed continued support of the EMD by the AAPG, three EMD overlapping committees with the AAPG were sunset. These EMD committees included the GIS Committee, the Outreach Committee, and the Education Committee.

Achievements

With these structural, leadership, and communications enhancements we anticipate that the AAPG EMD will be in a position more than ever before to contribute to AAPG membership needs in advancing the geological sciences and technology involved for expanding the energy resources now available for exploration and development to meet society's increasing demand for energy in the 21st century and beyond.

EMD achievements this past year were numerous, including the strong EMD program at the New Orleans convention, the Calgary convention, AAPG Section meetings and EMD member participation such as in Hedberg conferences. Active AAPG support through EMD Vice-Chairs and EMD EC and associated Commodity Chairs for 2011 meetings include the Houston ACE and added planned



conferences. EMD Vice-Chairs for upcoming 2012 conferences are in development. Technical support of planned AAPG Europe efforts is also well into the developing stage.

EMD was also well represented at the various section meetings through the outstanding work of our EMD councilors in assembling technical sessions and related activities.

Several EMD sponsored or co-sponsored publications were completed and have been released and distributed, resulting in good sales. They include:

(1) *Carbon Dioxide Sequestration in Geological Media – State of the Art,* AAPG Memoir
(2) *Gas Hydrates: Energy Resource Potential and Associated Geologic Hazards* – AAPG Studies in Geology 59

Final work is being completed on several EMD sponsored or co-sponsored publications including:

(1) Atlas of Coal Geology 2nd Edition – AAPG Studies in Geology,
(2) *Coal Assessment of the Gulf Coast* – AAPG Studies in Geology
(3) *Shale Petroleum Reservoirs* – AAPG Special Publication
(4) *Energy Resources for Human Settlement in the Solar System and Earth's Future in Space* – AAPG Special Publication

New publications originating from the EMD include *Heavy Oil/Bitumen Petroleum Systems in Alberta and Beyond* – AAPG memoir

Discussions are ongoing on piloting a GIS-3D object oriented database synthesis of the Athabasca oil sands. A geothermal energy publication is also being planned and proposed by the Chair of Geothermal Energy Committee. A new publication also is being planned by the Chair of the Uranium (Nuclear Minerals) Committee.

EMD Committee Chairs also submitted summaries of their energy commodity reports for publication in the scientific quarterly journal *Natural Resources Research* on a biannual basis. EMD members have been cooperating as deputy editor with the publisher for a number of years.

Fully documented future plans for each of the Technical Commodity Committees regarding GTW's, publications, conferences, short courses, and website maintenance have been developed and communicated to the AAPG Executive Committee. Overlaps of areas and responsibilities continue to be evaluated.

The AAPG EMD has originated and developed a new "Web Portal" that provides a web- based environment that quickly connects members to significant web-based content available on their technical fields of interest available within the EMD. This Web Portal is a member- interactive/support feature that provides for advanced connection to information on exploration and development of carbon-based energy, nuclear-based energy, and, for monitoring purposes, the renewable energy available in the environment to meet the needs of EMD as well as the AAPG membership and its Division, those members of the DEG and DPA. It also provides technical information on the environmental geosciences involved in each of the EMD Commodities as well as support from the DPA on matters related to ethics and professional training.

The joint EMD/DEG Renewable Energy Committee continues to provide heads-up information to EMD and DEG members regarding wind, solar, biofuels, hydropower, etc., through monitoring (1) the development of these resources, (2) their economic framework, and (3) the likelihood of the continued growth of the individual energy resources in contributing to the overall energy needs in the U.S. and overseas.

Recommendations

AAPG EMD activity has increased substantially over the past five years due in a large part to the world's need for additional energy resources. The EMD has added councilors for each of the regions, enlarged our role at multiple AAPG meetings, expanded our website offerings, and continued to sponsor AAPG-approved external conferences. The EMD Executive Committee has responded by continuing monthly conference calls that includes the full Executive Committee, technical chairs, and councilors this past year to more effectively coordinate the business of the Division.

We continue to believe this will help us to be much more effective as we further expand our activities to include participation in Geoscience Technology Workshops, external events with affiliated and sister societies (such as SEG, AIPG, GSA, and SPE), and in regional activities tied to the global expansion of AAPG.

EMD currently maintains an AAPG bank balance that can be applied to short-term funding of technical services and publication support of direct interest to the AAPG and AAPG EMD membership. The AAPG EC basis for supporting a sufficient AAPG EMD bank balance is still in final development, although this is no longer necessary because EMD's income from publications and meetings is no longer needed for sole support of the EMD. In its place, anticipated and budgeted EMD needs now emanate from the AAPG via an approved yearly EMD Budget, prepared by EMD and approved by AAPG.

At the end of the last fiscal year, EMD recorded approximately 1,366 members, which had represented about 5% of the AAPG membership. This number has remained fairly constant over the past five years despite the booming industry activity in unconventional gas and considerable effort by the EMD leadership to attract new members. The inability to increase membership was tied to several factors including the annual $20 dues payment and the lack of recognition as to what EMD offers. With the opening of the membership in April 2010, EMD currently reports more than 2,300 members and is rapidly growing monthly with increased knowledge of the enhanced AAPG membership benefits and opportunities now available.

Changing the name of the EMD, to better reflect its emphasis on AAPG membership interest and to more fully develop information and scientific knowledge within the full spectrum of energy-resource fields, is an additional initiative for the EMD membership to consider. Although the change in the name of the Division may represent an important change from the past, the overall goal remains the same—to become an indispensible source of information to AAPG members concerning the various types of energy resources that are available other than conventional oil and gas. The EMD leadership is fully committed to working with its members, the other Divisions, and AAPG to achieve this goal in the foreseeable future.

Frank E. Walles, EMD President

Division of Professional Affairs

The Division of Professional Affairs (DPA) is the community within AAPG that focuses on the professional practice of energy resource geoscience, and upholds the AAPG Code of Ethics. Its mainstay is the certification of petroleum geologists, geophysicists, and coal geologists.

The DPA community consists of geoscientists who are committed to standards of competence, to ethical behavior and to professionalism. Those commitments are furthered and verified through its certification program. Domestically, the DPA is the only organization that specifically certifies the educational background, work experience,