

Annual Meeting Report for Energy Economics & Technology Committee: 29 March 2010*

This report is submitted in two parts.

Part 1 provided “Comments on Natural Gas”, was submitted in February as a late “mid year” and early “annual meeting” report pertinent to topics of interest to the Committee.

Part 2, provided here, outlines proposed functions and activities of the Committee. The search for active committee members/vice chairs is continuing. This outline includes a proposal for a publication or equivalent documentation of project economic evaluations (e.g., shale plays being a matter of particular interest, although evaluations should not be restricted to that resource). While this could be developed with a “top down” blessing and conceivably financial support (needs yet to be determined), it could also be developed in a “bottom up” mode, as a collecting point for contributions from members that satisfy its themes and direction. Member inputs, suggestions and participation are invited.

Proposed Functions, Activities, and Contributions of the Energy Economics & Technology Committee

1. Annual meetings

(Special sessions related to Energy Economics have been scheduled at prior annual meetings, e.g. 2008 session chaired by J. Platt, EPRI and Dr. Michelle Foss, Jackson School, Univ. Texas at Austin.)

Assist AAPG and EMD identify, develop and execute sessions related to energy economics and technology in forthcoming annual meetings. This process will be facilitated with greater awareness of and participation in these thematic issues.

2. Cooperation with Other Divisions

Our “to do” list includes contacting members/officers of DEG, DPA to identify activities/sessions of mutual interest, ideally through cross-membership.

3. GTW’s, Webinars, and Speakers Bureau

The breadth and half-life of most economic assessments may preclude this, although material is available now (Mid-Year/Preliminary Annual Mtg report “Comments on Natural Gas”) that could support a webinar.

4. Publications

None planned. Short pieces have been developed for *AAPG Explorer*, recently in conjunction with the Coal Committee (Platt and Ambrose, coauthors, 2009), and a longer article for *Natural Resources*.

For consideration:

Economic Evaluations: Example Techniques and Case Studies. A question for

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consideration is whether AAPG/EMD both can (with participation of members and/or assistance to obtain expert support) and should prepare a compendium of economic analysis techniques, specifically directed at spreadsheet approaches, for evaluating and comparing prospects of various types. Initial top priority is U.S. gas shales. This could be an “open ended” effort, tackling an expanding scope (regions, international, resource types) over time, and allowing for updating. An important focus could be the economic interplay of factors affecting shale gas and shale gas with associate liquids.

Can AAPG/EMD’s contacts tap company/consultant “spreadsheets” for evaluating multi-year tradeoffs of various factors. These could include natural gas prices (hedged and otherwise), acreage and royalty costs, drilling costs, hydrofracturing/other costs, other development costs, decline rates, initial and six-month/first year production rates, refracing alternatives, NGL quantities/separation costs/value, etc. Additional considerations depending on detail of assessment: impacts of depth, pressure, gas-in-place on production characteristics; impact of geologic characteristics on frac fluid choice and performance; lateral design, density, length and number of stages; regional variability of the preceding. Entire concept is open to suggestions, improvement, and guidance on how to make it happen.

5. Section and Region Meetings

To date the committee has not been involved regional events. In the past, the Eastern Section engaged in various coal assessment activities with economic dimensions.

6. Technical Interest Groups

Establish and moderate a web-based Technical Interest Group that will serve as an online forum for the discussion of technical issues related to tight gas sand exploration and development.

7. Interaction with Non-Geological Organizations

The International/U.S. Associations for Energy Economics are groups with whom insights from individuals holding cross-memberships could be particularly helpful to AAPG members, particularly through providing some screening or finger-pointing to useful material on natural gas, oil and environmental topics.

8. Webpages

This is an area ripe for development/improvement. It is currently the home for twice-yearly Committee reports, which occasionally offer an expanded review. An example is the February posting of Comments on Natural Gas. To date, these principally reflect perspectives gained by the chair during the conduct of wide-ranging research for the Electric Power Research Institute. *With successful expansion of committee members and participation, the scope of materials offered can also be expanded.* The introductory (public section) material is also in need of updating.

The range of topics that should be incorporated span domestic and international petroleum and solid fuel market developments, recognizing critical development affecting both demand and supply. Too, they span macroeconomic (e.g. recession) and

environmental factors. The following is an example wish list, not a record of where we are yet.

Topical reviews. Topics of interest could include: (1) role of shale gas production – a game changer for how long?, (2) global LNG – accelerant or depressant of price movements, (3) oil and natural gas price linkage – with the Atlantic Basin following market based pricing, and Asia beginning to show resistance, will a new paradigm emerge and be embraced by producers/governments?, (4) promoting natural gas demand growth – what measures are being considered? do their promoters understand exactly how they operate? will measures borne in times of excess supply come to effect in times of scarce supply? (5) coal-fired electric generation – what is in prospect for coal demand growth or demand decline? (6) renewables – are renewable likely to take away from gas demand far more than they increase it? (7) the impact of mid-term gas abundance on Russian development and marketing practices, Etc. Additionally, the “economic evaluation spreadsheets” discussed above (Item 4, [Potential] Publications) would be useful to incorporate here for online access. The list is potentially far greater than indicated here. The technology development process, such as George Mitchell’s role in the Barnett Shale, has value that transcends the geological community (note Search and Discovery paper by Kent Bowker). Likewise, the evolution of computing power/seismic and field development in hostile environments are astonishing developments which too rapidly develop a take-it-for-granted feel.

Great speeches, etc. Much of so-called “economic analysis” is based on tapping what company leaders and others are saying about what is going on (e.g. investor presentations). Likewise, universities and other societies hold events/conferences of great interest to those following economic and technology developments. Both direct links and member-developed synopses would be excellent additions for online access through AAPG via involvement with EMD’s portfolio.