



Planning and Studies Committee Meeting

**Barton Creek Resort
Austin, TX
Live Oak Room**

**Thursday, April 16, 2009
2:15 p.m. – 5:30 p.m.**

Attached are the agenda and other materials for the Planning and Studies Committee meeting. All Foundation members are invited to attend and participate in this meeting.

Attached are the following:

- Meeting Agenda
- Status Report on Current Studies
- 2010 Study Proposal Development Program
- Foundation Mission Statement and Objectives, and Study Selection Criteria
- Study Steering Committee Participation Form
- Study Proposal Form

THE INGAA FOUNDATION, INC.
PLANNING AND STUDIES COMMITTEE MEETING

Barton Creek Resort
Austin, TX
Live Oak Room
Thursday, April 16, 2009
2:15 p.m. – 5:30 p.m.

Agenda

- Opening Remarks John Allcorn, *Chairman*
Planning and Studies Committee
- Discussion with Aubrey McClendon
- PRCI Research Projects Eric Thomas, PRCI
- Current Studies Status Foundation Staff
- New Business (2010 Study Development) Facilitated Table Break Out Discussions
[See attached 2010 Study Proposal
Development Process]
- Conclusion John Allcorn

THE INGAA FOUNDATION, INC.

STUDIES STATUS REPORT (As of April 3, 2009)

STUDIES AND PROJECTS COMPLETED SINCE NOVEMBER 2008

Quantification and Potential Utilization of Unconventional Gas Supplies (2008)

Sponsors: Dominion Transmission; Spectra Energy

This November 2008 study evaluates: a) potential supply volumes, b) types of supply source(s), c) geographic locations(s), d) resource timing, e) operational issues or constraints, and f) gas quality issues associated with various unconventional gas supplies such as tight sands, shale development, coal bed (seam) methane and coal gasification. ICF was the contractor. A final report was published and posted on the INGAA website and ensures that critical decision-making data is available for the industry consistent with the long term planning requirements of operating companies and customers. The results were presented at the Foundation's Annual meeting and highlighted at the FERC's State of the Natural Gas Industry Conference on November 21, 2008. This report forecasts that North American unconventional natural gas recoverable reserves from tight gas, coalbed methane, and shale gas formations exceed 900 trillion cubic feet (Tcf). The report states that overall recoverable natural gas resources in the U.S. and Canada exceed 2,330 Tcf. Current annual U.S. and Canadian consumption of natural gas is approximately 26.4 Tcf. Contact: Rich Hoffmann.

Carbon Sequestration & Storage: Developing Transportation Infrastructure (2007-2008)

Sponsors: Spectra Energy; Dominion Transmission; NiSource

This study informs Foundation members, policymakers and others on issues associated with developing and operating a CO₂ transportation system for purposes of carbon capture and sequestration (CCS). This study focuses on the pipeline infrastructure requirements for carbon capture and sequestration (CCS) in connection with compliance with mandatory greenhouse gas emissions reductions. The major conclusion of the study is that while CCS technologies are relatively well defined, there remain technological challenges in the carbon capture and sequestration phases, and less so in transportation. Carbon capture is the most significant cost in the CCS process. The study forecasts that the amount of pipeline that will be needed to transport CO₂ will be between 15,000 miles and 66,000 miles by 2030, depending on how much CO₂ must be sequestered and the degree to which enhanced oil recovery (EOR) is involved. The upper end of the forecast range is of the same order of magnitude as the miles of existing U.S. crude oil pipelines and products pipelines.

While there are no significant barriers to building the forecasted pipeline mileage, the major challenges to implementing CCS are in public policy and regulation. Because a CCS industry can evolve in several ways, public policy decisions must address key questions about industry structure, government support of early development, regulatory models, and operating rules. Such issues must be resolved before necessary investments in a CCS pipeline system can be made. ICF was the contractor. A final report was issued in February 2009. Contact: Lisa Beal.

Parallel Construction of New Pipelines – White Paper- Primer on Best Practices (2008)

Sponsors: El Paso, Mears, Willbros, Alliance Pipeline, William Gas Pipeline, and Cheniere

In July 2007, the Foundation conducted a workshop on parallel construction practices. Workshops were held in April and June of 2008 and a draft of the Parallel construction guidelines was reviewed by Foundation and INGAA members. As a result, the "Guidelines for the Parallel Construction of Pipelines" were finalized in December after PHMSA's comments were incorporated. These guidelines identify the issues which must be considered by the new and existing pipeline companies in the planning construction, and execution phases and options for mitigating the constraints. They were distributed to Foundation and INGAA members and posted on the INGAA website in January, 2009. P-PIC was the contractor. Contact: Rich Hoffmann.

Workshops:

Safety Culture

Sponsors: Iroquois

The Foundation held a safety workshop in Houston on March 24, 2009. It included detailed discussions of the various programs and approaches at 5 INGAA members companies for developing and maintaining safety culture oriented programs. It was apparent what degree of sophisticated thought had gone into to treatment of accidents, preventing them, and the proper methods of responding to people who were involved, or even the cause.

Next the program turned to how Foundation construction and service providers viewed the importance of actions and support for safety oriented culture--basically that actions speak louder than words--in establishing a culture of safety. There is a strong need for contractor and operating company cooperation and in a viewpoint where efforts are focused on preventing the break/ incident more than responding to the event.

Summaries of the workshop and presentations are on the INGAA website- www.ingaa.org.

Next steps include development of a more detailed safety intervention workshop currently planned for early June, 2009 in Houston. Contact: Terry Boss

Building Pipelines Better-Continuous Improvement (OA/OC)

Sponsors: EN Engineering; Michel's

The workshop on **Building Pipelines Better --Continuous Improvement** was held March 25 and 26. A major consensus out of the workshop is the need for a pipe quality summit. The workshop featured discussions of the pipeline business environment, the construction process, issues encountered this year, PHMSA and FERC views and finally on the need for and benefits of teamwork in building safe, economical, and environmentally responsible pipelines that satisfies market needs.

Workshop participants held discussions in industry specific 'clique' groups to determine their individual topics of concern to their industry segment and then comingled or cross-sections group discussions were held. These discussions led to a compilation of the issues most important to the collective workshop population Schedule compression to landowner interaction were discussed. After all the discussions with 60 plus participants, the prime issues determined to be affecting quality construction and tracking back to a vibrant safety culture were:

- Pipe Quality;
- Inspector qualifications
- ROW width
- Post certification/post construction project review

Work groups were formed on each of these topics to begin work on Foundation guidance to member companies.

It was determined that a **Pipe Quality Summit** with strong representation from the Foundation's pipeline manufacturers, construction contractors, coating providers was needed and is a priority. A June Summit is planned. Contact: Terry Boss

STUDIES AND PROJECTS IN PROGRESS IN 2009

Transmission Industry Critical Skills Forecast Analysis (2008 – 2009)

Sponsors; Workforce Steering Team

The Transmission Industry Critical Skills Forecast Analysis identifies and prioritizes skills required in the transmission industry. This study is a follow on to our 2007 study "Securing Our Future", and examines the critical skill requirements for our technical workforce of the future. Interliance was selected to continue this workforce analysis and the deliverables will include a functional analysis, supply recommendations, and an action plan for increasing critical skills in the industry. The study examines the critical skills for the technical workforce in the transmission segment of the natural gas industry that is responsible for design, construction, operation and maintenance of pipelines, and considers pipeline, engineering and construction companies specific needs. The study presents a functional analysis, supply recommendations, and an action plan for increasing the critical skills in the industry.

The roll-out discussion of the INGAA Foundation study; "*Critical Skills Forecast for the Natural Gas Transmission Industry*" is scheduled for Wednesday April 15, 2009. The study is in the final draft stage and this discussion will give Foundation members an opportunity to review the finding and provide input to the final report. Contact: Lisa Beal

Impacts of Broken Canopies on Forest Habitat and Interior Species (2008)

Sponsors: NiSource; El Paso

This study will result in a report that will furnish an unbiased historic and scientific basis related to the quantifiable impacts created on forest interior plants and animals when a new energy corridor is created or an existing corridor is maintained in an open, non-forested manner. The study will review existing literature, particularly with respect to pipeline corridors. The study will attempt to validate the investigation by reviewing pre- and post – construction monitoring reports along pipelines constructed within the past 20 years. The report will be used for communication efforts and recommendations to the U.S.F&WS, FERC, State DNRs, environmental groups, landowners, policy makers, etc. The contract was awarded to GAI Consultants in June, 2008 who has reviewed past ROW studies and research on available data. A second report is under review by the steering committee. The report will be completed in May 2009. Contact: Rich Hoffmann

Primer on Construction Techniques (2008) **Sponsors: El Paso, Mears, Willbros, Alliance Pipeline, William Gas Pipeline, and Cheniere**

Participants in the July 2007 parallel construction workshop identified a need for a document (primer) that could be used to communicate the story of what construction entails to regulators, legislators, policy makers and landowners. The primer development effort would produce a stand-alone document and web material that could be used by Foundation members and INGAA staff in communicating with stakeholders about the process of interstate natural gas transmission pipeline construction. Representatives from the US Army Corps of Engineers, the Bureau of Land Management, the US Forest Service, and the FERC have been briefed on the this study effort and have agreed to participate. P-PIC is the contractor for this effort. The schedule is to have a draft for review by Foundation and INGAA members in April and for federal agencies to review it by end of May 2009. Contact: Rich Hoffmann.

Pipeline and Storage Infrastructure Projections Through 2030 (2009) **Sponsors: URS, Spectra Energy**

This study will assess, evaluate and quantify the natural gas pipeline and gas storage infrastructure that will be necessary to meet market demands through 2030. A number of factors are considered in the development of this study including the following issues among others:

- Carbon Emission Controls and Carbon Sequestration Requirements
- Personnel, Equipment, Material Resource Limitations
- Energy Policy Implications
- Political Impacts on Demand of a New Administration's Policies
- Potential Recessionary Impacts on Demand
- Potential Pricing Impacts on Demand
- Potential Impacts on Demand and Pricing of Alternate Energy Supplies:
 - Oil Sands
 - Shale Oil
 - Coal Gasification
 - Coal Seam Methane
 - Tight Gas and Shallow Shale Gas
 - Opening Up ANWR
 - Completion of the Alaska Gas & MacKenzie Delta Pipelines
 - Renewables - Winds, BioFuels, etc
- Rig Count Availability (or Lack Thereof)
- Global Energy Demand, e.g. China, India
- Power Generation Projections
- LNG Imports (or lack of...)

The draft report is nearing completion for review by the steering committee and results of the study are being presented by ICF at the Foundation's Spring meeting at Barton Creek. Contact: Rich Hoffmann or Terry Boss

The Interstate Natural Gas Facility Authorization Process, A Policy Review (2009) **Sponsors: Spectra**

Shifts in the source of natural gas supply and continued growth in demand for natural gas have caused a significant increase in the number of proposed new interstate natural gas pipelines and storage facilities. The combination of a tight supply/demand balance

for natural gas and the significant shifts in the sources of gas supply in North America has placed a premium on the market responsive approval and construction of natural gas pipelines and storage.

Large projects and multiple projects in an area can cause controversy. Already, one bill has been introduced in the U.S. Congress that would create a national commission to examine the adequacy of current federal policies governing the siting of natural gas infrastructure. It is clear that the authors of this legislation would prefer a centralized process in which the government identified market needs on a regional basis and the optimal locations for natural gas infrastructure to meet such needs.

This report:

- Describes the policy rationale and practical experience with the present process for reviewing and approving new interstate natural gas infrastructure – pipelines, storage and LNG facilities.
- Describes previous FERC/FPC models for gas infrastructure review/approval and the experience with such models.
- Does a comparative analysis between present and previous regulatory models, examining such issues as:
 - Economics; Public Safety; Environment; Land use planning; Long term energy planning; Timeliness of approval; Legal risks; and Capital attraction.

A draft report has been submitted and is being revised. Completion of the final report in April 2009 is targeted.

Contact: Martin Edwards

A Permit Program for Take of Migratory Birds (2009) Sponsors: NiSource; El Paso

The objective of this study is to develop a report to the INGAA Foundation that would support a petition to the U.S. Fish and Wildlife Service to develop a permit program for incidental take of migratory birds under the MBTA. A contract with Holland and Hart was just signed and the study is underway.

Currently Holland & Hart is in the first stage of the study - "Review of MBTA statute, treaties, regulations and policy." They are reviewing the MBTA statute and regulations for language authorizing the issuance of permits. Similarly, they are reviewing the treaties implemented by the MBTA and Executive Order 13186 for such language. Once this legal research is complete, Holland & Hart will review U.S. Fish and Wildlife Service policy concerning incidental take permitting of migratory birds and look at the scope and authority for the existing, limited MBTA permit scheme. This research is in an effort to find statutory and regulatory authority, and other legal support, for the creation of a permit program for incidental take of migratory birds under the MBTA.

Holland & Hart is still in the early stages of their research and is reviewing the existing MBTA statute, regulations and treaties, and the U.S. Fish and Wildlife Service policies on incidental take. They plan to complete the first stage of the MBTA study by the end of April. From there, they will begin assessing the feasibility of an incidental take permit program based on their research.

Contact: Lisa Beal

Natural Gas - the Key to a Successful U.S. Climate Initiative (2009) Sponsors: Dominion Transmission and Spectra Energy

This white paper was to highlight the clear value and benefits that natural gas offers in helping our country move toward a low carbon economy. Applying politically and technically viable assumptions for the development of needed technology and the construction of future nuclear and renewable energy sources, it will emphasize the necessity for, as well as the viability of relying on natural gas over the next fifteen years to meet climate change goals.

In light of the informational pamphlet entitled "Why an Interstate Natural Gas Pipeline?" prepared last fall by the Foundation's Government and Public Affairs task force, the current proposal is to simply modify and use that document to help deliver this important message. This will help policy makers recognize the necessity for and the value of natural gas in meeting climate change initiatives. Internal resources and the government and public affairs task force will complete the work. Contact: Lisa Beal

Workshops:

Agency Education (2009)

Sponsors: SUG, El Paso, Dominion

This will be a forum to provide an opportunity to share the INGAA Foundation issues and findings with the various stakeholders and regulatory agencies. This initiative would be designed to improve the understanding and communication of impediments creating difficulty in building the needed natural gas energy infrastructure with the overall intent to find collaborative solutions to these problems.

The scope of this initiative will be somewhat fluid as the efforts will need to be focused on the current issues defined by the Foundation membership. Deliverables will be periodic meetings with appropriate agency contacts who can provide direction and

assist in effectuating change. One specific effort will be presentation of the Primer on Construction to agencies. Other education opportunities must be developed. Contact: Rich Hoffmann

Stakeholder Outreach--Phase I (2009)

Sponsors: Spectra Energy and Dominion

Phase I - industry “best practices” workshop focusing on stakeholder outreach for each stage of the pipeline project including:

1. Initial Project Development: Preparation is critical to successful stakeholder involvement and notification. Prior to any public outreach, companies develop the potential project scope and timing, primary public messages, key stakeholder lists, as well as conduct local culture and political environment analysis.
2. Public Kick-off / Surveying: The overriding premise of all public initiatives is that any affected party will learn of a project from the company, not someone else. Develop appropriate outreach materials, establish landowner hotline procedures, prepare FAQs, identify all potential stakeholders and collect relevant information from public officials, landowners and interested parties.
3. Open Houses / Scoping Meetings: The primary goal is to build and maintain strong positive relationships with stakeholders through the effective use of transparent communication and active stakeholder participation. Consistent with INGAA’s “Open House Best Practices” (see attached), address activities in the preparation, execution and follow-up stages of the public meeting process.
4. FERC Filing: Stakeholders may impact the filing process in a positive or negative manner. Determine message, mode and timing for all stakeholder interactions, develop news releases for major milestones, and appropriately respond to stakeholders concerns.

The workshop’s final product will document specific industry “best practices” for each stage of the pipeline project, from initial conception to FERC certificate. A contractor will organize a one-day workshop, develop the agenda and facilitate the process. Future phases will identify gaps in current practices, opportunities for improvement, and review subsequent project development stages such as pipeline construction and ongoing operations. Contact: Rich Hoffmann

Developing a Workforce Strategy: The Knowledge Element

Sponsor: Foundation Workforce Steering Committee

The proposed study will implement select recommendations made in the 2007 study believed to be appropriate considering both the Foundation’s mission as well as the time period relative to the overall effort. Specifically, this study will establish a model for knowledge strategy development using the following key elements:

- People; Technology; Process & Governance; and Culture

In addition to a focus on these key elements, the study will include:

- Benchmarking of leading organizations in the area of knowledge management, with emphasis on strategy, implementation and best management practices;
- Survey of technology and the role(s) it plays in the overall strategy and deployment of knowledge management solutions;

Other key attributes of this proposal include:

- The project will build on phase II – critical skills analysis – by factoring in the definition and projection of critical skill needs, both the type of skill and quantity of such, into the overall knowledge management strategy development process guidelines to be provided.
- The steering committee is proposing that the Foundation approach other industry organizations, such as SGA and cooperate and potentially co-fund this effort
- The deliverables of this project will include:
 - Report; benchmarking analysis; Survey of technology; Recommendations; and an Action plan.

Work on this phase will begin when Phase II on critical skills is completed. Contact: Lisa Beal

THE INGAA FOUNDATION, INC.
PLANNING AND STUDIES COMMITTEE MEETING
2010 Study Proposal Development Process

This year we are implementing improvements to the process for developing studies ideas and study proposals for the 2010 study year. First, the Committee Chairman assembled a Planning and Studies Leadership Committee to discuss and develop the broad categories of study areas and issues affecting the industry.

At this spring's planning and studies meeting, we will use break out groups to develop recommendations/ideas for specific studies in the categories below. There will be tables made up of 10-12 people. Each table will have a facilitator to help the group consider potential study and workshop projects in all 6 categories. Then, all meeting attendees will reconvene for a facilitated discussion of the results and select potential studies to be sponsored and further developed into a proposal prior to the August Planning and Studies meeting.

In August, the meeting will focus on discussing these proposals and selecting those which will be voted on at the Annual Meeting in November, 2009 for approval as the Foundation's 2010 study program.

To summarize, the new process consists of the following steps:

- Planning and Studies Leadership Committee Develops High Level Study Topics
- Facilitated Breakout Discussions of Specific Study Ideas in Following Categories:

1. Demand / Supply

Projects that explore issues related to the industry's interests in market growth, threat of demand destruction, supply availability, infrastructure needs, and accessing supply on public lands. Alternative energies- pros/cons, keying off natural gas being green.

2. Climate Change

Projects that explore the impacts, opportunities, and potential solutions to climate change and climate change related policies on natural gas pipelines and their service providers. Examples include, engine emissions, Greenhouse gas emissions and reporting, role of natural gas, carbon markets, and equipment change-outs.

3. Safety and Operations

Projects that explore issues related to the industry's interests in construction safety, public safety, pipeline integrity, pipe quality, operational/engineering/environmental safety, security, and R&D matters. Examples include safety culture, employee safety, damage prevention, and monitoring the parallel construction guidelines for potential updates.

4. Infrastructure Development

Projects that explore issues related to the structural elements that provide the framework supporting the entire natural gas pipeline system. Examples include the FERC Process, permitting, agency coordination, scheduling, and stakeholder outreach / conflict resolution.

5. Construction and ROW Development

Projects that explore issues related to pipeline construction and right-of-way maintenance, including vegetation control, hardwood matting, landowner issues, communication, HDDs, and technology including GIS.

6. Other

Projects that do not fall into any of the other categories but would advance the mission of the Foundation: Examples include: capital constraints, workforce availability, workforce competency, natural gas brand message development, promotion of natural gas industry.

- Facilitated Group Discussion of Recommended Study Topics
- Selection of Topics Recommended for Further Development for the August Planning and Strategy Meeting

The INGAA Foundation Inc.

Mission Statement and Objectives

We facilitate the efficient, cost-effective and environmentally responsible construction of new natural gas pipelines and the safe and reliable operation of the North American natural gas pipeline system in order to advance the delivery of natural gas for the benefit of the consuming public, the economy, and the environment.

The Mission is further interpreted and appropriate activities for the INGAA Foundation are defined by a set of objectives that the Foundation will pursue:

- Identify and work to remove impediments to the construction and operation of natural gas pipelines.
- Influence legislation and regulation on issues of importance to the natural gas pipeline industry by providing analysis in support of the industry's advocacy.
- Provide opportunities for Foundation members to become better-informed advocates for the natural gas pipeline industry.
- Enhance cooperation in fulfilling the Foundation's mission by facilitating communication among Foundation members.
- Enhance the public's perception of natural gas pipelines as a safe, reliable and environmentally preferred form of energy transportation.
- Analyze and disseminate information about the natural gas supply, demand, and utilization trends in North America and abroad that may affect demand for natural gas infrastructure and the ability to provide materials and services for pipeline construction, operation, and maintenance.

Study Selection Criteria

1. Is this work compatible with our Mission and Objectives?
2. Is the interest of the membership in this work sufficiently broad?
3. Is this new information?
4. Is this timeline for benefits reasonable?
5. What will we do differently as a result of this project?
6. Is the Foundation the right organization to perform this work?
7. Is the cost of this project an appropriate scale for the Foundation?

STUDY PROPOSAL FORM

Title of Project Proposal

Sponsor: *What organization will take lead responsibility for project completion?*

Steering Committee: *Who else will work on this project?*

Problem Statement: *Describe the reason this study is needed.*

Proposed Effort: *Describe the scope and deliverables for this project.*

Expected Audience: *Describe who will use the study.*

Outreach: *How will the results be communicated?*

Benefits to the Foundation Membership: *How will the project help the membership?*

Possible Contractors: *Who could execute the work?*

Estimated Cost: *What is the anticipated cost?*

Desired Completion Date: *When does the project need to be completed?*

INGAA Foundation Study Program

I would like to participate on the following Steering Committee(s):

Study Title(s)

Date _____

Name _____

Title _____

Company _____

Phone _____ Fax _____

E-mail _____

Please return to:

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