

THE GAS INDUSTRY STANDARDS BOARD (AN EXAMPLE OF A PUBLIC-PRIVATE PARTNERSHIP)

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The Gas Industry Standards Board (GISB) has been fortunate to develop public-private partnerships with several agencies, and these partnerships have contributed to GISB's credibility and its success. GISB strives to be responsive to the industry and government agencies through the efforts of its volunteers. Without the commitment of the members and interested industry participants, we would not have developed public-private partnerships that have evolved over the years to support GISB as an effective mechanism for setting industry standards.

GISB has, in its six years of existence, created and modified over 400 business practice standards, more than 40 standard transactions, more than 70 interpretations and 5 contracts and agreements which are compiled into six standards manuals. The manuals are comprised of thousands of pages of business process descriptions, file layouts, data dictionaries, and examples to accompany the standards. Version 1.4 is the latest version of the standards manuals, which was published in late 1999. Our standards have been referenced by the Federal Energy Regulatory Commission, (the Commission), and in being referenced, the orders demonstrate an active public-private partnership which has supported GISB activities. Below are some excerpts from its orders.

- **The Commission justified its reliance on GISB standards in Order No. 587-K¹:**
"GISB approved standards under its consensus procedures. As the Commission found in Order No. 587, adoption of consensus standards is appropriate because the consensus process helps ensure the reasonableness of the standards by requiring that the standards draw support from a broad spectrum of all segments of the industry. Moreover, since the industry itself has to conduct business under these standards, the Commission's regulations should reflect those standards that have the widest possible support. In § 12(d) of the National Technology Transfer and Advancement Act (NTT&AA) of 1995, Congress affirmatively requires federal agencies to use technical standards developed by voluntary consensus standards organizations, like GISB, as a means to carry out policy objectives or activities."
- **and in Order No. 587-A²:**
"Agencies rely on industry standards for much the same reasons the Commission has chosen

to give GISB's standards great weight. Industry possesses specialized knowledge and expertise in the relevant technical areas, and the procedural process of consensus standards development helps ensure the process is open to all interests and that the standards reflect a consensus of these interests."

- **The Commission has on occasion requested that GISB provide status reports to monitor GISB's progress, as is seen Order No. 587-E³:**
"Given the importance of developing standardized communications, the Commission expects GISB and the industry to move forward rapidly to complete the standardization process so that the Commission can substitute standardized communication modalities for the requirement for pipelines to maintain EBBs. The Commission requests a report by GISB, and others who may wish to comment, by September 1, 1997 on the extent of their progress and the contemplated completion date."
- **The Commission has provided guidance through stated policy to allow GISB to develop necessary standards, as is seen Order No. 587-F⁴:**
"In addition, the Commission is providing policy guidance on other issues to eliminate disputes within GISB over these issues and thereby assist GISB in developing implementation standards in these areas."
- **and went further to state⁵:**
"With the Commission's resolution of the fundamental policy issues, GISB should be able to formulate the standards necessary for implementing the policies addressed in this NOPR."
- **and⁶:**
"In stepping in to resolve the disputed issues, the Commission is in no way seeking to derogate GISB's role or its accomplishments. GISB's ability to develop a consensus on the large number of standards it has adopted is a signal achievement and testament to the industry's ability to work together to solve mutual problems. However, it would ignore reality to assume that all factions will be able to agree on every issue, particularly when those issues involve regulatory policy issues. By resolving these issues, the

Commission is not seeking to replace GISB, but rather work together with GISB and the industry to develop policies and standards necessary to increase the efficiency of the pipeline grid.”

- **The Commission has given the industry and GISB the opportunity to set standards before requiring implementation of a Commission requirement, as is seen Order No. 587-G⁷:**

“The Commission agrees that standards are needed for this notification process to operate efficiently. In particular, a data set will be needed for those customers relying upon EDI communication with the pipelines. Therefore, the Commission will defer implementation of this requirement until after the necessary standards are developed by GISB.”

- **The Commission has considered GISB’s ability or lack thereof to reach industry consensus when determining if a regulation should be proposed, as is seen Order No. 587-G⁸:**

“[On title transfer tracking] If GISB reaches consensus that pipelines should be required to provide this service, the Commission will give that agreement great weight in later considerations of the issue.

Absent a consensus position from GISB, however, the Commission finds insufficient justification for proposing a regulation requiring pipelines to perform title transfer tracking services.”

- **And last, but certainly not least, the Commission has supported implementation schedules provided by GISB regarding its standards, as is seen Order No. 587-I⁹:**

“The Commission finds the timetable for phased implementation laid out by GISB is reasonable and has every confidence that the industry can meet those targets. The Commission fully expects pipelines to implement the Internet transition according to this schedule. In setting out its implementation schedule, GISB has expressed concern about potential need for regulatory approval. The Commission emphasizes that pipelines need not and should not wait or Commission adoption of the standards to begin implementation.”

AN INTRODUCTION TO GISB

The Gas Industry Standards Board (GISB) is the natural gas industry’s response to the dramatic developments, both regulatory and technological, that have transformed the energy industry and its marketplace. GISB’s mission, as its charter states, is “to develop and promote standards to simplify and expand electronic communications, and to simplify and streamline business practices that will lead to a seamless marketplace for

natural gas. These standards will assist the natural gas industry in improving customer service, enhancing the reliability of natural gas service and increasing the competitiveness of natural gas markets.”

EXECUTIVE SUMMARY

In its six years of existence, GISB has proved its value to the natural gas industry. The standards it has developed are credited with having helped to transform the gas marketplace, making it far more competitive, transparent and dynamic. GISB’s success is the result of:

- A carefully developed organizational structure that has ensured that even the smallest segments of the industry have a voice and vote while protecting the rights of all industry members.
- Balanced voting procedures that promote consensus and inclusivity and prevent the “tyranny of the majority.”
- An open process that guarantees that everyone has the right to be heard.
- A public-private partnership between GISB and government organizations, including the Federal Energy Regulatory Commission and the Department of Energy.
- The provisions of GISB’s charter preventing the organization from engaging in advocacy activities, thus preserving GISB’s role as an honest broker able to resolve conflicts.
- GISB’s membership-driven focus – all activities are performed by GISB volunteers. The staff provides administrative support. If the volunteers do not support a particular activity, it will not be pursued.

From a standards perspective, GISB has in its short history has released five versions of standards manuals — the current version is 1.4. The organization has adopted more than 400 business practices, more than 50 interpretations and more than 40 transactions have been standardized for electronic communication via electronic data interchange (EDI) using the Internet, interactive web sites, and flat file transfers. The organization has also adopted five standard or model agreements covering short-term purchases and sales of natural gas, operational balancing agreements, day trades, funds transfer agency agreements and trading partner agreements. Procedures are in place to quickly maintain these standards to respond to the needs of the marketplace. The standards are available publicly through the GISB home page and are published in a common format. They are taught through regularly offered courses. A certification program also has been

put in place for the standards, beginning with version 1.3.

Standards applicable to federal jurisdiction have been adopted by the Federal Energy Regulatory Commission. The National Energy Board in Canada and the Comision Reguladora de Energia in Mexico have monitored our efforts, as have government agencies from Argentina, Australia, Bolivia, Chile, China, Colombia, Germany, Great Britain and Yugoslavia. Active in standards development, the U.S. Department of Defense has participated in the development of security standards, which have been reviewed by Sandia and Lawrence Livermore National Labs.

The organization has two governing bodies: a Board of Directors and an Executive Committee. These bodies are balanced across the industry segments with equal representation. The five industry segments are pipelines, producers, services, distributors and end users.

The work has been accomplished through the efforts of hundreds of volunteers from the industry – and participation is not limited to only members. There have been as many as 30 active subcommittees and task forces addressing standardization issues. Membership in GISB is not required to be active in these subcommittees and task forces. Participation can also be via conference calling or submitting comments – to reduce the cost of participation. Voting in the subcommittee can either be simple majority or balanced by industry segment. All meetings are open to any interested party. All work papers, agendas and meeting announcements are published on the GISB home page. The board addresses strategic, financial and governance issues, including adoption of the annual plan, budget, and any changes to the certificate or bylaws. Voting at the board level is simple majority with the exception of governance issues, which require 19 positive votes out of a possible 25 including at least two positive votes from each industry segment. On governance issues, board actions require membership ratification at a level of 90%. Those members whose chose not to return a ballot vote in favor of the board action.

The Executive Committee addresses standards creation and modification according to the GISB annual plan. Voting at the Executive Committee level is simple majority except for adoption of standards and interpretations, which require 17 positive votes out of a possible 25 including at least two positive votes from each industry segment. The adoption of standards and interpretations also require membership ratification. Affirmative votes are required from 67% of the members returning ballots in order to pass the Executive Committee actions.

Any party, regardless on membership status, can request that a standard be created, modified or interpreted. The request is reviewed first by a triage group, who recommends a disposition on scope, committee assignment and priority to the Executive Committee. The

Executive Committee acts on the recommendation from the triage group, transferring the request to the appropriate subcommittee for action. That subcommittee, with possible coordination from other groups, prepares a recommendation of a proposed standard, modification or interpretation. The recommendation then goes out for industry comment for a period of thirty days. The comments are posted on the GISB home page and forwarded to the Executive Committee for consideration. The Executive Committee at its next meeting considers the recommendation and comments and votes on the proposed standard. Assuming the proposed standard is adopted, it then goes out for membership ratification. Assuming membership ratification, it is listed as a final action, available publicly on the GISB home page, and is scheduled for publication in the next release of the standards.

With the above described organizational structure, governance process and defined voting for decision making, GISB has been effective in addressing controversial standardization issues through a broad based cross industry mechanism. GISB provides the ability for all interests to be involved in the standards making process with an equal voice, which has produced a strong work product widely accepted in the industry.

GISB'S EARLY HISTORY

Although GISB received its charter in 1994, its story actually began in 1992, when the Federal Energy Regulatory Commission (FERC) issued Order 636. In that order, FERC required interstate pipelines to post information about their systems, including service available through capacity-release transactions and firm and interruptible capacity available directly from the pipelines, on electronic bulletin boards (EBBs). This led the industry to begin discussions on how electronic communications systems would work in the fast-developing marketplace for natural gas.

In 1993, five working groups were established to iron out the details of EBBs. The groups operated under FERC auspices, with participation by FERC staff and representatives of all segments of the gas industry. The working groups resolved a number of technical issues, including an agreement to base gas industry standards on the already established electronic data interchange protocols. But broader issues remained unresolved. For instance, should FERC require a common set of electronic communications standards, encourage voluntary standards, or permit each pipeline to use its own system? If there were to be standards, should they be set by FERC, the industry, or a third party?

FERC attempted to resolve these and other issues by consolidating its working groups and instructing them to continue to seek solutions to the remaining problems. Meanwhile, the Department of Energy (DOE) was developing a strategy calling for the development of a natural gas standards board, and a series of open

discussions on standards issues was initiated in 1992 by the Natural Gas Council, an industry organization founded by the American Gas Association (AGA), the Independent Petroleum Association of America (IPAA), the Natural Gas Supply Association (NGSA) and the Interstate Natural Gas Association of America (INGAA).

The discussions by the council and FERC—which frequently involved the same industry participants—led to the general acceptance of the concept of a board to develop and maintain the voluntary standards on electronic information exchange and electronic communications necessary to promote reliable gas service. GISB was not the first gas industry effort on electronic information standards. During its developmental stages the organization drew heavily on the experiences of those who had participated in the American National Standards Institute's gas quality and measurement standards effort, the American Petroleum Institute and AGA committees that had worked on pipeline tariff issues, GAS*FLOW, and the Council of Petroleum Accounting Societies. The nascent organization also received support from standards advocates outside the gas industry. DOE's Domestic Oil and Gas Initiative, for instance, acknowledged GISB's importance to the industry. In addition, the Office of Management and Budget encouraged GISB's development by supporting the general policy that voluntary standards should be incorporated into regulations if the standards are consistent with the public interest.

GISB'S GOVERNANCE

Mindful of the gas industry's history of divisiveness, GISB's founders carefully crafted a membership-driven organizational structure that ensured that even the smallest segments of the industry received a voice and a place at the table while protecting the largest segments when make-or-break issues arose for them. To ensure that all of the gas industry's business segments were represented, five GISB membership categories were established: LDCs (local distribution companies, or utilities), service providers (marketers, financial services companies, consultants, law firms, software developers and other businesses), producers, pipelines and end users. Chosen to govern the new organization were two 25-member governing boards with five members from each segment: the Board of Directors, with responsibility for approving the budget, initiating and recommending charter changes, and maintaining contacts with the industry and government agencies; and the Executive Committee, which was given the responsibility for developing the standards themselves. (Later, numerous working groups, subcommittees and task forces were formed to assist the Executive Committee, and an Advisory Committee made up of regulatory and legislative representatives was created.)

GISB's voting rules ensure that all decisions are the result of a genuine industry consensus. Prospective standards

must get at least 17 affirmative votes in the Executive Committee, and there must be at least two affirmative votes from each segment. Standards must then be ratified by the GISB membership; a 67 percent affirmative vote of those submitting ballots is required for a standard to get final approval. On the Board of Directors, changes in bylaws or articles of incorporation need at least 19 affirmative votes, with at least two affirmative votes from each segment. Governance changes must also be ratified by membership, requiring a 90% affirmative vote – with those members who choose not to return a ballot by proxy voting in favor of the board action. GISB is committed to openness and the broadest possible industry participation. All meetings are open to the public, and while GISB's dues have been intentionally kept at a reasonable level to encourage companies to join, even nonmembers are welcome to propose and comment on prospective standards and to vote on all but Board of Directors, Executive Committee, and standards ratification initiatives. GISB maintains a permanent office in downtown Houston; its staff has been kept small throughout its existence and currently consists of three employees.

GISB'S FUNDING

With the exception of its first year of operations, GISB has had expenses of less than one million dollars. The funding in the first year came primarily from founding sponsors. In the subsequent years, funding is primarily from membership dues. Membership dues are assessed at \$5000 per company membership. Any employees of the company are considered GISB members. The membership does not apply to affiliates or subsidiaries of the member company. Other funding sources include training courses, the annual meeting, certification, advertising and sales of work products. These other funding sources make up approximately 15% of the revenue stream.

GISB'S EARLY ACCOMPLISHMENTS

Following its official start date of Sept. 1, 1994, GISB spent its first several months developing a vision, mission statement and strategic intent, as well as objectives and action items for its first year of operation. Officers were elected, membership materials were developed, a membership drive was launched, and working committees and procedures were established. One of GISB's first standards-related achievements was the completion of a model trading-partner agreement for companies to use in exchanging business documents by means of electronic data interchange (EDI). The agreement is intended to serve as the contractual foundation for electronic commerce within the gas industry. It does not define business practices, which trading partners must agree to in individual cases depending on their own particular circumstances. Rather, it defines the electronic methods for exchanging information. All parties to the agreement have the same rights and obligations with respect to transactions

completed electronically that they would have if the transactions were carried out by conventional paper-based means. A second early GISB achievement was the forging of an agreement with GasEDI, a Canadian EDI technical organization, to develop and maintain common North American gas information standards. The agreement was intended to help ensure the seamless movement of natural gas across the U.S.-Canadian border and to improve working relationships among gas industry participants in both countries.

GISB's first standards, on capacity release, were approved by the organization's membership and put into effect in August 1995. The standards were based on the work of FERC's EBB working groups and included those formally adopted by the commission in Order 563. GISB incorporated those standards, developed complete and easy implementation procedures and examples, and expanded the definition of the information requirements. The chairman of GISB's Executive Committee called ratification of the standards "an important milestone both for GISB and the natural gas industry." The following month, GISB members approved standards for nominations, confirmations and scheduled volumes. The standards were based on GAS*FLOW implementation guides. (Earlier in the year, GAS*FLOW had voted to become part of the GISB organization.)

With its first standards in place, GISB faced an important decision. Its original charter allowed the organization to create voluntary gas industry standards only in the area of electronic commerce and contained a sunset provision that allowed members to bring the organization to a conclusion in two years—on Oct. 1, 1996—if sufficient progress was not made. (The intention behind the sunset provision was to ensure that the organization didn't outlive its usefulness.) But many in the industry believed the limited scope and lifespan of the organization hampered its effectiveness by keeping some companies from joining and leading some regulators to believe that the gas industry wasn't serious about standardizing and facilitating electronic commerce.

In October 1995, during GISB's first Annual Meeting held in Baltimore, GISB's Board of Directors voted to expand the organization's scope to allow it to adopt voluntary standards on the gas industry practices that relate to streamlining the gas marketplace. The board also voted to extend GISB's sunset date to December 31, 1998. (The sunset date has since been extended at least until December 31, 2001.)

RESPONDING TO FERC

While GISB was justifiably proud of the progress it had made in less than a year's time, expectations on the part of regulators and some members of the industry had been quite high. GISB's critics became increasingly vocal about their view that the organization wasn't moving quickly and boldly enough. At a technical hearing on EBBs held by FERC in September 1995, Commissioner

Donald Santa said the electric industry's progress on electronic communications should be a "warning shot across the bow" for natural gas. FERC Chair Elizabeth Moler suggested that the commission would set deadlines for electronic communications standards if the industry did not do so on its own. And while representatives of AGA, INGAA and NGSA endorsed GISB as the vehicle for industry consensus on electronic communications issues, the endorsement wasn't unanimous. Some large producers expressed concern about the pace of change in the industry, while IPAA testified that small producers were being hurt in the current gas market and urged that FERC mandate standardization of electronic communications.

In an Oct. 24 speech to GISB's First Annual Meeting, Commissioner James Hoecker told the industry that "open access with imperfect communications and flawed data is suboptimal. And it needs fixing." As regulators, Hoecker said, "when we see a key piece of the competitive puzzle missing, we instinctively want to step in and fill in the blank spots ourselves. It's in the nature of what we do and who we are." Hoecker also urged GISB not to "set standards at the level of the lowest common denominator" in an attempt to please everyone, noting that while he admired GISB's "inherent respect for minority views," democracy "must be rationed to avoid gridlock. A good decision today is usually better than a perfect decision next year."

The other shoe officially dropped a day later, when FERC issued an advance notice of proposed rulemaking (ANOPR). The ANOPR set a March 15, 1996, deadline for comments "containing detailed proposals for the standard set of information [data elements] that the commission should require all pipelines to use" in implementing the 10 high-priority data requirements already identified by the commission, "as well as for standard nomenclature and standards for any associated business practices and procedures." FERC said the proposals should be detailed enough to explain the standards and should contain a schedule so that the standards could be implemented by Jan. 1, 1997.

While FERC said that it expected GISB "may become a forum through which these industry efforts can be coordinated," the commission made it clear that it was ready to step in if the industry failed to take charge of its own destiny. FERC warned, "Even in the absence of a consensus proposal from GISB, the commission intends to move ahead with this proceeding."

To an extent, GISB had anticipated FERC's action on standards by forming a Business Practices Subcommittee to consider the new issues that had been placed on the table when the organization voted to expand its scope beyond electronic communications to include the industry's underlying business practices. But the aggressive timetable set by the commission presented GISB with its most formidable challenge to date. It required an effort that has been accurately

described as “Herculean,” but GISB managed to meet FERC’s deadline. Five task forces—on nominations, confirmations and scheduled quantities; flowing gas; invoicing; electronic delivery mechanisms; and capacity release—met for 45 of the 53 workdays between Nov. 16, when the drafting effort began, and Feb. 5, when it ended. The more than 500 volunteers involved in the effort conducted five industry surveys, produced over 10,000 pages of notes and work papers, identified 190 issues out of thousands of proposals and reached 248 agreements. Volunteers canceled family holiday trips, endured unscheduled layovers and endless airport delays because of the near-record blizzards, and allowed their own work to pile up on their desks so that they could devote full time to the GISB effort.

In 25 hours of meetings in the Commission Meeting Room at FERC on March 7 and 8, the GISB Executive Committee took separate votes on all 248 agreements reached by the task forces. The committee approved 140 standards and rejected only 28. Eighty-six items were either omitted because they duplicated other proposed standards or were deferred for later consideration. In a memorandum sent to committee members after the meeting, the Executive Committee chairman said, “By any measure, this is a remarkable accomplishment. With your leadership, our industry has taken a giant step towards a more user-friendly, customer-responsive, seamless production, transportation and distribution system.”

GISB’s massive effort received official endorsement on July 1996, when FERC issued Order 587, accepting the 140 business practice standards submitted by GISB. FERC said GISB’s standards “regularize the means by which the entire industry will conduct business across the interstate pipeline grid” and declared that GISB’s standards “represent a formidable step towards improved efficiency and competitiveness in the gas industry.”

A CONTINUOUS IMPROVEMENT ORGANIZATION

GISB didn’t rest on its laurels after Order 587. GISB’s standards process, while it provides a means of achieving consensus even on very difficult issues, does not guarantee success in every instance, so the organization worked toward solving some of the problems that remained after the 140-standards push. It also worked to streamline the process of standards maintenance—the essential but unglamorous task of ensuring that existing standards are free of errors and work the way they are intended, and of accommodating requests for changes, additions and exceptions. A GISB Executive Committee chairman called GISB a “continuous improvement organization,” and GISB has taken that description seriously.

To create the standards and maintain them, GISB has worked with several other standards organizations. GISB standards have been adopted by the American National

Standards Institute (ANSI). GISB is a standards development organization member of the ANSI, and a member of its X12 subcommittee. Data Interchange Standards Association (DISA) is the secretariat for the X12 subcommittee; and with GISB working with other standards groups through DISA, GISB has had several of its X12 transactions adopted.

Most recently, GISB’s work has been directly tied to the growth of electronic commerce and, more specifically, the Internet, a development that is transforming all industry. While estimates of the impact of this development vary dramatically, they all agree that revenue generated through electronic commerce is substantial and increasing. International Data Corporation reported that electronic commerce revenues in 1997 were \$12.4 billion and will grow to \$133 billion in 2000 and \$425 billion in 2002. The company also estimates 170 million web users in 2000 and 320 million web users in 2002. This tremendous growth underlines the Internet’s pervasiveness and convenience.

In Order 587-B, FERC declared that GISB had developed a communications standard that is “at the forefront of the use of Internet-based protocols to conduct business transactions.” It added that the protocols developed by GISB “promise to provide the gas industry with the ability to use automated computer-to-computer communications to more efficiently conduct crucial and time-sensitive business transactions, such as nominating and confirming daily gas flows, as well as invoicing and payment.” The protocols “also carry the potential for enhancing the effectiveness of communication between all members of the gas industry, including confirmations between pipelines and upstream point operators, confirmations among upstream and downstream pipelines, as well as business transactions involving local distribution companies, marketers and producers,” FERC said.

Having satisfied itself that GISB and the gas industry had made adequate progress on Internet communications protocols to take matters to the next stage, FERC in 1998 issued Order 587-G, which called on pipelines to provide all electronic transactions with customers over the Internet. It also said pipelines could provide interactive sites on the World Wide Web, but they were not required to do so. The order called on GISB to standardize the “look and feel” of pipeline interactive websites.

A special GISB task force responded to FERC’s order by calling for a one-year staggered implementation schedule that would conclude in June 2000. The task force chairman declared that “all industry, especially the natural gas industry, are at the beginning of a profound change in how we implement electronic commerce—a change that will have a dramatic impact on technologies, value propositions, design and—especially—business models. The natural gas industry is one of the first industries to recognize the added value of standardization and electronic commerce standards.”

The task force generated 87 standards covering the transition to the Internet in the course of 25 days of meetings held from August 1998 to July 1999. The standards were adopted by GISB and incorporated in Version 1.4 of GISB's standards later that year.

GISB has also paid attention to the Internet security. Through the efforts of DOE, a GISB security task force met with officials of the President's Commission on Critical Infrastructure Protection and Sandia and Lawrence Livermore National Laboratories. They reviewed GISB's draft Internet standards and helped identify low-cost, commercially available products to ensure against cyberthreats as the gas industry makes the transition to the Internet. The most recent development in this area has been DOE's funding of a \$100,000 project, coordinated by Sandia, to develop a set of secure, safe and affordable electronic commerce guidelines for Internet Web servers in the gas industry. The project's final report will provide recommendations on a scalable Internet system architecture using appropriate electronic commerce business standards as well as recommendations and documentation on a written set of secure electronic guidelines for conducting natural gas business.

The movement of the gas industry to the Internet has also resulted in a proliferation of software products designed to help companies do business electronically. As a result of electronic commerce and standardization, more analysis tools are being developed to support gas business decisions. Standardized information has made possible the increased availability of shelfware or "shrink wrap" products, a great convenience for companies that otherwise would have had to develop these tools on their own. This has increased reliability in the marketplace and provided more choice to market participants as they determine how to transact business electronically. At the request of member companies seeking confirmation of vendors' claims that such products were compliant with GISB standards, GISB instituted a voluntary certification program in 1999 allowing companies that proved their products complied with the current version of GISB standards to display a special logo for a two-year period. Companies seeking certification must choose from a list of qualified certifiers provided by GISB.

Another Internet issue currently on GISB's agenda is interoperability, which refers to the ability to go from website to website without experiencing problems caused by conflicts and incompatibilities in the software tools that were used to put the sites together. As business dependence on the Web increases, as websites proliferate, and as the many tools available for website creation undergo increasingly numerous and complex revisions, interoperability problems become almost inevitable. Because GISB's focus for the foreseeable future will be on developing and perfecting standards for Internet-based commerce in energy, it has become evident that GISB must avoid causing interoperability problems by setting specifications that lead to conflicts

and incompatibilities. GISB must also seek to resolve conflicts caused by the programs and protocols that GISB member companies must use to do business electronically. Some states, for example, have adopted technical guidelines that conflict with those implemented by other states. And the uneven pace of state-level gas and electric deregulation is exacerbating this problem. The real concern is that an e-commerce system could develop that requires two computers—one for natural gas and one for electricity—for every state in which a company wants to do business, a circumstance that would be a major blow to the converging gas and electric marketplace.

GISB STANDARDS PUBLICATION PROCESS

GISB has in its short history published five versions of standards manuals – the current version is 1.4. The organization has adopted more than 400 business practices, more than 70 interpretations and more than 40 transactions have been standardized for electronic communication via electronic data interchange (EDI) using the Internet, interactive web sites, and flat file transfers. The organization has also adopted five standard and model agreements covering short-term purchases and sales of natural gas, operational balancing agreements, day trades, funds transfer agency agreements and trading partner agreements.

Leading to this publication activity, GISB follows a rigorous process of documentation. From the receipt of a request from any interested party, which would modify an existing standard or create a new one, to its publication in a standards manual – all work products are available on the GISB home page and can be easily tracked via the request number. Similarly, from the identification of standards development in the annual plan as an action item to the completion of the action item resulting in standards published in a standards manual – all work products are available and can be tracked through the action item. This tracking includes all minutes, agendas, attendance at meetings, work papers used in the meetings, voting records, Executive committee voting records by member, industry comments, transcripts of the Executive Committee meetings, final actions of the Executive Committee, member ratification results and the standards manuals themselves. These materials are posted on the GISB home page with the exception of the transcripts, which can be ordered from the transcription service.

The standards manuals follow the format of ISO 9000 manuals and are quite comprehensive. Each manual follows the same format, including the standards themselves, the business process descriptions, the transactions, data dictionaries, paper examples, and examples in X12 EDI format. From one version to subsequent version on the standard manuals, the requests are noted which comprised the changes. Cross-references are provided to indicate which standards change for a given version and which have been interpreted.

These processes are followed to ensure that a clear record exists for each request received and each standard created or modified. The record is used when a request for interpretation is received, or to respond to questions. The record provides a comprehensive audit trail of all GISB actions taken on requests received and annual plans approved by the Board.

GISB ACTIVITIES IN 2000

All GISB standards efforts are governed by the annual plan. The annual plan is approved by the Board of Directors, and only the Board of Directors can change it. The plan is then used as a tool to direct the work of the Executive Committee and its subcommittees and task forces.

GISB's annual plan for 2000 puts the compatibility issue high on the organization's agenda. It calls for a survey of member companies on interoperability, work to determine the extent to which GISB standards should be compatible with AS2 standards for business-to-business communication over the Internet, and review and modification of GISB Web standards based on interoperability issues. Other mechanisms for communication such as Extended Mark-up Language (XML) are also being investigated to provide flexibility to companies as they implement GISB standards. Also prominent in the annual plan are security issues, with the agenda including development of standards and modification of existing standards based on DOE's Sandia study.

The recently issued FERC Order 637 should also direct GISB's attention to modifications of the capacity release transactions, implementation of title transfer tracking and imbalance netting and trading standards. It is a recent addition to the 2000 annual plan, which was added during the Board meeting held on March 2, 2000.

Contracts issues will also occupy GISB's attention during 2000. The annual plan calls for modifying the short-term base contract as the result of several years' experience, developing an electronic version of that contract, and developing a standard model long-term base contract. The plan also calls for a program of standards maintenance, standards interpretation, and technical work.

GISB PRINCIPLES

Both because of conscious decisions made by GISB's founders and as the result of actual experience over its six-year history, a number of principles have developed that characterize GISB's operations and governance. These include:

Public-Private Partnership: In a 1996 interview in GISB Review, the organization's quarterly newsletter, James Hoecker, who had become FERC's chairman, described the relationship between FERC and GISB this way: "The

characterization I would give is a public-private partnership. Setting the terms and conditions of service is a matter of jurisdictional interest for this agency under the Natural Gas Act, and we have, in the process of helping to restructure the services of interstate pipelines, taken a great deal of interest in how interstate pipelines provide open and nondiscriminatory access to their facilities and their services. I think it's the involvement of all elements of the industry in helping us collect data and resolve some very arcane and technical operational issues that gives GISB its enormous value. It would require an enormous resources commitment on our part to address those issues and, frankly, it would be very difficult with even the best technical staff here at the agency to comprehend all the business implications of these decisions." The partnership envisioned by Chairman Hoecker has, if anything only strengthened as FERC has incorporated the vast majority of GISB's standards into the commission's regulations. The relationship between GISB and DOE, one of GISB's founding members, is another example of this partnership. DOE's assistance has been invaluable to GISB in a number of ways. And GISB has made it a point to seek partnerships with state regulatory bodies as well, both formally—state regulators serve on the GISB Advisory Committee and have addressed numerous GISB meetings—and informally.

Inclusivity and Balanced Voting: At a GISB-facilitated meeting held at DOE headquarters to discuss the need for an organization to set retail gas and electric standards, an end user member of GISB's Executive Committee said that if standards are set by a simple majority rule, "What happens to the end user? We're going to get outvoted every time. But we are your customers. Every segment deserves a voice and a vote." GISB's requirement that standards and other matters must have at least two votes from each segment to pass allows each industry segment to exercise a veto when necessary, but the five-member-per-segment rule on both the Board of Directors and the Executive Committee ensures a level playing field for everyone. This structure has helped GISB achieve consensus on numerous difficult issues, greatly decreasing the rivalries and disagreements that characterized the natural gas industry prior to GISB's founding.

No Advocacy: GISB's charter forbids the organization from engaging in advocacy activities. In this respect, its function is quite different from that of industry trade associations, which are expected to plead their members' cases before legislative and regulatory bodies. Rather than restricting GISB, the rule banning advocacy enables the organization to be an honest broker, resolving conflicts over how business processes that involve the entire industry should be standardized. Whether these conflicts are within segments, between segments or across the entire membership, GISB's procedures help the organization achieve agreement and consensus. GISB encourages trade associations to be actively involved in its activities as nonvoting members, but

GISB's role as a standards organization means that it must preserve its independence from advocacy groups.

CONCLUSION

In the same 1996 interview in which he described the public-private partnership between GISB and FERC, Chairman Hoecker was asked about GISB's future. He said that GISB "may provide value added in future years for a reason that we only dimly perceive at this point: it's one of the few places where all elements of this industry are democratically represented and come together to talk about the issues, the problems, that are facing the industry." He added, "I guess the bottom line here is that I see GISB enduring for quite awhile."

Four years after that interview, GISB remains the one organization that brings the entire gas industry together for a common purpose. The organization's mission, as described in its charter, is to promote a "seamless marketplace" for natural gas. There seems little doubt that substantial progress has been made in that direction as the result of GISB's efforts. Standardization, coupled with the use of electronic commerce, has improved communication between multiple trading partners, made information necessary for business transactions less ambiguous, allowed transactions to be completed more quickly, and provided more accountability. It has also facilitated tighter coordination between trading partners and automated the business process. As an example of the tangible benefits of this process, the Commodity Futures Trading Commission has attributed to GISB standards the reduction in the New York Mercantile Exchange trading cycle for gas futures from five days to three days.

Besides enhancing efficiency, electronic commerce and standardization are leading to increased competition. The more relevant information that is made available to market participants in a timely manner, the better the marketplace functions. And standards for electronic communication make doing business in the gas marketplace considerably simpler. This helps to level the playing field for smaller players, who previously did not have the staff to devote to learning each pipeline's way of doing business, as well as to improve efficiency for larger firms.

The transformation of the gas market from its traditional way of doing business—with its mounds of paper and faxes and countless phone calls—to an almost instantaneous Web-based process has happened in a relatively short period of time, and naturally it has not been easy for all market participants. But as so frequently happens when industries undergo major changes, some companies' problems become other companies' opportunities. Dozens of firms, some of them startups and others veteran players in the business of electronic commerce have emerged to offer products and services to help small—and large—gas companies meet GISB's standards and FERC's deadlines.

As the energy market continues to evolve, there will undoubtedly be new and formidable challenges facing companies determined to survive and prosper in an increasingly competitive environment—challenges that a membership-driven standards-setting organization like GISB is uniquely qualified to meet. GISB stands ready to offer advice and help to anyone who sees in its success the possibility that even complex and competitive industries can chart their own futures through consensus and cooperation.

FOOTNOTES

¹ Issued April 2, 1999. FERC Order No. 587-K, Docket No. RM96-1-001, pp. 3-4.

² Issued October 29, 1996. FERC Order No. 587-A, Docket No. RM96-1-001, p. 7.

³ Issued May 6, 1997. FERC Order No. 587-E, Docket Nos. RM96-1-005 and RP97-276-000, pp. 9-10.

⁴ Issued April 16, 1998. FERC Order No. 587-G, Docket No. RM96-1-007, p. 82.

⁵ Issued November 12, 1997. FERC Order No. 587-F, Docket No. RM96-1-007, p. 8.

⁶ Issued November 12, 1997. FERC Order No. 587-F, Docket No. RM96-1-007, pp. 8-9.

⁷ Issued November 12, 1997. FERC Order No. 587-F, Docket No. RM96-1-007, p. 1.

⁸ Issued November 12, 1997. FERC Order No. 587-F, Docket No. RM96-1-007, p. 88.

⁹ Federal Register, Vol. 63, No 193. Tuesday, October 6, 1998, Rules and Regulations, p. 53572.