I. Introduction and Summary

Q. Please state your name and business address.

A. My name is George E. Briden. My business address is Snake Hill Energy Resources, Inc. ("Snake Hill"), 17 Cody Drive, North Scituate, RI, 02857-2916.

Q. What is your occupation?

A. I am the President of Snake Hill. Among other things, Snake Hill offers consulting services to its clients.

Q. Please describe the nature of the consulting work performed by Snake Hill.

A. The firm provides analysis, policy advice and litigation support on business and regulatory matters to a variety of clients in the energy industry.

Q. Please state briefly your professional experience and qualifications?

A. I have been employed in the energy business in various capacities for over twenty-three years. During that period of time, I held positions with a local gas distribution company, an interstate pipeline, and a privately held firm with substantial interests in the independent power industry and natural gas drilling and exploration. I have also been self-employed as a consultant.

During the course of my career in the energy field, I have presented expert testimony in various formal regulatory and judicial proceedings at the state and

federal level, and have appeared as an expert in arbitration proceedings as well as serving as an arbitrator. In addition, I have performed or undertaken gas supply planning and procurement, contract administration, natural gas and power marketing, risk management, and corporate planning. Since forming Snake Hill, I have provided my clients with advice and assistance on regulatory matters, including expert testimony, as well as more general advice on energy matters. A copy of my Curriculum Vitae is attached as Exhibit No. ___ (GEB-2).

Q. Are you a member of any professional associations?

A. Yes. I am a member of the American Economic Association, the National Energy Services Association, and the Energy Bar Association.

Q. Have you ever appeared in a formal proceeding before the Massachusetts department of Telecommunications and Energy (the "Department")?

A. No.

Q. Have you testified before any other administrative bodies?

A. Yes. I have appeared before the Federal Energy Regulatory Commission, the National Energy Board of Canada, the New Jersey Board of Public Utilities, the Rhode Island Public Utility Commission, the Massachusetts Energy Facility Siting Board, the Public Service Commission of West Virginia, the Connecticut Department of Public Utility Control, and the Maine Department of Public

Utilities. A schedule showing particular details of these appearances is attached hereto as Exhibit No. ___ (GEB-3).

Q. On whose behalf are you appearing in this proceeding?

A. I am appearing on behalf of the Sprague Energy Corp. ("Sprague"). Sprague is an intervenor in this proceeding and a provider of gas supply and other related services to end-users in Massachusetts, including the so-called "Grandfathered Customers" in the service territory of Bay State Gas Company (the "Company").

Q. What is the purpose of your testimony?

A. Sprague has asked me to review the Company's submissions in this proceeding and evaluate the reasonableness of the Company's various proposals with respect to the use of a capacity reserve to "back stop" the requirements of the Grandfathered Customers ("Capacity Reserve Proposal").

Q. Would you please briefly summarize your findings and conclusions?

A. I find that the Company has failed to support its Capacity Reserve Proposal, and that the proposal is in fact unsuitable for the purposes to which the Company would apply it. Moreover, I conclude that, in addition to the conceptual flaws of the Capacity Reserve Proposal, (i) the level of capacity reserve proposed by the Company is excessive; and (ii) the related cost allocation proposals require significant revision, inasmuch as these cost allocations fail to conform to the fundamental principles underlying the design of just and reasonable rates. As a

general matter, since the Capacity Release Proposal has not and cannot be supported, is contrary to Department orders and policy, and is in fact not just and reasonable, it should therefore be rejected by the Department. Instead, the Department should direct the Company to adhere to the directives set forth in DTE 02-75-A, where the Company was required to implement a system allowing the monitoring of the Grandfathered Customer loads.

Q. How is the rest of your presentation organized?

A. I will first outline what I consider to be the pertinent background, including the related Department findings. Next, I will outline the Company's Capacity Reserve proposal and discuss the fundamental flaws in that proposal. Finally, I will show (i) that the Company's requested level of reserve is not supported by its data; and (ii) that the Company's proposed cost allocation is inconsistent with accepted principles of cost allocation.

II. Background

Q. Please describe the "Grandfathered Customers"?

A. The Grandfathered Customers are firm transportation customers of the Company. As with all transportation customers, the Grandfathered Customers rely on suppliers other than the Company for their energy requirements. The Grandfathered Customers are uniquely situated among the firm transportation customers, however, in that the Grandfathered Customers are exempt from the

mandatory capacity assignment aspects of the Company's suite of unbundled services.

Q. How did this distinction arise?

A. The class of Grandfathered Customers emerged from the Department's generic unbundling proceeding, Docket No. D.T.E. 98-32. As part of the results of those proceedings, the Grandfathered Customers were designated to be (i) those customers which were taking firm transportation service as of February 1, 1999 and opted to continue taking that service without accepting an assignment of a portion of the Company's upstream capacity; or (ii) those customers which opt for firm transportation without ever having been a firm sales customer of the Company.

Q. What are the implications of "Grandfathered" status?

A. The Grandfathered Customers do not have an unqualified right to call upon the Company for sales service. As the Department has stated, "LDCs are not required to serve customers if the addition of those new customers to the system would increase average costs". *D.T.E. 02-75 at 32.* This Department policy finds expression in the Terms and Conditions of the Company's Tariff at Section 15.6, which states in pertinent part that "The Company shall be under no obligation to provide Default Service to a customer at a maximum daily level in excess of the total contractual quantity of recallable capacity assigned to a Supplier on behalf of said Customer". Thus, the Grandfathered Customers are ultimately at risk for

their energy supplies. If their own suppliers should default or fail, these customers cannot rely upon the Company as a supplier of last resort.

Q. Since the Company is not obligated to provide default service to the Grandfathered Customers, what happens in the event a Grandfathered Customer experiences a supply shortfall?

A. As a practical matter, that customer must curtail its natural gas usage or be subject to penalties and/or disconnection.

Q. Are the Grandfathered Customers aware of these risks?

A. They are or should be so aware. The risks we are discussing are a matter of tariff. Moreover, in order to assure itself that the Grandfathered Customers were aware of these specific risks, the Department directed the Company to "notify and remind" the Grandfathered Customers that "unauthorized overtakes are subject to penalties" and that "such overtakes may threaten the integrity of the Company's distribution system and therefore will result in disconnects from the system." *D.T.E. 02-75-A at 7.*

Q. Did the Company provide this notice?

A. Yes. According to the testimony of Company Witness Ferro, on January 31, 2005 the Company provided notice to the Grandfathered Customers that they were subject to penalties and shutoff. That notice, reproduced as Attachment JAF-1 to Exhibit No. BSG-1, advises the recipient that "as a grandfathered firm

transportation customer of Bay State, you, or your supplier on behalf of you, must have sufficient natural gas to meet your daily requirements, and pursuant to state tariff provision, Bay State may assess penalties on any unauthorized use in the amount of five (5) times the daily index price of natural gas on the day of the overtake. Please be aware that each time you take more natural gas from Bay State's distribution system than that which is being provided by your supplier, such overtake may threaten the integrity of Bay State's distribution system and jeopardize Bay State's ability to serve its bundled firm residential and commercial customers with natural gas service for heating and other needs. Accordingly, Bay State has an obligation to its other firm customers and the right, and specifically reserves the right, to shut off your meter and disconnect your service from its distribution system in the event of an overtake on any day of the year, especially during peak demand periods, or for any other reason it determines the operation of its distribution system may be jeopardized."

Q. In addition to the Department's directives regarding the notification of Grandfathered Customers, have there been any other significant events of a regulatory nature since the Grandfathered Customer class was formed?

A. Yes. The Department has considered two proposals by the Company to alter the fundamental nature of Grandfathered status.

Q. Please explain.

A. In Docket No. 02-75, the Company advanced a proposal to include a 10% reserve margin or contingency in its planning for supply adequacy and reliability. This

contingency reserve was intended to serve as a hedge against terrorist threats to infrastructure and "the risk that so-called grandfathered transportation customers may migrate" back to the Company's sales service. *D.T.E. 02-75 at 24.* The Company apparently developed this proposal based in part on the belief that it was obligated to supply customers migrating back to default service. *Id. at 30.* The Department rejected the proposal. In particular, the Department found that the proposal was "deficient" inasmuch as the Company had no obligation to serve migrating Grandfathered Customers, and as such there could be no reliability risk associated with such potential migration. Importantly, in its request for reconsideration of that finding, the Company specifically raised the issue of reliability risk associated with Grandfathered Customer unauthorized overtakes, a risk which is distinctly different from the risk of a migration back to default service. Upon a request for reconsideration by the Company, the Department reaffirmed its earlier decision and emphasized it by requiring the Company to issue the notification to Grandfathered Customers discussed earlier. In addition, responding to the risk of unauthorized overtakes, the Company was directed to "implement a system under which Bay State will have the ability to monitor usage by [the Grandfathered Customers] on a daily basis and to disconnect such customers" in the event of such unauthorized overtakes. *D.T.E. 02-75-A at 7.*

Subsequently, in Docket No. 05-27, the Company advanced a proposal to assign capacity to Grandfathered Customers who overtake gas on a critical day. This

proposal was also rejected by the Department. In the order, the Department criticized the Company's proposal as "incomplete" and specifically noted in that regard that "the Department explicitly directed the Company to implement a system under which the Company will have the ability to monitor the usage of its grandfathered customers. The Company has not developed such a method and is unable to appropriately assign costs it incurs on a critical day to its grandfathered transportation customers". *D.T.E. 05-27 at 355.*

III. The Company's Proposal

Q. Please describe the Company's proposals in this proceeding.

A. The bulk of the Company's proposals are set out in the Motion of Bay State Gas Company for Approval of System Protection Planning Standard for Grandfathered Overtakes (the "Motion"). Specifically, the Company proposes to introduce an "incremental planning standard" which would provide for the inclusion of 30% of Grandfathered Customer design day requirements in Bay State's forecasted total requirements for planning purposes. The Company proposes to recover the costs of these incremental resources from the Grandfathered Customers in a manner purportedly "consistent with cost causation principles". *Motion at 2.* In addition, the Company proposes "changes to its nomination and balancing protocols" that the Company claims would allow it to "monitor more closely the potential for unauthorized overtakes by grandfathered customers." *Id.* The Direct Testimony of Joseph A. Ferro includes an additional

proposal apparently not explicitly mentioned in the Motion: the Company would like to assign capacity to any Grandfathered Customer which has overtakes on a critical day in excess of its share of the proposed 30% reserve. Thus, in this docket the Company has essentially reoffered a combination of its proposals (albeit slightly altered with respect to some of the details) from Docket Nos. 02-75 and 05-27.

Q. Why is the Company making these proposals?

A. The Company is offering this package as a substitute for the system of flow monitoring and control that the Department has directed the Company to implement in D.T.E 02-75-A and D.T.E. 05-27. The Company has not as yet complied with the specific directives in those orders.

Q. With respect to the Company's new proposals, what justification or support does the Company offer?

A. The Company's main argument has two prongs.

First, the Company asserts that it has had "excessive difficulty in devising . . . a plan [for monitoring and curtailment] that would be operationally effective on a Critical Day and would be cost-efficient to deploy." *Motion at 1-2.* Hence, the Company implies that the circumstances call out for a reasonably close substitute for the system of flow monitoring and control that the Department has directed the Company to implement.

Second, the Company asserts that its plan allows it to manage the risk of Grandfathered Customers migrating from transportation back to sales service as well as the "increased" operational risk of unauthorized overtakes by those customers. Accordingly, argues the Company, inasmuch as reliance on the open market alone is misplaced, its plan presents the substitute the alleged exigent present circumstances require. *Motion at 6-7.*

Q. With respect to the first prong of its argument, does the Company demonstrate that the Department's monitoring and control plan is infeasible?

A. No. The details of the Company's "excessive difficulty" argument are presented in the testimony of Witness Ferro. According to the witness, two things are required to implement the Department's plan: (i) the installation of advanced metering/flow control ("AMFC") devices at the inlet to the Grandfathered Customers; and (ii) revisions in certain of the Company's transportation service protocols. With respect to the AMFC devices, the witness does not claim that they do not exist or that they cannot be had, only that they are expensive in some relative sense, and accordingly undesirable. With respect to the transportation service protocols, the witness' central thesis is that intraday scheduling flexibility on the interstate pipelines makes infeasible as a practical matter the timely disconnection of overtaking customers. Thus, even if the Company had the AMFC devices in place, it would not be able to utilize them effectively to eliminate the reliability risk of overtakes. In sum, the "excessive difficulty"

argument would have it that AMFC devices are overly expensive and ineffective as a practical matter, and the Department's plan for monitoring and flow control is therefore presumably infirm.

Q. Does the Company demonstrate that the AMFC devices are overly expensive?

A. No. There are at least two difficulties with the Company's argument. First, a review of the testimony reveals that the Company's range of estimates with respect to the costs of installing AMFC devices is very broad, and the specifics offered quite vague. The Company's presentation is merely conclusory, lacking in specifics. By way of example, Witness Ferro describes the costs of purchasing and installing the devices at "approximately $17,000 to $25,000 per customer". *Ferro at 5, line 19.* This is, to say the least, not an estimate with a great deal of inherent precision, as Witness Ferro concedes. In addition, the witness does not describe the functionality of the devices the Company has presumably reviewed, or their expected service lives. Moreover, ongoing operating and maintenance costs associated with these devices are unknown to the Company. *Ferro at 6, lines 1-2.* Consequently, it is fair to say that as a general matter the Company's presentation does not permit any definitive cost-benefit analysis. Second, based on these questionable estimates, Witness Ferro calculates an increased monthly customer charge of $260 for associated with installation of the AMFC devices and the recovery of related costs from the Grandfathered Customers. *Ferro* at 6, lines 5-11. The resulting monthly charge is then

compared to the current level of monthly customer charge, and the implication we are invited to draw is that the implementation of the Department's monitoring and flow control plan will result in a "100%-400%" rate shock. *Id.* However, when more appropriately compared to the Grandfathered Customers' customers' annual energy budget, the $260 cost increase is orders of magnitude smaller on a percentage basis. Based on citygate prices for Algonquin and Tennessee Zone 6 published in the *Gas Daily* for August 3, 2006, the Grandfathered Customers' annual gas cost at the citygate is somewhere in the neighborhood of $100 million. By way of comparison, the total annual cost of service associated with the AMFC installation is not more than approximately $5.5 million (i.e., $35 million in capital expenditure times the capital cost factors provided by the Company's witness) or less than 5½% of the Grandfathered Customers' annual energy budget. *Ferro* at 6, lines 7-8. In any event, "rate shock" should not be seen as an issue that absolutely bars implementation of the Department's monitoring and flow control plan. The overriding policy goal is the preservation of system reliability, and any perceived "rate shock" is properly weighted against that goal and the costs of failing to maintain system integrity.

Q. Does the Company demonstrate that the alleged difficulties associated with intraday nominations cannot be overcome?

A. No. To state the alleged problem, as described by Witness Ferro, "Bay State cannot shutoff a customer until all intraday nomination deadlines have passed". *Ferro* at 7, lines 11-12. Thus, according to Witness Ferro, "By the time

an incident can be identified, it is too late." *Id* at lines 14-15. However, Witness Ferro does not consider the obvious solution; namely, changing the rules so that the Company *could* if necessary implement curtailment prior to intraday nomination deadlines on critical days.

Q. With respect to the second prong of the Company's argument, has the Company demonstrated that its proposal is a reasonable substitute for the monitoring and flow control directed by the Department?

A. No. On the one hand, the Company advances the notion that its plan will enable it to manage the risk of migration to default sales service. However, the Department has already ruled on this issue: the Company is not obligated to serve migrating Grandfathered Customers and as a result there is no need for a capacity reserve to manage migrating loads. On the other hand, the Company also advances the notion that its plan will enable it to manage the operational risks associated with overtakes by Grandfathered Customers. The Department has also already ruled on this issue: the solution to unauthorized overtakes is to monitor the takes of the Grandfathered Customers and maintain the ability to curtail them. Thus, in this regard, the Company's plan is "deficient" in the sense of D.T.E. 02-75, that is, the Company's plan lacks a compelling rationale and is in fact operationally unsuited to the purposes to which the Company would apply it. Clearly, a capacity reserve would be inadequate in the event overtakes were to exceed the size of the reserve. Should that occur, curtailments would become necessary, and the Company, lacking the AMFC devices, would be hard pressed

to respond. Moreover, the capacity reserve itself is subject to exigencies, such as *force majeure* type events impairing the ability of upstream pipelines to perform. Finally, as the Department itself has recognized, upstream capacity reserves are "unlikely" to be useful in the event of a distribution system failure. *D.T.E. 02-75 at 32.* Accordingly, a capacity reserve, no matter how large, simply cannot answer the system integrity problem in the final, definitive manner offered by the installation of AMFC devices. Witness Ferro is wrong when he states that the Capacity Reserve Proposal would provide a "permanent resolution of the reliability risks associated with" the Grandfathered Customer loads. *Ferro* at 2, line 14-15.

Q. What should the Department conclude?

A. The Department should find that the Company has failed to demonstrate that the Department's directives with respect to monitoring and flow control are in fact infeasible, and that the Company has advanced no reasons, arguments or evidence that would compel rescinding those directives. In other words, the Company has not demonstrated that a substitute for the Department's plan is either necessary or desirable. The Department should further find that, in any event, the Company's suggested substitute is lacks substantial support and is in fact operationally unsuitable to the reliability problem at hand. In short, the Department has reviewed and rejected the Company's Capacity Reserve Proposals twice before; it should reject them again here.

IV. The Specific Details of the Company's Proposals Are Flawed

Q. Assuming that the Department were to adopt a capacity reserve solution to the reliability problem, is the 30% level suggested by the Company appropriate?

A. No. A proper analysis of the Company's data strongly suggests that the level of capacity reserve should be no more than 10%.

Q. Please explain.

A. The Company requests a 30% reserve based on a "combination of analytical results and reasoned business and operational judgment." *Ferro at 11, line 3-4.* The "analytical results" are derived from a study of the history with respect to overtakes by Grandfathered Customers. This study reveals that "on three occasions" during the study sample period, "overtakes exceeded thirty percent in one of the Company's divisions". *Id. at lines 10-11.* Inasmuch as there is no need to carry a reserve to deal with migrating loads, as discussed earlier, I would tend to agree that the percentage of overtakes is a reasonable metric to study. However, the data indicate that the largest "combined overtake" in the sample period was 5,933 dth, and that occurred in December of 2001. *Exhibit BSG-1, Attachment JAF-2.* Thus, the Company's experience suggests that existing protocols are sufficient to keep overtakes by Grandfathered Customers at the level of 5,933 dth or less. Comparing the overtake of 5,933 dth with the Company's estimate of a 58,846 dth draw by Grandfathered Customers on the design day, and we deduce that the capacity reserve requirement should more

properly be in the range of 10% (= 5,933/58,846). *Exhibit BSG-1, Attachment JAF-3, line 1.* Noting that 2001 was a year of considerable uncertainty in the gas marketplace, I would further argue that 10% should be viewed as a conservative estimate of the required capacity reserve, and in fact may itself be excessive.

Q. The Company claims that the "Customer Reliability Charge" is consistent with cost causation principles. Do you agree?

A. No. I find three reasons to conclude the contrary.

First, assume for a moment that the Department were to agree that a 30% capacity reserve is appropriate. As we have seen, the Company's experience with overtakes suggests that a 10% reserve is more than sufficient for the purpose of allowing the Company to manage overtake risk. The additional 20% reserve must be for some other purpose, and the only other purpose the Company advances is the management of the risk of Grandfathered Customer migration back to sales service. However, as the Motion makes clear in regard to the question of serving migrating loads, "service continuity and access to fuel sources . . . truly benefits other customers, the local economy and the broader economic well being of the State." *Motion at 5.* If we accept that this argument as part of the rationale for the 30% capacity reserve, there is no longer a direct and unique casual link between the level of capacity reserve and the Grandfathered Customers behavior, insofar as the reserve was instituted, at least in part, for the general social welfare. Thus, cost causation principles dictate that all customers share in the costs of the reserve. The Company's proposal to recover the costs of the reserve solely from

Grandfathered Customers, as set forth on Exhibit BSG-1, Attachment JAF-3 is inconsistent with these principles.

Second, the Company would allocate a portion of capacity release revenues and off-system sales margins as an offset to the cost of the reserve using a peak-day allocation factor. I agree that there should be such an allocation, but I disagree with the Company's allocation method. The capacity release revenues and off-system sales margins are generated using idle capacity, and the capacity reserve is basically always idle. Thus, the Grandfathered Customers share of system capacity generates far more by way of capacity release revenues and off-system sales margins than the system capacity dedicated to sales customers. Any allocation of capacity release revenues and off-system sales margins must recognize the difference in load factor between the Grandfathered Customer capacity reserve and the capacity used to manage sales customer loads, and should accordingly be weighted in favor of the Grandfathered Customers.

Third, the cost allocation methodology used by the Company does not recognize commodity cost savings to the sales customers generated by the availability of Grandfathered Customer capacity reserves for least cost dispatch. The capacity costs allocated to the Grandfathered Customers are based on their relative share of the peak day. Thus, the Grandfathered Customers are effectively allocated a *pro rata* slice of the Company's system resources. However, as a practical matter, the Company's dispatcher will not (or should not) specifically reserve a slice of the

system when dispatching sales customer requirements. Instead, the dispatcher will meet sales customer needs in a least-cost fashion. This perforce will result in the more desirable pieces of the Grandfathered Customer reserve being dispatched to meet sales customers' requirements ahead of some of their own more expensive capacity components. The result is commodity cost saving for the sales customers as a result of the availability of the Grandfathered Customer's capacity reserve. It stands to reason that the sales customers should not be made better off through the use of Grandfathered Customer capacity reserves unless they contribute something to the cost of those reserves. Thus, we have yet another reason to suppose that the cost of the reserve should be spread widely, as are the benefits. Alternatively, the Company should be required to use the SENDOUT dispatch model to calculate the commodity cost savings to firm sales customers associated with having the reserve available, and credit those savings to the Grandfathered Customers before calculating the Customer Reliability Charge.

Q. Please summarize your recommendations with respect to the size of the proposed capacity reserve and the allocation of related costs and revenue credits.

A. The Company's proposed reserve ratio is not supported by the data presented in the study of Grandfathered Customer overtakes. That data suggests that the ratio should be at most 10%. Moreover, the Company's proposed method of allocating the costs of any reserve results in unfair subsidies to the sales customers at the expense of the Grandfathered Customer class. Accordingly, should the Department determine that a capacity reserve should be implemented, that reserve

should be no greater than 10% of the Grandfathered Customer peak day requirements, and cost and revenue credits should be allocated in accordance with the foregoing in order that the sales customer do not get a windfall subsidy as a result of the implementation of the reserve.

Q. Does that conclude your direct testimony?

A. Yes.