

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

At a session of the Public Service  
Commission held in the City of  
Albany on May 12, 1987

COMMISSIONERS PRESENT:  
Anne F. Mead, Chair  
Harold A. Jerry, Jr.  
Gail Garfield Schwartz

Case 29292 - Gas Alternative Systems, Inc. Petition for a  
Commission Order directing Niagara Mohawk Power  
Corporation to enter into a long-term contract  
for the purchase of energy generated from a  
co-generation facility to be built by Gas  
Alternative Systems, Inc.

POLICY STATEMENT ON BACK-UP OIL  
USE BY CO-GENERATION FACILITIES

(Issued May 29, 1987)

BY THE COMMISSION:

INTRODUCTION

By order issued February 25, 1987, we called for  
comments concerning the extent to which oil may be used as a  
"back-up fuel" by co-generation facilities under Public  
Service Law (PSL) §2(2-a). The issue arises because Niagara  
Mohawk Power Corporation has filed a 40-year contract with  
Gas Alternative Systems, Inc. (GAS) for the purchase of  
electricity from GAS' proposed 49 MW gas-fired co-generation  
facility to be located in Syracuse. GAS proposes to burn oil  
as a back-up fuel only; this, GAS maintains, will make the  
facility a "qualifying facility" under PURPA and under  
§§2(2-a) and 66-c of the PSL.

Section 2(2-a) states, in pertinent part, that a co-generation facility includes "any facility with an electric generation capacity of up to eighty megawatts, together with any related facilities located at the same project site, which is fueled by coal, gas, wood, alcohol, solid waste refuse-derived fuel, water or oil, to the extent any such oil-fueled facility was fueled by oil prior to the effective date of this subdivision and there is no increase in the amount of oil used at the facility, or to the extent oil is used as a back-up fuel for such a facility..." (emphasis added).

Our order noted that we have not yet established a policy concerning how much oil may be burned by a co-generation facility as a back-up fuel under PSL §§2(2-a) §66-c without loss of eligibility for the 6¢/kWh statutory minimum rate. The instant filing does not indicate whether GAS has a firm commitment for adequate supplies or transportation of gas to meet the facility's operating requirements, and we expressed a concern that unavailability of gas could cause GAS to burn oil a large percentage of the time.

Comments have been received on behalf of Niagara Mohawk, New York State Electric and Gas Corporation, the New York State Energy Office (SEO), Long Lake Energy Corporation,

Brooklyn Union Gas Company, Occidental Chemical Corporation, Tellus, Inc., and GAS, they are summarized below.

SUMMARY OF COMMENTS

Gas Alternative Systems. GAS proposes that use of oil be permissible during periods when gas is unavailable for reasons such as curtailment under applicable Federal or State tariffs,<sup>1</sup> and permissible in any event for up to 25% of the total energy input of the facility during any calendar year. Propane would not be considered "oil" and would be usable as a back-up fuel without limitation.<sup>2</sup> Finally, enforcement would be prospective, based on reporting of actual fuel consumption. Non-compliance would suspend entitlement to the 6¢/kWh minimum rate, subject to reinstatement upon resumption of gas delivery and consumption for a period of 30 continuous days.

GAS notes that on August 2, 1985, in clarification of a ruling in Case 29006, we opined that a co-generation facility whose primary fuel was coke oven gas could burn

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<sup>1</sup> GAS does note that natural gas is expected to be the primary fuel used by its facility, to be supplied under a long-term contract, but that this supply will be interruptible.

<sup>2</sup> GAS sees no basis for classifying propane as oil, pointing out that natural gas is a mixture of hydrocarbons including propane, and that interstate pipelines and gas utilities routinely employ propane as a supplement to natural gas supplies, with the propane treated for regulatory purposes as "gas."

natural gas as a back-up to the extent that it did not exceed 25% of fuel consumption. Also cited are the Public Utility Regulatory Policy Act (PURPA) and the Federal Energy Regulatory Commission's (FERC) implementing regulations (18 CFR 292.204(b)(2)), which similarly provide a 25% limit.

The State Energy Office. SEO maintains that imposing any specific maximum oil consumption figure would be inconsistent with the language and legislative intent of the provisions extending benefits to gas-fired and other co-generation facilities, and with expressed State energy policy. SEO proposes that any oil consumed during a gas supply interruption, which cannot be replaced by utility gas supplies at standard interruptible or boiler fuel rates, be deemed oil used as "back-up fuel."

SEO argues that while the Legislature clearly has not intended to extend the benefits of the statutory scheme to new facilities burning oil as the primary fuel, it recognized that those co-generators which it did intend to encourage might burn oil as a back-up fuel. And SEO notes that the Legislature refrained from defining "back-up fuel," and placed no limitation on the amount of oil used as back-up fuel -- which it could have done had it so desired. Further, SEO argues that there is nothing in the plain meaning of the work "back-up" to convey a quantitative limitation.

SEO goes on to argue that any specific quantitative limit would have to be arbitrary, since what is necessary or appropriate one year might not be sufficient the next. At any rate, its fundamental argument is that the aim is to encourage these co-generation facilities, and that to deny the incentive to co-generate electricity when the primary fuel is unavailable, for reasons outside the control of the co-generator, would run counter to this basic aim.

A further argument is that a quantitative limit on "back-up fuel" would contrast to the use of the phrase of "back-up power" in PSL §66-c and PURPA, neither of which specifies entail a quantitative limit.

SEO notes also that non-gas-fired co-generation facilities are not normally designed to function as dual fuel facilities. SEO deems it unreasonable to assume that a developer would burn more oil than necessary to meet interruptions in his primary fuel supply, and indeed, holds that since most such facilities are designed to use natural gas as the preferred fuel, any oil use would be minimal and hence should be deemed back-up per se. SEO does recognize that a gas-fired co-generation facility, under certain conditions, might be more economically operated using oil; nevertheless, SEO holds that a gas-fired facility operated with utility gas supplies, and which experiences an interruption, should be allowed to use oil as a back-up without any restriction, since any such interruption would be

a result of factors clearly out of the co-generator's control. With respect to the situation in the instant case -- an independent, non-utility gas supply -- SEO suggests requiring the use of utility supplies of interruptible or boiler fuel gas, at standard rates for such, before using oil during an interruption in the independent gas supply.

SEO notes that its proposals would minimize reporting requirements on gas-fired co-generation facilities, in keeping with the legislative intent to curb unnecessary regulation of them. SEO says that reporting or notice requirements in buy-back contracts would be necessary only where gas is not sold or transported by the purchasing electric utility; in such cases the co-generator could be required to provide annually to the purchasing utility its fuel consumption and gas supply interruption data. Such requirements would be unnecessary, says SEO, where the co-generation facility burns gas sold or transported by the purchasing utility, in which case the utility would be able to determine for itself whether oil had been used for other than back-up purposes.

Occidental Chemical Corporation. Occidental endorses SEO's comments, adding that in the event we impose some limitations on the use of oil as a back-up fuel in a solid waste facility, we should develop clear criteria that will provide guidance to operators of co-generation projects.

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Occidental opposes any reporting requirements, due to the burden that would be involved. As for solid fuel facilities, Occidental opines that oil use should be permitted at least to the extent necessary to allow safe and efficient operation of these fuels as a primary energy source, e.g., during interruptions in the use or supply of the facility's primary fuel source. Occidental explains that even partial interruption in the amount of solid fuels available at any moment can create safety hazards because of the limited turn-down ratio of solid fuel units. As an example, Occidental says that the boiler flame in a wood- or refuse-fired facility may be temporarily quenched due to uneven fuel quality, and if oil is not available, boiler ignition may be lost; this in turn would raise a danger of sudden re-ignition of fuel gases, risking furnace "puffs" or explosions.

Occidental says also that use of gas or oil is sometimes necessary for safe and efficient start-up of a solid fuel boiler, in order to minimize the chance of furnace explosion. In addition, says Occidental, gas or oil is often necessary for supplemental boiler firing in order to maintain steam loads and flow, ensure flame stability and adequate re-ignition, and, once more, to minimize the potential for explosions.

Brooklyn Union Gas Company. This utility proposes that oil burned by a gas-fired co-generator be considered "back-up" use when it is in place of gas supplies interrupted pursuant to the interruption provisions of the supply contract. Brooklyn Union argues that the public policy considerations weighing against use of oil as a primary co-generation fuel do not justify discouraging its use as a back-up fuel. The utility cautions against endangering, or appearing to endanger, the State qualification of a co-generation facility whose primary gas supply arrangements are interruptible, noting that forcing co-generators to use more costly firm gas would be a significant disincentive, the economic consequences of which could halt or prevent some projects. Moreover, for large co-generation projects, Brooklyn Union suggests, a year-round firm gas supply may be virtually impossible to obtain at any costs. Brooklyn Union opposes using a fixed percentage limitation, arguing that a figure set too high could give the co-generator an incentive to use oil even if gas were available, while too low a figure might render an interruptible gas supply arrangement infeasible.

Niagara Mohawk. This utility argues that in light of a clear policy against encouraging new oil usage, the back-up exception should be narrowly confined. Niagara Mohawk suggests that oil be allowed only during periods when

an event of force majeure has effectively interrupted the primary fuel source, and where good faith efforts are continuously being made to reinstate it. Back-up oil use would be limited to the amount required to supply steam or thermal energy to the industrial processes served by the co-generator, at the level of activity underway at the time the primary fuel was interrupted, or which is normal for the time of the year, month and week; and the level required to maintain the integrity of the plant and related equipment. Niagara Mohawk would allow the sale of electricity fueled by back-up oil only where such generation level is strictly the by-product of the steam production required for the legitimate industrial steam load of the co-generator.

Niagara Mohawk suggests that electricity generated by the impermissible use of oil be denied the 6¢ minimum rate and any other benefits of section 66-c, and that continued or deliberate transgressions result in a permanent loss of qualification under §2(2-a). Niagara Mohawk urges establishment of reporting and record-keeping requirements to enforce this.

Long Lake. This party suggests that in the event of a disruption of primary gas supply, oil use not exceeding the plant's requirement for one month per year would be a reasonable limitation. Long Lake notes, however, that the ability of the distributing utility to deliver available gas

could be a problem and that use of oil during periods when this arises should be regarded as "back-up." Long Lake observes that the utility would automatically be aware of such instances, making for ease of administration.<sup>1</sup>

NYSEG. The utility maintains that the legislative intent is to avoid encouraging increased dependence on oil, so that the term "back-up fuel" here should not be interpreted to include a general market unavailability of natural gas. Rather, says NYSEG, the definition should be confined to short-term equipment failures, perhaps with a 48-hour limit, with total annual oil use being restricted to two percent of annual fuel requirements. NYSEG also proposes that the plant operator be required to periodically report actual fuel usage on an hourly or daily basis, and that any

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<sup>1</sup> Long Lake also holds that while ordinarily, there are strong incentives for a gas co-generation facility to burn gas rather than oil, a contrary signal could be provided by our current policy: in general, payments under power purchase contracts are based on the utility's avoided costs, which would presumably be affected by oil prices; and faced with paying gas costs higher than the oil component in the contract payments, a co-generation facility would be motivated to use oil for non-back-up purposes. Long Lake suggests that this problem could be cured if the standard offer provided in Opinion 86-8 (fixed capacity payment with variable energy payments; page 59) were structured to link the varying energy payment, in some manner, to a reasonable forecast of gas prices.

Long Lake's point here is not of course directly pertinent to the issue at hand. But Long Lake will be free to raise the matter in the updated long run avoided cost proceeding soon to commence.

electrical energy generated by oil usage falling outside of the limit not be entitled to the 6¢ provision.

Tellus. This commenting party proposes that "oil" be defined as any petroleum distillate with an A.P.I. gravity of 100 or less, with "back-up fuel" being defined as that which is used to replace the normal fuel for the co-generation plant, when its supply is interrupted. This would not apply to "start-up" or "light-off" fuel. Tellus also proposes that the maximum amount of back-up fuel stored on site be limited to the minimum requirements of the New York Power Pool. Tellus opposes limiting the number of days, or the percentage, of oil consumption, arguing that this would limit potential benefits to firm gas ratepayers during peak load conditions. Tellus characterizes gas-fired co-generation facilities as gas peak shaving facilities, which can help defer the need for gas distribution companies to acquire new pipelines, production plants or storage facilities. Given this, Tellus says, during a very cold winter it might be desirable for a co-generator to give up its firm transportation for 100-120 days.

#### DISCUSSION AND CONCLUSION

The problem here is that two basic policies are somewhat in conflict: we want to encourage co-generators, but we want to discourage their use of oil. Being too restrictive would tend to hamper co-generators; being too permissive might result in unnecessary oil usage.

The strict quantitative limits proposed by the utilities would serve one of the purposes but only at the expense of dis-serving the other. We believe that co-generators should be given some assurance that unavoidable use of oil, within reasonable limits, will not result in loss of the statutory rate of 6¢/kWh. Accordingly, oil use will be considered "back-up" whenever utility supplies of interruptible or boiler fuel gas, at effective tariff rates, become temporarily unavailable.

To define "temporarily" in this context, it seems desirable to stipulate an outside limit on the total amount of oil that can be burned as back-up fuel, albeit a less restrictive one than proposed by the utilities. For these purposes, GAS' proposal, that oil not be allowed to exceed 25% of the total energy input of the facility during any twelve month period, is fair. With GAS itself being willing to accept such a limit, it should provide co-generators with a reasonable assurance that the statutory rate will not be lost except under severe circumstances. At the same time, such a limit will also serve to ensure adherence to the State's policy objective of minimizing oil usage.

We will leave compliance monitoring to the utilities. In most circumstances, they will be able to determine fairly readily whether a co-generator is in

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compliance. We are, however, prepared to consider establishing reporting requirements upon a showing by any utility that it cannot, on its own, monitor compliance in any given case.

As to the consequences of non-compliance, we do not consider it appropriate to cut off the 6¢ rate for a prolonged or indefinite period. Instead, the 6¢ rate will simply be denied to any electricity generated with oil that fails to qualify as back-up fuel under the standards adopted here.

Finally, we grant GAS' request that propane not be considered "oil." During the period of gas curtailments, we did consider propane to be gas, with about 75% of it coming from natural gas wells; and propane is generally treated as interchangeable with gas.

By the Commission,

(SIGNED)

JOHN J. KELLIHER  
Secretary

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