

# Comment: The State is Prepared for a Short-Term Petroleum Crisis

In the preceding article, Thomas LaPointe focuses his attention on "... short-term supply crisis management caused by an embargo or national catastrophe..." and its implications for state and local policy making.

After a detailed analysis of the current energy situation in the United States and North Carolina in particular, LaPointe concludes that North Carolina is relatively secure in the areas of electric power generation and home heating. However, he feels that North Carolina is particularly vulnerable in the transportation area, should another petroleum embargo strike the United States.

In effect, he seems to feel the national and state plans relating to an energy emergency are inadequate. Specifically, they "... fail to address the physical need for moving people to essential activities." He also feels energy crisis programs that are totally market oriented—that is, the emergency programs increasing governmental regulation of existing energy plans must go beyond government "encouragement" or "guidance," and "market regulation." State governments must "propose concrete measures for moving people to essential activities during periods of substantially reduced gasoline supplies."

It is our intention to examine North Carolina's energy crisis plans—specifically the draft Emergency Energy Program, to determine if LaPointe's comments about the Program, particularly in the area of transportation, merit further planning response.

## Emergency Energy Program

A brief review of the draft Emergency Energy Program indicates that it consists of six major parts: an Energy Resources Overview; an Energy Outlook; Apparent Trends for North Carolina; Definition of an Energy Crisis; an overview of Emergency Energy Planning; and Administrative Procedures Pertaining to the Declaration of an Energy Crisis by the Governor.

The Energy Resources Overview reviews the historical context of our present national energy situation and the Energy outlook summarizes the major findings of the Federal Energy Administration's (FEA) 1976 National Energy Outlook.

The Emergency Energy Program draft states that the outlook on specific fuels in use in North Carolina is more uncertain than the national outlook. However, it appears likely that North Carolina can no longer rely on cheap energy in general, and particularly cannot rely on cheap natural gas or electricity which has fueled much recent growth outside of the transportation sector.

The Emergency Energy Program draft also states that natural gas will be the fuel most likely to be in short supply in the immediate future, and the effects of a severe natural gas curtailment during a "normal" or "colder than normal" winter on the demand and supply of alternate fuels are difficult to predict.

Should North Carolina face an energy crisis in the near future, the most likely situations appear to be: (1) natural gas curtailments in the area of 50 + percent, with attendant increased demand for propane, middle distillate and residual fuel oils, coupled with a cold winter; (2) spot shortages in the supply of petroleum products due to interruptions in the transportation and distribution infrastructure; e.g., localized pipeline malfunctions, labor actions, terminal fire, etc.; (3) spot increases in consumption in certain sectors. This may be brought about for example by an unseasonal period of cold weather; panic buying as a result of an announced or rumored impending price increase, etc.

In the longer term, crisis situations may develop due to: (1) possible withdrawal of large prime suppliers from the state upon termination of the mandatory allocation system; (2) imposition of another oil embargo; or (3) propane storage, distribution, or daily flow limitations at the Apex, North Carolina terminal and its associated pipeline.

Emergency energy planning entails the specification of certain actions to be taken to bring into balance the energy supply-demand equation. Generally, two types of actions may be considered to adjust an imbalance:

- (1) Curtailment of demand, such as, conservation, etc.;
- (2) Allocation of available supplies, such as, rationing or other allocation procedures.

The contingency measures outlined in the draft Emergency Energy Program are designed to reduce the demand for energy resources in short supply for the period of the shortage with the least amount of

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*John Sweeney is an economist with the Energy Division, North Carolina Department of Military and Veteran Affairs (DMVA). He has a B.A. from St. Joseph's College (Pennsylvania) and an M.A. in Economics from the College of William and Mary.*

*Jonathan Rogoff is an economist with the Energy Division, North Carolina Department of Military and Veteran Affairs (DMVA). He holds a M.A. in Economics from Columbia University and a J.D. from the School of Law, University of North Carolina, Chapel Hill.*



*Gasoline management is a part of the short-term program*  
Photo by Bruce Stiffler

"sacrifices." However, it is recognized that the basis of the state's overall welfare depends, to a large degree, upon maintaining maximum utilization of production facilities and income-generating activities. Thus, adequate preparation is the initial indispensable element of remedial action, should an energy crisis develop.

The nature of the remedial action required will depend on the seriousness of the crisis as judged by the Energy Policy Council, the Governor, and the Legislative Committee on Energy Crisis Management. The accuracy of any judgment or evaluation of the situation as well as the effectiveness of any action taken will depend entirely on the nature and accuracy of the information available to these entities, and on their ability to obtain that information in a timely manner.

In order to insure timely and equitable implementation of the contingency and emergency programs and to provide sources of information, coordination and arbitration at the local levels, six Area Fuel Councils should be established across the State. Additionally, three member County Energy Panels should be organized in each county. The major function of the Area Fuel Councils and the County Energy Panels will be to assist the Energy Policy Council to ensure equitable distribution of available fuels, coordinate support and assistance between wholesale purchaser-resellers, furnish timely information on the local supply situation, and coordinate assistance to wholesale purchaser-consumers and end-users. These groups will be the basic grass-roots organizations of the contingency programs. In the event of an energy crisis, the ability of the state to assist its citizens could be directly attributable to the quality of operations of these local bodies.

In general, the actions available to the Governor during an energy crisis are (1) appeals to the public

and private sectors for voluntary conservation measures such as increased car pooling, reduction of heating thermostat temperatures, etc., (2) mandatory measures such as utility load curtailments, rationing plans, etc., and (3) some combination of both voluntary and mandatory measures as the situation might dictate.

The draft Emergency Energy Program recognizes that emergency orders, rules and regulations applied across the board on an equal basis may by their very nature cause individual hardship or discomfort disproportionate to that experienced by the state as a whole. Thus, the Program provides for appeals or review in such cases. Exemptions may be granted to individuals or firms that demonstrate unique circumstances or hardship.

## Transportation and Essential Activities

LaPointe contends that some short-run solutions are needed to maintain essential activities if a future embargo arises. He states that the Emergency Energy Program "... fails to address the physical need for moving people to essential activities." He also contends that, "... fuel is made less available by restricting sales or requiring certain conservation practices, and emergency allocations are made to special hardship cases, but the fact that many people will have to get to certain locations is ignored."

It must be remembered that American society cannot be restructured in the short-run, nor can it be restructured by a single state's program. In the short-run, the best that any state can hope to accomplish is to utilize the existing structure to achieve its objectives—the ability to perform necessary activities with the least social disruption. While the short-term emergency program will cause some displacement, such as fewer trips to the supermarket, less dining out and an end to pleasure trips, a long-term response will require permanent alterations in our life-style. These alterations may be a function of inducements or rewards, price rationing, and curtailments or other mandatory measures. They will probably include the use of mass transit, more efficient cars, bicycles, and walking.

The various measures outlined in the Emergency Energy Program are designed to balance supply and demand for energy resources in the short-run with the least amount of sacrifice to the public.

In point of fact, the Emergency Energy Program does address the problem of moving people to essential activities. In a three phased approach to a declared energy crisis, the State's emergency energy planning contains sections concerned with transportation and gasoline-diesel rationing plans. The underlying assumption is that transportation is essential and can be accomplished through existing modes of transport. The phases of the Emergency Energy Program are detailed below:

### Phase I

(a) *Voluntary Measures - Public and Private*

### (1) *Transportation*

- \*— Encourage strict adherence to speed limits.
  - Ask motorists not to drive at least one day per week.
  - Ask motorists to combine several errands into one trip.
  - Encourage carpooling, vanpooling, and utilization of mass transit systems.
  - Encourage use of bicycles and walking.
  - Encourage individual and corporate automobile and truck conservation in everyday driving through tuneups, properly inflated tires, avoiding excessive braking and less use of car or truck air conditioning. Check air filters and PCV valves and replace if it is necessary.
  - Encourage motorists not to idle engines unnecessarily and not to race engines.
- \*— Ask for and encourage better use of turn-right-on-red law
  - Encourage use of public transportation (bus and rail) for trips out of town. Encourage bus companies to provide additional pickup points for passengers.
  - Ask for limiting unnecessary student driving to school.

### (2) *Voluntary Gasoline-Diesel Rationing Plan*

- \*— Encourage service station operators to limit hours for the sale of gasoline.
- \*— Encourage closing service stations at least one day a week. Stations in the same general area should be encouraged to stagger the days they will close. This would not apply to stations in isolated areas or truck stops.
- \*— Encourage gasoline purchases be made on odd-even day of month as determined by the last digit of the license plate number. Odd number - odd number calendar day, even number - even number calendar day. Personalized license plates with no number should be considered odd.
- \*— For those stations open, Saturday or Sunday will be open purchase day.
  - Encourage business to investigate and develop plans for staggering work hours so that employees can utilize mass transit systems more effectively. Mass transit officials should be consulted.
  - Truck stop dealers should be encouraged to limit sales to volumes that would be adequate for a reasonable distance depending on the severity of the supply situation.
- \*— Encourage volume or dollar limitations at the discretion of the dealer. It is suggested that where inventory permits, fillups be made to alleviate wasted fuel for the customer. (This

should not include reserve tanks and supplementary storage containers.)

- \*— Gas cans should not be filled except where necessary to move out-of-gas cars to service stations.
- \*— Encourage adoption of flag system to indicate availability of various services at service stations. *Green flag* indicates sale of gas to all customers. *Red flag* indicates station is closed. *Yellow flag* shows station is open for service only.
- \*— If the situation warrants, priority at the pump should be given only to those classes of customers in the (100) percent of current requirements category as listed in the Federal Mandatory Allocation Regulations for gasoline and diesel.

### (3) *Residential and General Public*

- Urge homeowners during heating seasons to turn thermostats down 6°F during the day and to 55°F at night. A six degree reduction in every home would save the equivalent of 600,000 barrels per day nationally or enough to heat three million homes.
- Encourage homeowners to use storm windows, heavy polyethylene sheeting, and weatherstripping.
- Keep fireplace dampers closed at all times when not in use. Use fireplace to supplement space heat.
- Leave draperies open on sunny days facing the sun. Close at night to protect against the cold.
- Close off rooms not in use.
- Reduce hot water temperature. Take shower baths instead of filling the tub. Operate dishwashers and clothes washers only at full loads to reduce number of washing needed. Use detergents designed for cold or warm water washing. Repair leaky faucets.
- Avoid letting hot water run constantly while washing dishes, shaving and similar uses.

### (4) *Industrial and Commercial*

- Encourage reduction of space heat. Turn thermostats down to maintain 65°F during working hours and 55°F during non-working hours. Exceptions to these efforts may be necessary for protection and operation of specialized equipment, e.g., hospitals, greenhouses, and computers.
- Encourage reduction of hot water heater temperature to 105°F.
- Reduce the number of trips scheduled for corporate airplanes and other motor vehicles. Combine several trips into one.
- Encourage combustion efficiency of boiler and

other process equipment.

- Promote use of the communication facilities in lieu of travel.
- Encourage industry to use rail shipments instead of trucks where fuel would be conserved. Improve intercity freight deliveries and service calls.

## Phase II

In the event that Phase I does not improve the supply situation, the Governor, upon approval from the Legislative Crisis Committee should institute Phase II.

Phase II could include, on a mandatory basis, those items in Phase I marked with an *asterisk*. The Governor should continue to ask for voluntary compliance to all other measures.

The shortage situation in one type of fuel may be having an adverse effect on other energy resources at this point. The Governor may consider instituting voluntary and/or mandatory orders for other energy resources. In matters relating to electricity and/or natural gas, the North Carolina Utilities Commission is the regulatory authority.

## Phase III

It is reasonable to assume that the crisis is of regional-national proportions if abatement of the shortage does not occur during Phase I and II after crisis declaration. Therefore, it is reasoned that national controls would be in existence at this point. However, the Governor may find it necessary to continue the mandatory controls for additional 30 day intervals, as approved by the Legislative Committee on Energy Crisis Management.

## Termination

Termination of controls and orders implemented by the Governor will end 30 days after implementation unless renewed by affirmative action of the Governor and the Legislative Committee. Termination will be by public announcement.

Implicit in this phased approach to the embargo scenario is the fact that some gasoline will still be available for consumption. The U.S. may not be energy independent, but it still produces 60 percent of its own petroleum supplies.

If the next embargo leads to the "worst case" then Phase III will be in effect and state planning will be pre-empted by the federal program. In either case, both the state and federal programs are designed to provide the consuming public the gasoline they need for essential transportation needs. However, some inconvenience will probably be experienced by the consumer. An embargo will remove from the market some amount of previously available supplies. No amount of planning will replace this lost supply. There is no way you can remove 40 percent of the current supply of petroleum without incurring some social discomfort. However, this does not mean essential activities must be curtailed.

The measures suggested by LaPointe imply a massive logistics problem. How do you make efficient use of the school bus fleets if they are fully utilized during the peak hours, from 7 to 9 a.m. and 3 to 5 p.m., picking up and delivering children? This is also the time that most men and women are going to and coming from work. In addition, he has stated, "... low residential densities make efficient mass transportation systems virtually impossible." Why would the use of the school bus fleet be any more efficient?

Many of LaPointe's recommendations such as rewards for carpooling, vanpooling and the utilization of mass transit systems are also encouraged by the Emergency Energy Program. However, in an emergency situation, where gasoline is in short supply, the above measures offer the reward of increased gasoline for other personal needs rather than monetary rewards.

LaPointe also believes that, "State and local government planners must go beyond 'encouragement' or 'guidance' and propose concrete measures for moving people to essential activities during periods of substantially reduced gasoline supplies."

The question of whether "... state and local government planners must go beyond 'encouragement' or 'guidance' " or merely make "... new rules for market transactions" seems to be more a matter of value judgment than obvious fact. LaPointe's reassurance that proposed non-market measures will affect more efficient (cost returning) results than a controlled market oriented program as proposed by the Emergency Energy Program is speculation. Realistically, political and economic considerations cannot be ignored. Any circumventing of the existing market structure would require a new, costly and cumbersome, bureaucratic structure. For any proposed program to be effective, it must be acceptable to both the North Carolina General Assembly and more importantly to cost conscious North Carolinians.

## Conclusion

In sum, it is not at all clear that North Carolinians are secure in the areas of electrical generation, home heating, or transportation in the event of a renewed petroleum embargo. At the same time, considerable effort has been given to designing emergency plans that will help to obviate these problems during an energy crisis.

North Carolina's Emergency Energy Program is a group of contingency measures designed to reduce short-term energy supply problems. LaPointe's conclusion that, "... our main worry in a future substantial petroleum supply denial will be finding alternatives to private automobile use ..." is a long-term and a costly problem that will have to be addressed by the federal government, since no state will have the resources to obviate the hardships of a substantial long-term embargo.

It is the belief of the Energy Division that the proposed Emergency Energy Program is capable of handling short-term supply problems, with a minimum of personal sacrifice and bureaucratic cost.