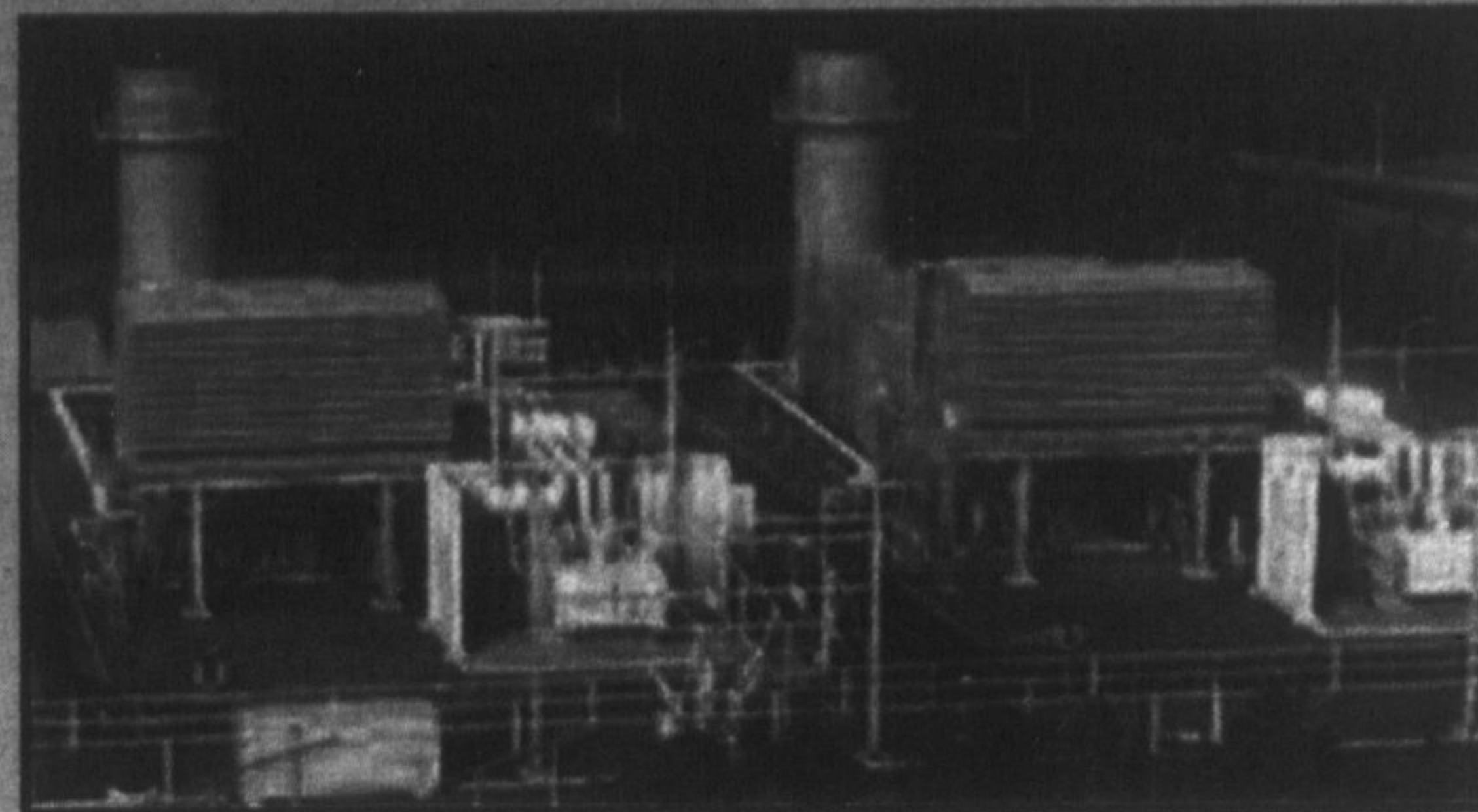


Here are the answers... and more

Why does Northern York Region need additional electricity supply?

Northern York Region needs additional electricity supply because:

- There is only one major transmission line serving the entire region (not 7 as some claim) and that line, as it comes into the region is already at its capacity – it is close to being maxed out.
- This means that there is a reliability issue when added demand occurs – unless more supply is available – brownouts or worse, failure.
- It also means that if the line fails – burns out, damaged by a windstorm, deliberate sabotage or a major problem on the supply system outside of York Region – there will be NO POWER AVAILABLE to the residents, public institutions or businesses in the region.



Some are talking about big gas companies, or Alberta from where the gas comes, profiting at the expense of Ontario consumers. What about that?

Well, natural gas prices to consumers are regulated by the Ontario Energy Board. So, the consumer knows the price is set at a fair rate compared to alternative types of fuels. Second, buying natural gas from Alberta helps the entire Canadian economy, just as Alberta companies buying steel from Ontario does.

So, if natural gas is to be the fuel source, how big a generation plant is needed?

The OPA, the Independent Electricity System Operator (IESO), and the local distribution companies, after years of study and observing trends in economic development and technology improvements, together have determined that a medium sized 350 MW single cycle natural gas generating plant is the best, cost effective, environmentally compliant solution. Such a plant will take up less than 10 acres, about the size of a box store and parking lot. It is likely that additional acreage would be acquired to provide an appropriate set-back for a plant.

The plant would consist of multiple turbines linked in series and properly baffled to reduce noise. Each turbine would have an exhaust stack to vent hot air, CO₂ and NO_x. The height of the stacks will vary according to the lay of the land at the final site chosen, but are likely to be in the range of 80 to 100 feet – actually shorter than some of the commercial grain silos in the area and much less visible than a municipal water tower.

Emissions of the plant would be licensed and monitored by the Ontario Ministry of the Environment.

What about noise?

Like other industrial facilities, natural gas-fired facilities will emit low levels of noise to some degree. For comparative purposes, the noise levels might be described as the equivalent of a gentle rainfall or a quiet residential area. The facility will be subject to provincial and municipal noise standards.

How much water does such a facility use?

Water use will be similar to other industrial facilities. In fact, such facilities mostly use air rather than water for system cooling.

Could the plant run more often in order to supply provincial supply shortages?

There is no incentive to operate a peaking plant more than is needed to meet the brief seasonal peaks because of the high cost of natural gas and the fact that these stations are not designed to operate flat-out over extended periods of time. Under normal circumstances, the plant would be called on to operate only after other facilities that are designed to run more frequently are already in service. Under system emergencies, all available resources are used to meet electricity demand.

But why does it have to be so big and so expensive and then operate only 10% of the time; that doesn't seem to make sense?

Well, it is much like building a fire hall for a growing community. Hopefully, it will never be needed, but that hope is not a reason to not build it. It makes sense to have a local fire hall rather than one far away.

But it also makes sense to have more than one fire truck in case several are needed to respond to one or more really big emergencies.

It is the same for the power plant. It makes sense to locate it near where it is needed and it makes good sense to make it big enough so that it can respond to a range of needs including when the transmission line is down.

Well, why can't we have several smaller 'fire halls' throughout the community?

Theoretically we could, but we would take up a lot of additional space and duplicate a lot of support facilities – parking lots for staff cars, offices, access driveways, etc. – to have the same ultimate capacity. And of course there would be additional management effort required to dispatch the fire trucks – or the electricity – to the right destination, at the right time. Overall, it would be more costly and less manageable.

But, there is also a difference in the analogy. Those who want a number of smaller plants, like more and smaller fire halls, also want to use a different type of electricity generation technology – cogeneration or combined heat and power (CHP) which they correctly claim is more 'energy efficient' than the simple single cycle plant. Cogeneration must operate – run – 80% or more of the time to achieve that efficiency. And they produce a great deal of heat that must be used. That means there has to be a use for the heat – especially on a hot summer day. That is a real challenge. Yes, there is technology that can turn that heat back into 'cool', but that adds real complexity and cost. This approach would be like having each of those fire trucks sitting with their motor running – waiting for a call or venting their heat and exhaust into the air – unless they were connected to something that could use the heat, too.

And at the end of the day, it just is more efficient to have one larger fire hall with sufficient fire trucks to do the right size of the job, when and where needed – even for the seven alarm fire which every one hopes will never happen.

How will this project be paid for?

The electricity generating facility, which will be a system resource, will benefit all Ontario electricity ratepayers. Its costs will be recovered through charges on province-wide customers' electricity bills.

What will happen if the gas-fired electricity generating facility does not go ahead?

The alternative is to build a new transmission line to serve the area of Northern York Region.

Still have more questions?

Visit www.powerauthority.on.ca