TOOLS FOR LIFE

A Series of Self-Help Booklets designed to help students beyond the classroom into Life

#6 (undated)

NUMBER 6

"YOU and the ENERGY CRISIS"

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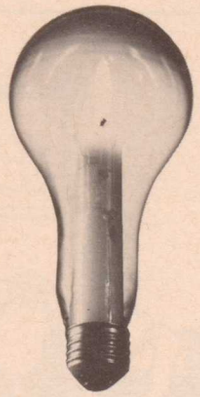
TOOLS FOR LIFE/Number 6

YOU and the ENERGY CRISIS

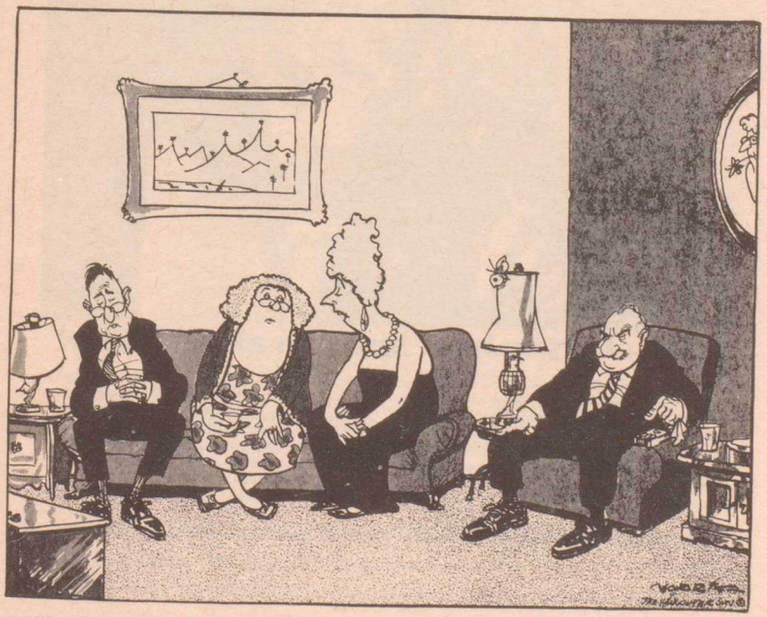
By: G. A. Spencer



THE OBJECT OF THIS BOOKLET

Believing that the next fifty years may be dominated by what has come to be known as the Energy Crisis, the purpose of this booklet is to attempt to explain how it arose, what it may mean to you in terms of your job and everyday living, what resources are available to cushion its effects upon you; and, finally, the hope that exists for a permanent solution. It concludes with a suggested personal philosophy which may help you to face an environment of rapidly increasing and unavoidable change.

As in our previous booklet, "The Shape of Jobs to Come", its purpose it not to plant readymade ideas, but to stimulate your own thinking about these and other challenges of real life outside and beyond the cocoon of family and classroom.



"It's the major ingredient of Rodney's conservation of vital energy program . . . switching the set off during commercials."

(with electric heat she can afford to be)

Only electric heat offers just the kind of heat you want, where you want it. Forced warm air furnaces, hot water boilers, baseboard heating units, floor or wall mounted units or completely hidden ceiling units. There's an electric heating unit designed to suit every structural or decorative requirement. And only electric heat gives you convenient room-by-room temperature control. For comfort. For economy. You can keep the nursery warm, while your bedroom is nice and cool. And you don't pay to heat rooms you don't use. If you're building a new home, or remodelling your present home, be choosy. First choose electric heating. Then choose the kind of electric heat you want.

B.C. HYDRO

18,000 homeowners have made electric heat B.C.'s hottest seller!

Have you ever considered that modern man is both a slave-owner and a slave-driver? It's a strange thought, isn't it, but then, many of the things we take for granted change shape when we look at them from a different angle. One of the things we most take for granted — and on which our considerable standard of personal comfort is based — is a continuing unlimited supply of energy. For every man, woman, and child on the North American continent in 1970, according to the Massachusetts Institute of Technology, this energy expenditure was equivalent to having 80 slaves labour day and night to keep us in the standard of living to which we have grown accustomed. By 1975 it will probably amount to around 100 energy slaves.

This Christmas, give her everything but the kitchen sink.

Christmas Day. The tree and the mistletoe, the cards and the gifts. And Christmas dinner - after which your wife spends the rest of the day at the kitchen sink, washing an enormous pile of dishes. Merry Christmas. Ho, ho, ho.

Take the kitchen sink out of her life. Give her an automatic dishwasher. It will clean pots, pans, glassware and fine china far more quickly and far more thoroughly than she ever could. With far less trouble, too. Just load everything into the dishwasher, switch on - and the job's done.

So give her a lifetime holiday from dishes. Give her everything but the kitchen sink.

Give her a dishwasher.

B.C. HYDRO

WIN A 40-PIECE SET OF WEDGWOOD FINE BONE CHINA (Worth up to $270)

See a dishwasher demonstration and register for the drawing at your dishwasher dealer's. Ten sets, in a choice of four designs, will be given away. Sponsored by "DISHWASHER ALL"

The fact must be faced that what we call "civilization" (which we are inclined to equate with "technology") derives from the use of inanimate energy. Energy in all its forms is the basis of civilization, and a direct cause of material prosperity. It is, furthermore, the best single index by which to measure the continued growth of technology and standard of living.

Up to comparatively recently, we have never had cause to doubt that we would always have as much energy as we wanted simply by pressing a button. We have, in fact, been encouraged in this belief by advertising campaigns of competing power utilities, urging us to become "all-electric" families, to choose between the respective siren songs of gas or oil (coal, in the public mind, having slipped to Cinderella status); by governments offering massive subsidies towards rural electrification; by energy symbols in the quaint shape of little men like "Mr. Watt" or "Mr. Therm" urging us to ever greater indulgence. We have been led by the nose into a land of make-believe, in which the sheer consumption of energy by countless gadgets has become a personal status symbol.

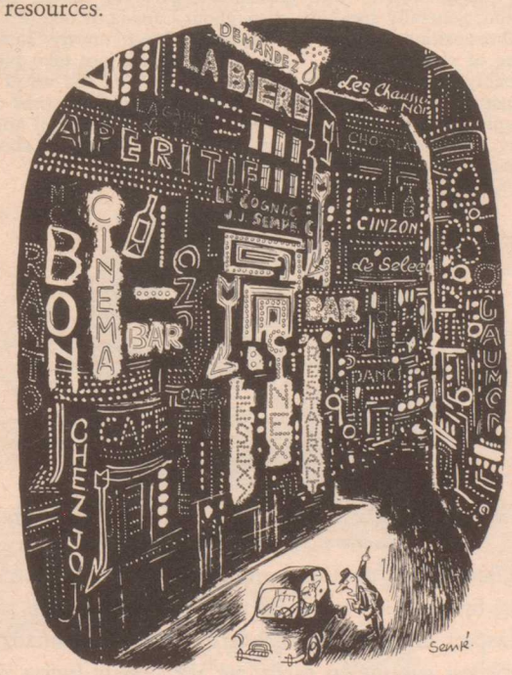
The new Cascade symbol on your next water heater guarantees all the hot water your family can use for at least 10 years.

Now there's a new standard of performance in electric water heaters. Every Cascade certified heater features greater element capacity for a constant hot water supply under the heaviest loads. Each unit has been CSA tested for efficient, economical performance and carries a full, unconditional 10 year guarantee. Only those manufacturers able to meet these rigid specifications are permitted to use the Cascade symbol.
Of course, in addition to the Cascade standards, you get all the advantages inherent in modern electric water heating: cleanliness, quietness, easy installation with no venting required and a choice of 40 or 60 Imperial gallon capacities.
Installation and purchase costs are low . . . and can be financed through your dealer or through B.C. Hydro with very low monthly payments. Operating costs are low, too.
Look for the Cascade symbol . . . and stop worrying about hot water for at least 10 years.

THE GOOD LIFE IS ELECTRIC . . . TURN IT ON!

B.C. HYDRO

The fact is, however, that we are already in the middle of a rude awakening. Our traditional sources of energy are running out. Taking the energy requirements of this continent alone, over the past 100 years demand has increased twentyfold. It is expected to double in the decade between 1970 and 1980, and to quadruple between 1980 and 1990. By the the end of the century, we may be calling for eight times the present energy supply. Getting it will be another matter: we are already considered the world's energy hogs, with one-twentieth of its people devouring more than one third of its total energy. As the undeveloped parts of the world raise their sights, we can expect fierce competition for energy resources.

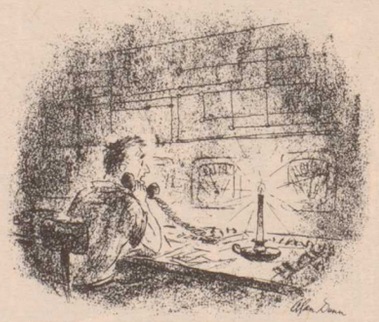


"I suppose you'll tell me that you didn't see the light!"

Furthermore, with world population expected to double by the year 2000, the outlook for continuing to supply the world with conventional fuels is exceedingly dim. Oil and gas may last a couple of generations; coal several centuries. Hydro-power, on which we rely so heavily in British Columbia, would not even come close to supplying present world demand, let alone the future, even if the latent energy of all the rivers of the world were fully developed.

This has led some prophets of doom* to forecase the final exhaustion of natural resources of all kinds within a century or so. Not only will fossil fuels run out, but iron, copper, zinc and the rest will become more costly as the veins run thinner and deeper. This, they maintain, may mean that as the number of people increases, resources per capita will decrease, with the muscles of men and animals once again applied in ways almost forgotten.

* Among whom, evidently, the new chairman of B.C. Hydro, Mr. David Cass-Beggs, is not to be numbered in the light of his statement (21.2.73) that: "There is no shortage of energy in the world. We have enough for the next 1,000 years before we have to do much scraping . . ." In a later statement (15.12.73) he qualified: "The general prospect for energy use in British Columbia and, generally speaking, throughout Canada, is one of a fairly steady but gradual transition from a primary dependence on the fossil fuels to a majority use of electric power. This transition will not take place suddenly; it will probably take at least 30 years, and possibly 50, but we in the electrical industry must plan for this transition. While the overall increase in energy use on a per capita basis will be quite small, the change from oil and natural gas to electricity, will mean a growth rate for electrical energy of about 8.0% per year for years to come." This appears to be a minority view.

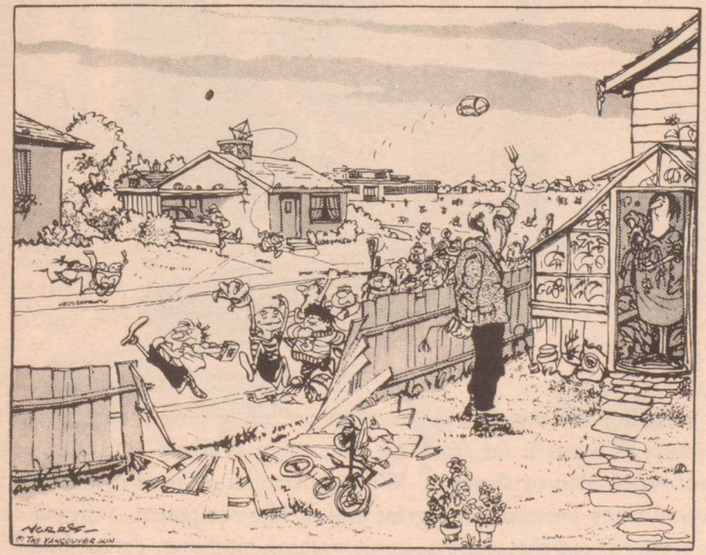


"Con Ed Queens Division speaking, Madam. Just what is the nature of your problem?"

We shall have to get used to living in a crisis atmosphere. Scarcely a day will pass by in which our news media will not reveal some further worrysome aspect of the growing energy crisis. In Canada, as one of the energy-richest nations on earth, we are already living in a state of siege as others less privileged (or even greedier) lay claim to a share of what they feel may be a gift of nature lavish beyond all reasonable need. As a result, no aspect of our lives will from now on remain untouched by manoeuvres on the chess board of power resources. What follows is a sketchy attempt to rough out the scenario of a power-play, which may become increasingly familiar as we are all drawn into the plot. And as we can't bow out or avert our eyes, yet's take a cool look at some of many possible effects in our daily lives.

HOW WILL IT AFFECT US?

In the cities in which most of us live, it may mean that we shall have to adapt to living for at least one generation under some of the conditions which faced Londoners during the Blitz. A foretaste of what this may mean was provided in February 1972 during the three weeks in which London was forced to operate a program of planned power cuts due to a strike by coal miners. Factories went on part-time schedules; lay-offs added to existing unemployment; workers and residents in sky-scrapers were more or less marooned while the elevators were out of action: dairies had to adjust their milking schedules; everyone worried about frozen food; people watched TV only if their locality was not on scheduled black-out. In short, it was like living in a war without bombs. Modern megapolitan man, particularly in North America, simply isn't geared to face sudden deprivation without psychological preconditioning.



". . . and what does our government do about the energy crisis? . . . triple the baby bonus!"

With or without clear warning, all megapolitan areas may expect something of the kind in varying intensity over the next fifty years. Apart from anything else, a considerable *personal* adjustment will have to be made, as it is generally accepted that in terms of adaptation for survival we are no different from Darwin's turtles on Galapagos.

WHAT IT MAY MEAN TO THE FAMILY . . .

For one thing — and at almost any moment now — it may mean the end of the right to draw at will on abundant, low-cost power, simply by writing a monthend cheque. The "all-electric" family beloved of sales promotion departments in the forties, fifties, and sixties, may already belong in the waxwork museum. Following time-honoured exhortations to voluntary restraint (ineffective as ever), it seems likely that families or dwelling units will be rationed to a given energy quota. The meter will be credited with so many units, and the family may then have to decide whether it wants to blow the works on a dishwasher, or eke it out over reading lamps, cooking, one small radio/TV, and an occasional hot bath. A dial on the meter will show the diminishing energy balance. This may be expected to form a stimulating subject for family debate.

"Now look who's wasting watts!"

Suffering the temporary inconvenience of a power outage lasting minutes or hours is far from the same thing as living with the *permanent* expectation of shortage. We may have to get used to the frustration of being possessed of a great deal of idle equipment — in our case, to begin the sad list; shavers, irons, washing machines, dryers, blenders, waffle irons, can openers, ice-crushers, garburators, power tools, polishers, festive lights . . .

Marching back out of the past may come such primeval living tools as treadle sewing machines (or simply needle and thread), hand tools, scrubbing board, hand irons, manual can openers, mincers, coffee mills, razors, curling irons, lawn mowers, hedge clippers, candles; and, for cold nights possibly, stone pigs and flannel nighties.

WHAT IT MAY MEAN TO INDUSTRY . . .

By the same reasoning it seems unlikely that, if the crisis dictates a domestic power ration, industry will not be similarly affected. However, where the individual may well be left with a choice, even if reduced, as to how he uses his ration, it may be doubted whether industry will continue to be permitted a similar free choice in what it manufactures or offers by way of service. A considerable measure of direction may be expected. Planning may have to become a way of life rather than a temporary expedient. As an example, when energy is rationed, would we — meaning society — really wish to have 48 factories manufacturing deodorants for all mentionable and unmentionable parts of the human body? Might we not feel that soap or bicycles or books ought to rank somewhat higher in the priorities? In any event, whatever we may in the past have meant by "freedom" is almost certain to be modified as we react to the exigencies of the energy crisis. Will not the energy crisis alone put to the practical test the implications advanced by B. F. Skinner's "Beyond Freedom & Dignity"? If, as seems likely, Skinner's thesis will be forced upon us whether we like it or not, educational institutions — and especially community colleges — may be required to play a key conditioning role in inculcating the behavioural patterns necessary for survival.

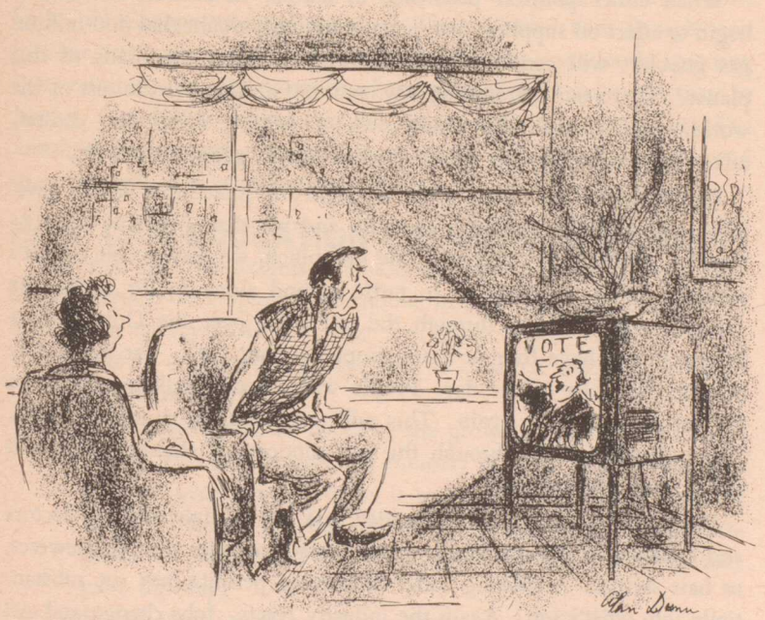
HOW IT MAY AFFECT JOBS . . .

In 1971 a cold spell in Ohio created a temporary gas shortage. As a result, there were over 50,000 layoffs in affected industries. The effect on British industry of power rationing caused by the three-week coal miners' strike of February 1972 is reflected not only in the dismal balance of payment figures, but may have been a direct cause of the subsequent devaluation of the pound sterling. The industrial dislocation brought massive layoffs and deepened the economic crisis of the country.

Britain is only the model. Wherever in the industrialized world unplanned power shortages occur, similar effects may be expected to take place. The increasingly structured life of industrial man does not adapt well to sudden emergencies.

Where the energy crisis creates *planned shortages,* dislocation may be less severe. A factory that knows in advance that the power will be cut off at a certain time, will react by *planned* layoffs. It is less likely to make snap decisions. Regardless, however, workers affected by spasmodic layoffs may tend to search for less unstable employment. There

may thus be an increasing number of workers on the move in all directions, and not just looking for work of the same kind under more stable conditions. Vastly greater and more flexible re-training schemes may be required to cope with this expanding migrant labour force.



"Now, there are some watts I could gladly save."

If, as indicated earlier, power shortages force society to decide what it is socially desirable to manufacture, whole industries may face closure. The cosmetic industry may be an example. Other industries may have to amalagamate and streamline a luxuriant product mix into fewer, standard lines. This might apply, for example, to the pharmaceutical industry, or the appliance industry. In searching for a new job, a worker may have to think hard about essentials. What seems likely to survive? What seems likely to go to the wall? In this light, a bakery may possibly be a better bet than a place turning out powder puffs, and while it is unlikely that we shall revert to the primitive, neither will the energy crisis permit us to continue dallying along the primrose path of conspicuous consumption and outrageous waste. A bit of thought, along with the working of our natural survival equipment, will, one hopes, show the way.

LET'S MAKE A MODEL . . .

Supposing that we consider how the energy crisis may affect one particular industry, and draw from it what conclusions we can. Let's take the automobile industry.

When either political problems, or simple exhaustion of reserves begin to affect oil supplies, does anyone seriously doubt that 400 million gas gobblers will continue to be allowed to infest the roads of this planet? That's our 120 million, say, and 280 million for the rest of the world, together with the whole mess of satellite industries: dealers, advertisers, salesmen, gas stations, repair shops, gadget stores etc.

But if there's not going to be enough oil, something has to give. The crisis will not explode overnight, and we shall probably react by stages.* As supplies experience the first pinch, we may decide that it's wasteful to allow one body to rattle around alone in his loved one (already you pass free through the toll gates over the Golden Gate Bridge if you have four or more people in your car). Car pools may become the order of the day. People will actually walk one block to the corner drug store again. This will cut down the number of cars. The industry will go through the first motions of change. Jobs will shrink and shift around.

Some time later, it may be decided that it's all right say for doctors and farmers and bureaucrats to drive, but not younger sons, housewives, or hair stylists. A pecking order of driving permits may cut substantially into what's left. Again the industry reacts. Jobs change and get shuffled around. More disappear, but a few new ones appear. The accessory industry fades away; refineries consolidate; gas stations remain only at key intersections; dealer organizations shrink . . .

Finally, with total exhaustion of oil staring us in the face, the gasoline engine is abandoned. In its place appears a small, practical, electric automobile, powered perhaps by a brainchild of solid state physics. Again the industry reacts, this time possibly the other way. It starts making the new cars. Depending on the rules we set ourselves, people will acquire and drive them. The gas stations are gone, but realigned repair stations will re-appear. Presumably, the love affair will start all over again, but nothing will be quite the same as before. You can fill out the picture yourself: the automobile has, after all, generated more dreams than Sheherazade.

Perhaps overall there will be fewer jobs, and the classifications will

*It did! This leaflet was first drafted in October, 1972.

change. But this may owe as much to automation as to the energy crisis. The point is that automation affects *all* industry, and not just one. Jobs are shrinking all around as fewer hands guiding sophisticated tools produce more. But in the area we are discussing, the energy crisis may well dictate the rate, type, and pressure of change. Change is the keyword. Change means re-training. Those blessed with farsight and initiative may choose to anticipate compulsion by consciously selecting their retraining in what remains of the area of free choice. It may be hard to face, but re-cycling may not always apply to waste paper. The moral, of course, is to recognize the nature of change as it happens, and to act according to personal circumstances.

HOW CAN EDUCATION MINIMIZE THE CRISIS?

The role of post-secondary education, particularly technical/vocational/personal-development education, may perhaps be expected to react to the energy crisis in at least four major ways:

(1) It will, of necessity, be required to continue teaching the skills of the moment;

(2) It may anticipate the needs of the growing crisis by continuous liaison with government and industry in order to plan necessary training programs. Perhaps it may even become the training arm of industry, moving out, where necessary, to conduct programs on location. Pilot programs in specific industries may pave the way;

(3) It may develop the guiding principle not merely to train for specific skills, but to attempt to inculcate in each individual the greatest measure of personal flexibility in attitude towards change. This may become a dominating consideration. A foretaste is indicated (see Tools for Life, No. 1) by certain major industries already specifying that they prefer their trainees to have no special skills whatever, provided that they show evidence of personal flexibility and display a positive attitude;

(4) Community Education Services may experience substantial growth in order to fulfill their role of channelling people's increasing leisure into personal development programs. Contingency plans may be laid to meet the needs thrown up by sudden industrial dislocations, creating a kind of buffer zone in which to cushion the shock of readjustment. Community Colleges as a whole may gain increasing recognition as an instrument of change.

A Practical Personal Philosophy to Meet the Energy Crisis . . .

(1) Recognize the inevitability of change: all life is change;

(2) Keep an open mind about any new situations you meet: above all, don't prejudge issues;

(3) Be prepared to accept the need to change your job at least half a dozen times in your lifetime: the jobs of the eighties are not even dreamed of in terms of the seventies.

(4) When confronted by the need to change, don't wait until the last minute: give yourself time to change under the most pleasant rather than under the most adverse conditions;

(5) Never consider yourself incapable of mastering any job within your reach: you'll never know until you try;

(6) Hold steadfastly to the view that personal attitude is 90% of the battle: it is relatively easy to graft new skill buds on to a willing and receptive rootstock;

(7) Be both interested in, and inquisitive about, all that surrounds you: the knowledge stored is already building towards an easier transition when the next change comes alone, as it must;

(8) If, having made a change, some aspect of the new furrow is not immediately as acceptable as the old rut, make light of it: treat it as you would a new, exciting game;

(9) Look ahead by making one of your hobbies the basis for a possible job switch: no trousers ever slipped when held up by both suspenders and a belt.

TO SUM UP . . .

Fifty difficult years lie ahead as the energy crisis deepens. After pressing into service all possible sources, shortages and blackouts may become the pattern of our existence. At best, we shall only be able to apply palliatives. This patchwork of expedients may be expected to move us from crisis to crisis until, at some distance as yet too remote to offer comfort, the prospect of virtually unlimited fusion-power offers hope of a final planetary solution — provided our technical ingenuity is able to rise to the challenge. Were this to be achieved, it would perhaps transcend in terms of its impact on human development the discovery of the wheel, fire and agriculture. The hope that it will be achieved must help to sustain us through a new Dark Age in which the adaptability of each and every one of us will be tested to the utmost. You too will have your role to play in the gathering crisis. Start by thinking about it now.

"TOOLS FOR LIFE"

Booklets so far published in the series:

(1) Creative Job Search
(2) The Effective Job Application
(3) Getting to See the Man and
Selling Yourself at the Interview
(4) Creating Your Own Job
(5) Jobs: The Shape of Things to Come
(6) You and the Energy Crisis

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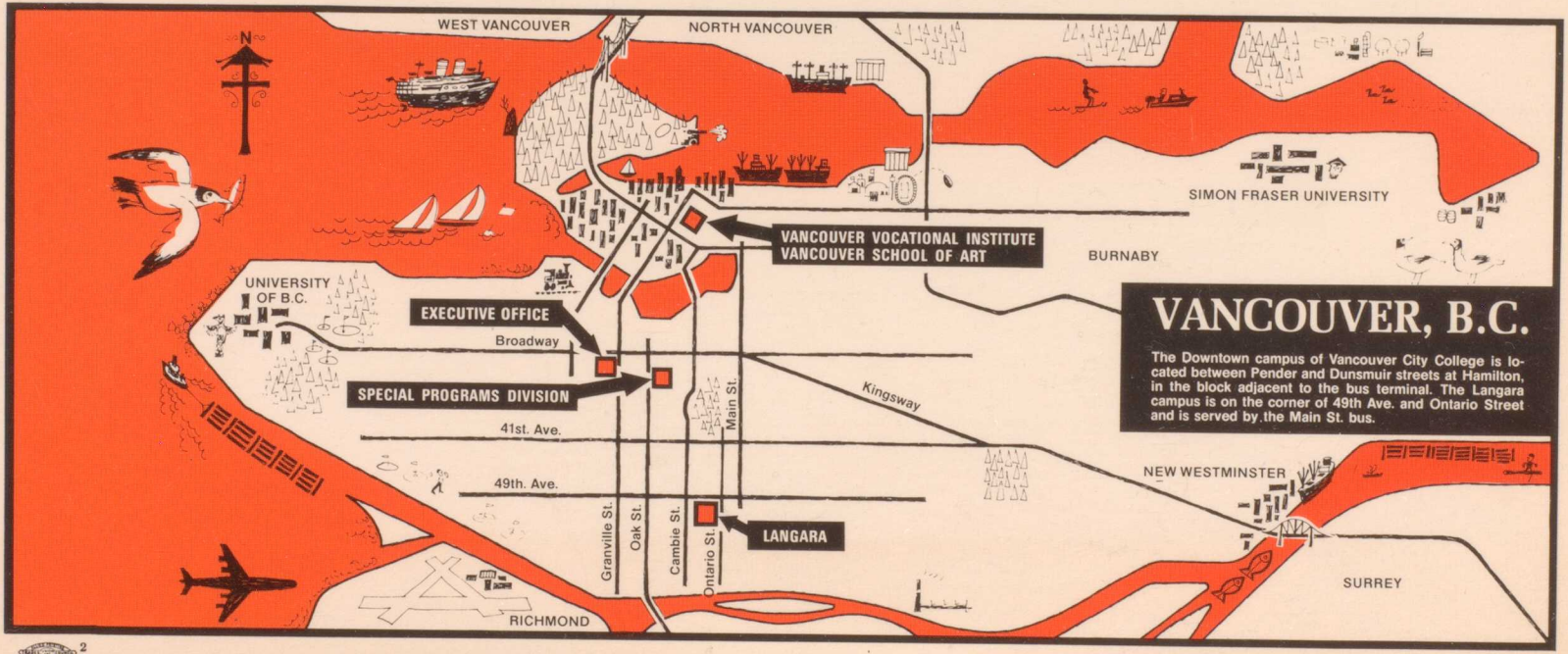
Vancouver City College is an educational complex consisting of five divisions:

The Langara Campus,
The Vancouver School of Art,
The Vancouver Vocational Institute,
The Special Programs Division,
The Community Education Services Division.

In morning, afternoon and evening classes held in centres throughout Vancouver, the College offers the most flexible arrangements whereby those in the community who wish to further their education may undertake studies to obtain a variety of diplomas or certificates.



VANCOUVER, B.C.

The Downtown campus of Vancouver City College is located between Pender and Dunsmuir streets at Hamilton, in the block adjacent to the bus terminal. The Langara campus is on the corner of 49th Ave. and Ontario Street and is served by the Main St. bus.