

# Energy And Employment

**C**hanges in the intensity of commercial and industrial energy use together with shifts in energy consumption patterns have implications for employment in Canada. While some have advocated the development of alternative energy sources and the promotion of conservation for the express purpose of creating employment, others regard the employment effects of energy policy as secondary. The Committee believes that a more thorough understanding of the relationship between energy and employment is essential and this section discusses some of the issues involved.

Full employment is an important target in developed economies. Conflicts arise, however, because full employment is only one of many societal goals: controlling inflation, promoting industrial development and equitable distribution of income among people and regions, and achieving energy self-sufficiency are examples of others. Unfortunately, the simultaneous attainment of these objectives continues to elude both governments and the natural workings of the economy.

Our economy depends upon plentiful energy. With energy being a vital input to production, changes in its use, supply, price and type influence market reactions and, therefore, the employment of labour. Beyond this, government policy and altered consumer tastes concerning energy use can also affect employment. These interactions are discussed here.

Increased economic activity generally has the effect of increasing the demand for labour. Increasing energy prices tend, however, to have a depressing effect on labour activity because as the costs of production rise, output cutbacks generally follow. Nevertheless, even in the short run, labour is often substituted for energy when the price of the latter rises. This may well result in a net positive effect on overall employment even if output levels fall. In the longer run, if industries can substitute other inputs for more expensive energy, output levels, and consequently employment, may not necessarily fall. If, on the other hand, the longer-run effect of higher energy prices is reduced economic growth, then employment may decline simply because aggregate productive capacity is reduced.

At the level of the consumer, other goods will be substituted for energy as its cost increases. For

instance, people will insulate homes if this is cheaper over time than spending more on space heating. Substituting insulation for energy stimulates the insulation industry and bolsters its associated employment. There is evidence to support the view that the positive effects of energy-saving options on labour more than offset labour losses in the replaced energy supply industries. This is not to say though that disruptions within the total labour market will not occur.

In the auto industry we are witnessing sales reductions, production cut-backs and employee lay-offs occurring at least partially in response to changes in the demand for energy. The main cause of the demand change in Canada though is probably attributable to rising costs for automobiles themselves and to changes in consumer tastes, because the real price of domestic gasoline has remained relatively stable over the last decade. Regardless of whether the reduction in demand for the typical, large North American automobile is in response to the rising cost of fuel, to the cost of the car itself or to preference changes, adjustment is hindered by the inflexibility of the automobile production process. Such rigidities lead inevitably to employment losses.

It is possible to substitute labour for energy in transportation by walking and bicycling, or it is possible to produce vehicles very labour-intensively (as is done in Rolls Royce production), but these solutions are costly in time, convenience and dollars.

On the other hand, if energy prices continue increasing, the energy supply industries will be stimulated and employment in that sector will expand. More oil and gas wells will be drilled, additional tar sands plants will be considered and the development of alternatives to conventional oil will be encouraged.

Decentralized energy options lead to regionally dispersed benefits in employment. For some areas the net employment benefits are clearly positive because an industry develops where no activity existed before. This improves local economic conditions and stimulates local growth. The overall effect, when total Canadian employment effects are weighed, is not so clear however. Regional employment gains must be measured against real income losses if the decentralized industry provides energy which costs more than energy obtained from a