AUSTRALIAN INSTITUTE OF ENERGY

FIRST NATIONAL CONFERENCE 1979

THE UNIVERSITY OF NEWCASTLE

7 FEBRUARY 1979 - 7.00 P.M.

SCIENCE, ENERGY AND THE LAW

The Hon. Mr. Justice M.D. Kirby

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THE LAW UNDER STRAIN

The law, and our society governed by the law, are going through a period of great challenge, change and stress. Listen to how one of the British Lords of Appeal in Ordinary recently described a little reminiscent stocktaking :

> "[T]o celebrate a birthday anniversary which ... I personally would have preferred to ignore ... a little stocktaking seemed called for. The process brought home to me yet again that, during my lifetime, surely some of the greatest and most astonishing transitions have taken place. Just think: from horse to jet; from steam to nuclear fission; from rifle to hydrogen bomb; from magic-lantern to T.V.; from workhouse to Welfare State; from a proud and mightly Empire to a junior member of the European Economic Community; from thrift to hire purchase; from the [Judges'] dress allowance to the lady High Court Judge; from original sin to the Id; from the unmentionable topic to State support for family planning; from "the love that dare not speak its name" to "Gay Club" advertisements in The Spectator; and from "Little Women" to "Lolita" ".[1]

Let me be blunt, lawyers generally feel uncomfortable in the circle of scientists and technologists. Ours is an art which can rely upon the general immutability of human nature to ensure a certain continuity in the way we go about things. Few professions and few disciplines are more resistant to change. But wide-eyed amazement at social developments (many of them spurred on by science and technology) will no longer do. Increasingly, the business of the law and lawyers is the accommodation of the legal system to the challenges of science and technology. The law and lawyers of the future will be more cognisant of scientific developments and problems and more sensitive to the part which the law can play in furthering advances in society identified by scientists and technologists.

The thesis of my talk is a simple one. Laws, of their nature, tend to look back. They tend to address one generation in the language and with the social values of previous generations. Whether one thinks of a written contract between parties or a statute drawn by Parliament at a particular time, or the judgment of the courts which forms part of the common law of our country, it is of the nature of law to be in a final, settled form. Society does not stand conveniently still. A tension is therefore developed, complicated by the input of new ideas, new social themes, new industrial and economic circumstances and new science and technology many of which may not have been conceived when the legal principle was established.[2]

ENERGY AND SOCIAL CHANGE

The issues that will be considered in any conference addressing Australian needs for energy are simply illustrations of the rapid way in which things change. Even the average Australian has begun to perceive that the cheap energy, in the form of oil, which was the major ingredient of the post-war economic boom, is a thing of the past. The Minister has pointed out :

> "The days of cheap energy from oil [are] over and very importantly, stability of supply [can] not be guaranteed. Therefore, to maintain standards of living, to sustain economic growth and to avoid serious disruptions there [is] clearly a need to reduce dependence on oil, especially imported oil.[3]

Although it is generally known that we are about 70 per cent self-sufficient in oil and have large deposits of black coal and other sources of energy, watchers of events have learned that our reserves of the prime form of energy, oil, are being swiftly depleted. By 1985 our self-sufficiency in oil will have dropped to about 50 per cent and, although we will be exporting other forms of energy, our import bill for oil will grow markedly.[4]

The destabilising effects upon the economy and therefore upon social tranquility, of dependence upon external sources of energy are well documented. The U.S. Deputy Secretary of

Energy, John O'Leary, told an Atomic Industrial Forum at a time when the Congress was struggling with President Carter's energy proposals

> "I give you the case of Great Britain around the time of World War I when the country had had a flourishing economy for 100 years. There had been the period in which Britannia ruled the waves and virtually everything else in sight. Then in a few short years they found that because they had to import more than they were able to export, they were eroding their whole international position. Ever since that time ... the economy of the United Kingdom has been in and out of trouble and occasionally in serious trouble". 5

Mr. O'Leary drew parallels for the United States. The message was simple. Our societies face unpleasant decisions:

> "I would imagine that by 1982 or 1983, unless we become disciplined in our use of energy, unless we force ourselves to do some things that are, at least at the moment, unpleasant, then we will find [declining real disposable income] setting in in this economy chronically".[6]

The question of energy alternatives and the decisions facing the Parliaments and people of Australia are political questions, into which I will not intrude. But the message of the events since 1973, the statements of the Minister, the grants for research on alternative energy development and the pronouncements of the Australian Minerals and Energy Council,[7] the National Energy Research Development and Demonstration Council[8] and others make some things clear. First, priority must be given to informing the Australian community of the needs for energy conservation and the ways in which it can be achieved. Secondly, every effort must be made, by research and otherwise, to develop acceptable, alternative sources of energy and to facilitate and encourage their use.[9]

THE ROLE OF THE LAW IN THE ENERGY CRISIS

What role is there for the law in these questions? Are they simply, political, economic and emotional issues to be resolved by public debate, election campaigns and the market economy?

The Minister posed the question in a speech to an Energy Symposium last November:

> "What is the proper role of government in relation to energy conservation in buildings? One could conceive of the government's role ranging from mandatory measures, su as compulsory insulation through building regulations, to less direct measures, such as the provision of informatio to architects, builders and home buyers".[10]

This question, that of the law's potential role, is one that, briefly, I want to address. There are nine legislatures and eleven law reform bodies throughout Australia. Many of the l reform commissions, including the Australian Law Reform Commission, are (as I will show) seeking to modernise the law to make its rules relevant to the new conditions of science ar technology. None of the Commissions, Commonwealth or State, has been asked to survey comprehensively the necessary impact on the legal system of changing energy sources. However, some of them have received tasks from their respective governments, that bear indirectly upon the problem.

For example, Mr. Ellicott, when Attorney-General, asked th Federal Commission to scrutinise the question of the "standing' which people should have in order to challenge the constitutionality or other lawfulness of conduct to which they object. In our country, normally, a person must have an actual, immediate or commercial interest of his own and cannot assert that courts should hear his complaint simply because he objects to certain conduct by others or even considers conduct to be unlawful.[11] In the United States, a wider view is held of "standing" rights. This has permitted community groups, associations and lobbies to challenge in the courts the legality of government and commercial operations, to an extent that simply would not be possible under our legal procedures.

One such celebrated action was brought in 1973 by the Sierra Club to compel the United States Atomic Energy Commission to prepare an environmental impact statement on its nuclear power export program.[12] An order was issued. Neither under our Commonwealth environment legislation, nor under the General Rules of Court Procedure would such a body usually be considered to have a sufficient legal interest to initiate court consideration of its claim in Australia. A

question which the Australian Law Reform Commission is considering is whether it is appropriate to lower the barriers to standing. Advocates urge that our citizens are now more frequently organised in responsible and concerned community groups. They say that we must activate the courts to uphold the rule of law. Critics suggest that many disputes are better settled in a political forum and are not apt for resolution by judges, who may not have all the facts and may not be responsive and answerable to community opinion.

This debate is still before my Commission and no conclusions have yet been reached. Obviously, it has implications far beyond the energy field. It really asks the question: What is the proper province and function of courts in our form of society?

SOLAR ENERGY AND THE LAW

One law reform body in Australia has been asked to look directly at the implications for the law of a particular form of energy, namely solar energy. An Information and Discussion Paper issued by the Law Reform Committee of South Australia in June 1978 summarises the way in which the development of alternative energy sources (in this case, solar energy) impacts the legal system. Some of the consequences are obvious. Others are more surprising. I understand that lately, the South Australian Minister has taken this issue within his own administration. The questions raised by the Committee, chaired by Mr. Justice Zelling remain apt for consideration, nonetheless.

I should say at the outset that, just as the Australian Law Reform Commission seeks in all relevant tasks, to secure the assistance of scientists and technologists, this course was also followed by the South Australian Committee. For the purpose of its work on this project, as well as the Judge and a Queen's Counsel, members comprised an officer of the Ministry of Mines and Energy, a Dean of Engineering and a Senior

Lecturer in Physics. We will, I believe, see more inter-disciplinary work of this kind: lawyers and scientists workin together to improve the legal system and to make it more relevant.

To the Committee's paper is attached a schedule which catalogues the legislation of a large number of States in the United States dealing with various aspects of solar energy. Many of them provide for financial incentives to convert, in part at least, to solar energy. Others provide guarantees for solar access. Still others make provision for standards for solar systems. Finally, legislation by way of building code provisions (as foreshadowed by the Minister) has been passed in a number of jurisdictions of the United States.

The Committee, on the basis of expert advice, reached a conclusion that direct use of the sun could provide up to twelve per cent of Australia's energy requirements by the year 2000. Large scale production of fuel from crops, already under way overseas, could contribute another eight per cent. Addressing itself to energy conservation and building, the Committee conceded that "changing the public attitude towards energy conservation in their homes will not be easy".[13] It referred to the lead which governments could take in building design, insulation and orientation, as a first step. It then admitted to a special difficulty which it faced as a committee of lawyers and scientists:

> "Lawyers are traditionally taught that issues are only to be decided on the basis of actual conflicts. The task facing the Committee was thus somewhat different from the usual law reform problem in which the adequacy of existing law is assessed on the basis of substantial experience. A more forward looking analysis is necessary, in which emphasis is placed on the way in which the current administrative, financial, legal and institutional framework should take into account present solar energy use and to some extent at least anticipate future technological developments".[14]

The Committee then made a number of positive recommendations. Amongst them were the following:

(1) The mandatory use of insulation in public buildings and housing and, at least, the ceilings of all new houses.[15]

(2) The Government should consider establishing an Energy Advisory Service to provide the same kind of assistance presently provided to consumers generally by the Commissioner of Consumer Affairs.[16]

(3) The Building Act and Regulations should be amended to facilitate incorporation of solar systems.

(4) Public electricity and gas authorities should reflect in their tariff structures the contribution of solar energy systems to the reduction of peak demands.[17]

(5) The existing law does not grant any right of access to the sun, although easements can be used to exchange ownership of air space. Legislation could promote the use of solar energy access by defining the scope of unimpeded access necessary to use solar collectors effectively.[18]

(6) The protection of unimpeded access to the sun and the provision of an individual right to such access could be considered as part of planning law. "It would be possible to declare some residential zones as solar zones and consider limitations in those areas on building and vegetation so as to ensure access".[19] Increased density allowances could be given to developers who showed intended energy conservation or solar use in their plans.[20]

A number of other, specific recommendations are made about funding, Commonwealth leadership, co-operation with the States and so on. Much of the United States legislation relates to the provision of funding encouragement for energy conservation. Some, such as the New Mexico Solar Rights Act, effective from 1 July 1978, includes the creation of general rights:

> "The legislature declares that the right to use the natural resource of solar energy is a property right ... known as a solar right".[21]

In exploring the way in which current laws could be moulded to fit the new problem of access to the sun, the South Australian Committee had some interesting things to say about ancient times and medieval England:

> "Access to light has been highly valued since at least the time of the Temple of Apollo at Pompeii when the local government authority purchased for a considerable sum the right to intercept daylight by constructing a wall around the temple's precinct. ... There is also considerable precedent recognising the importance of daylight in buildings in the English common law. The "Doctrine of Ancient Lights" created by English judges dates to Mediaeval times. Under this doctrine property owners are entitled to receive light across adjacent land for reasonable use and enjoyment of land, if they have received that light for [as long as people remembered]. The required ... time ... has varied with English legal history. The Statute of Westminster I in 1275 set the date that Richard I assumed the throne (6 July 1189) as the beginning of "legal memory". In later years this period was changed to 60 years and in 1623 reduced to 20 years ...".

In most parts of Australia the doctrine was abolished by statute. Because there was no right to access to light and sunshine, the law of nuisance would not be available to protect an adjoining owner against the construction of buildings which deny him that access. As rights to sunshine become more valuable, so the law must mend its ways.

I have taken the case of solar energy simply because of the recent report of the South Australian Law Reform Committee. Doubtless, similar reports could be prepared upon the impact of other forms of energy. The Committee does mention in passing the implications of wind energy for the law. Although, doubtless, similar problems of access to wind would arise for the law, the issue was not really explored.

The prospective development of other energy sources from water, coal, waves, natural gas or nuclear energy will undoubtedly have an impact on the private law and require careful consideration and advice to Government. The differential use of different kinds of fuel and the limitations that may have to be imposed upon the consumption of fossil fuels, so that they can be preserved for uses most appropriate to them, will all require laws in the future. It is not difficult to see that, to adapt the words of the United States Deputy Secretary for Energy, some of those laws may, at least for a time, be unpleasant to a society grown accustomed to abundant petroleum energy.

TECHNOLOGY AND THE LAW

Although the Australian Law Reform Commission has no present tasks specifically addressed to energy needs, a number of the assignments given to us by the Government show a concern with the general question of the impact of science and technology on the law.

Perhaps the best known is our task on Privacy protection. We have been asked to assist Parliament by advising the Government upon the new laws that should be introduced to provide adequate legal protection for individual privacy in Australia. Throughout the Western world, legislatures are rapidly enacting laws aimed at preserving individual integrity in secure and accurate information, particularly that stored in computers. The computer is no longer "an intellectual toy". In 1954 there were about 5,000 of them in use in the United States. A mere decade late, 30,000 were fully operative. Now it is said there are more than 100,000. The exponential growth of the development of information systems will be known to all of you.

The features of computing which raise concern are well catalogued: the capacity of computers to collect vast amounts of information. The fact that this is retrievable at ever-increasing speed and ever-diminishing cost. The capacity to combine material supplied for different purposes. A relatively new profession. An inevitable tendency to centralisation. All these features spell a threat to individual values which our kind of society traditionally seeks to protect and preserve. This is not a problem unique to Australia. It is an international issue being addressed in the legislation of most countries of the Western world.

Our legal system provides few remedies to protect the privacy of the individual. In 1937 the High Court of Australia held that "however desirable some limitation upon invasions of privacy might be, no authority was cited which shows that any general right of privacy exists".[22] It is to now suggest for Parliament's assistance the laws that should exist, that the

Government has asked the Law Reform Commission to report. Obviously Parliament is aware of Jacques Ellul's warning to us all

> "that it is to be a dictatorship of dossiers and data banks rather than of hobnailed boots will not make it any less a dictatorship".[23]

Many other tasks given to us illustrate the theme of the law catching up to science and technology. We have been asked to propose reforms of the law of Defamation. Our report on this subject will be tabled in Parliament in March. At present we have eight different systems of defamation law in Australia, one for each Territory and State. At the time of Federation, when publications were local, that was entirely apt. At a time when technology has provided national means of mass communication, by radio, television, telefacsimile and airline distribution, the presence of different laws is a positive burden on editors and a blight on free speech. Every effort must be made to secure a modern and uniform law which recognises the new technological environment.

Our report on Human Tissue Transplants has now been enacted with the support of the Government and the Capital Territory Legislative Assembly for Canberra. The Queensland Government has announced its intention to introduce legislation based on this Federal report. Other States will probably follow. It introduces a new definition of death for legal purposes. In times gone by, it was entirely appropriate that the law should follow common sense in defining death in terms of blood circulation and heartbeat. With modern ventilators which by-pass natural respiration, such a definition becomes inapt. Unless we change it, our conscientious doctors face the risk that to remove the ventilator might be held to be a decision to "murder" a person.

Although our report was a pathfinding one, it only touched the surface of the problems which new medical science posed for the law and law makers. What limits, if any, will we put upon genetic engineering? What are the legal consequences of

artificial insemination? How should the law cope with euthanasia? Should embryo transplants be permitted? What rules should govern human experimentation? These are not abstract problems of the distant future. Law makers, lawyers and the legal system and indeed society as a whole must face them in the next decade and lay down the rules by which we will be governed.

The devices of science and technology can be brought to the aid of the law, as the Law Reform Commission as shown. The Breathalyser and other equipment can reduce the controversies about levels of intoxication that may affect driving skills. Tape recordings and videotape will, in the future, reduce the bitter contests about alleged confessions made at police stations. In 1977 the Government introduced into the Federal Parliament a most important measure, the Criminal Investigation Bill. This Bill, based on a report of the Law Reform Commission, stops the talk of the past 20 years and introduces, for the first time in legislation in the Commonwealth of Nations, a provision requiring tape recording by Commonwealth Police.[24]

Introducing the measure, the Attorney-General explained that:

> "the Bill is also noteworthy because it represents an attempt by the law to catch up with the developments of science and technology and to call them in aid, both of the police and of the accused, in the process of criminal investigation. But above all it proposes that these advances which are now available should be brought to the assistance of the administration of justice itself".[25]

There are many other tasks assigned to us in which we are endeavouring to identify the impact of science and technology on the law and to fashion legal instruments that will commend themselves to Parliament and ensure that the law makes the changes that are necessary to keep pace with the society we live in.

COMMUNICATION

The development of information sciences apart, there is no other development which is thrust upon us with more far-reaching consequences than the changes in energy resources and needs. Those changes will affect our society in many ways, most of them unpredictable at this time. They will require alteration of community attitudes and expectations. They will demand new policies of government and of administrators. But they will also require modifications of the legal system and a facility on the part of judges and all lawyers involved in the administration of justice to accommodate themselves to the new, post-1973 era.

Of course, the Law Reform Commission is not the full answer to changing the law and lawyers' attitudes under the impact of new technology. The effect of computers on society and on the law, for example, must be seen as akin to the impact of electricity, which we now simply take for granted. Just as it is the responsibility of judges and lawyers to acquaint themselves with the rudiments of the problems of challenges which face our society as a consequence of the changing energy scene, I do hope you all realise your obligations to convey to the layman, including mere lawyers, the impact which the changing scene will have on so many aspects of our everyday life. Lawyers are at last beginning to pay an interest in what scientists, engineers and technologists are up to. I hope the interest will be reciprocated.

* Chairman of the Australian Law Reform Commission. The views expressed are the author's own and not those of the Law Reform Commission.

FOOTNOTES

1. Lord Edmund-Davies, "Ferment in the Law", Holdsworth Club Presidential Address, 1977, 1.

2. L.H. Tribe, "Technology Assessment and the Fourth Discontinuity" 46, S. Calif. L. Rev., 617 (1973).

3. Speech by Mr. Kevin Newman (Minister for National Development) to an Energy Symposium (1978) 3 Cth. Record 1549. See also reported address to the ANZAAS Conference Auckland, New Zealand, 24 January 1979.

4. (1978) 3 Cth. Record 1549.

5. 36 Congressional Quarterly WR, 633 (1978).

6. Ibid.

7. See e.g., Statement by the Australian Minerals and Energy Council (1978) 3 Cth. Record 1010.

8. Statement by Mr. Kevin Newman, "Review of Australian Atomic Energy Commission Research Role", (1978) 3 Cth. Record 1503.

9. K. Newman, Speech to Energy Symposium, n.3, 1551.

10. Ibid.

11. See e.g., Anderson v. The Commonwealth (1932) 47 C.L.R. 50. The issues are debated in the Law Reform Commission (Aust.) D.P.4, "Access to the Courts: I Standing: Public Interest Suits", 1977.

12. Sierra Club v. United States Atomic Energy Commission, Disd. 7 Georgia JICL 148 (1977).

13. Law Reform Committee (S.A.), "Solar Energy and the Law in South Australia", 1978, 23.

14. Id., 70.

15. Id., 25-27.

16. Id., 80.

17. Id., 92.

18. Id., 99.

19. Id., 111-116.

20. Id., 115.

21. Solar Rights Act, 1978 (New Mexico), Appendix B, South Australian Report.

22. Victoria Racing and Recreation Grounds Co. Ltd. v. Taylor (1937) 58 C.L.R. 479.

23. Cited A. Miller, "The Dossier Society", Uni. of Illinois L. Rev. 54, 158 (1971).

24. Criminal Investigation Bill, 1977 (Cth.), cl.34. The Bill lapsed in 1977. Senator Durack has recently announced his hope to reintroduce the Bill in the Autumn Sittings of Parliament in 1979. (1978) 3 Cth. Record 892.

25. R.J. Ellicott, Second Reading Speech, 24 March 1979. C.P.D. (H. of R.) 562, 566.