Life Style Perspectives in the Danish Energy Plan

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In April 1996, the Danish Minister for Environment and Energy published his new energy plan entitled ENERGY 21. The plan and the preparation for it were the responsibility of the Danish Energy Agency (DEA), which is a part of the Ministry. A debate phase preceded the plan which took its point of departure in a presentation by the DEA and a number of technical background reports one of which was: Energy consumption—life style and behavior.

Partly as a result of upgrading questions of behavior and life style, the new Danish energy plan contains a number of initiatives concerning organizational and more holistic matters. This is a novelty in relation to previous energy plans which listed a number of individual initiatives in the field of savings and calculations of the degree to which (primarily technical) savings potential could be realized. They did not consider organizational matters or problems of implementation as a whole to any great degree. In the more recent energy debate and planning there has been a growing understanding of the fact that savings potential is not a simple arithmetic element but rather heavily dependent on life style.

INTRODUCTION

In Denmark we have a lengthy tradition of prioritizing energy savings. Changes in behavior are a prerequisite for energy savings and it has been proved that the possibility of changing behavior is connected, inter alia, with the life style of the population. For this reason a new element in the run-up to the energy plan was focus on the links between energy consumption, behavior and life style. A background report entitled "Energy consumption, life style and behavior"² was drawn up, the aim of which was to gain greater knowledge about to how far we can go in encouraging behavioral changes.

Savings potentials are, amongst others, the subject of other background reports drawn up before the plan itself. Potentials may be the savings that can be achieved by means of improved technology and by changing behavior in the use of appliances. It is however not merely behavioral aims that may be realized, as influencing behavior in the sense of greater awareness of one's energy consumption—or perhaps merely having sufficient knowledge—can also result in energy efficient choices when acquiring new equipment, thereby realizing the technical potential.

Our energy consumption depends on both socio-economic conditions (family size, age composition, size of dwelling and the like) and on the life we live (level of activity, attitudes and values). This further implies that what we term savings potential can differ greatly even in two households that are socio-economically similar. The report shows that life style plays a crucial part, but it also the complexity of this part. Therefore it is vital that our savings objectives are realistic if they are to win the acceptance of the consumers. When measures of energy policy are employed to realize some savings potential, it is, therefore, central to know and start from the barriers and contexts that have to do with life style and organization.

The working group behind the report agrees that there are no indications of change in the basic principles of our welfare society, and thus a genuine shift in life style, where energy consumption undergoes qualitative change, is not immediately. If this becomes the objective there is a risk that the authorities will give up trying to do anything, or that they will issue visionary statements with no great effect.

This does not mean that it is meaningless to concern oneself with life style and energy consumption; on the contrary it is extremely important so that we know how the message can reach our target groups. We can go far if we achieve a change that is acceptable to the individual in this way. The more long-term savings can also be ensured in this way by providing better possibilities and preconditions for energyconscious choices to be made when new appliances are acquired.

In addition, the debate about the welfare state and consequences for the environment should be priotitised to integrate environmental aspects in wishes and plans for the future development of society. It should be remembered that material growth is not necessarily at odds with energy and environmental considerations. The recommendations made in the report are linked to a specific and relatively brief time span. This means, for instance, that it is not recommended that a busy family is asked to save by limiting the use of dishwasher, television, home computer or car.

RESULTS FROM THE ANALYSIS

Life Styles

Life style is a buzzword in Denmark today and it crops up in numerous contexts; it has many different meanings and is used by many different professions from cultural research to advertising. Although there is no commonly accepted definition of life style, it is used in roughly two ways: 1) as an expression of structural patterns of activity in society and, 2) as an expression of different ways of living.

The first definition implies that life style in the West, including Denmark, is regarded as uniform, a life style that is associated with large-scale material consumption. In practice this means a great deal of living space, considerable transportation, a high level of consumption of goods and services where the downside is a corresponding waste of resources³.

In the second definition, the emphasis is on the fact that, also within the framework of Western ''life style'', people live in very different ways, even in a small country like Denmark. This is because the population consists of groups with different values, opinions and patterns of behavior. Originating in cultural background and social upbringing, these differences are constantly confirmed or invalidated in the social contexts that individual persons and members of households enter into during the course of their lives; in their work, children's schooling, leisure-time education, sport and other leisure-time pursuits. Pierre Bordieu, the French cultural researcher and sociologist, employs this type of life style concept⁴.

The basic reasoning in the report on life style is that social conditions play a crucial part in energy consumption. Two families with similar incomes and of similar size may have widely different energy consumption because of the different structures of their everyday lives, their ideas, and their actions. What seems natural to one, is alien to the other. Thus, this is life style as a social factor on a line with norms and values used in this context for describing how behavior may be changed.

Linking life style and energy behavior is relatively new research and as yet we have little knowledge of the direct connection between the two. For example do certain "energy life styles" exist, or is energy behavior part of other "life styles"? What we do know is that research on energy behavior and experiences from experiments document the importance of starting out from the specific social contexts of the individual. Experience, moreover, can tell us something about the possibility of influencing energy consumption by acquiring a deeper knowledge of the link between energy behavior and life style.

Influencing Energy Behavior

Differences in ways of living and perceptions of what constitutes a good life are important influences on energy behavior. Firstly, different ways of living mean different levels of energy consumption and thus differences in what has to be changed. Secondly, the way efforts to accomplish this must be designed and communicated are related to the way we live.

In practice energy consumption is only a small part of people's lives and therefore a general acceptance of the necessity of saving is not the same as prioritizing questions of energy in everyday life. Energy consumption is a means of achieving other benefits such as clean clothes, light to read by, or swifter transport. Therefore energy-consuming behavior is not just a matter of direct energy consumption such as the temperature in the living-room. It is also a matter of behavior that involves energy consumption such as transport by car to work, on holiday trips and the like.

Potentialities on the Long and the Short Term

Changing energy behavior means different efforts at different levels; and it is absolutely crucial is that these efforts are not self-contradictory. Several different complementary measures should be implemented at the same time to achieve a synergistic effect. Some of these efforts will aim at minimizing of energy consumption within the given framework/ life style: remembering to switch off the light, washing at a lower temperature, and buying low-energy appliances when replacing equipment. Other efforts could aim more at changing behavior, trying to alter framework and life style by converting and cutting down on consumption by, for instance, washing clothes less frequently, using things longer, not buying appliances, designing homes differently, lowering the temperature of comfort of heating and the like. What is decisive is the existence of interplay between shortterm and long-term perspectives, is of the essence.

The Individual or Group Contexts as a Starting Point for Behavioural Change

If we are to make recommendations for practicable efforts in the energy area we must make use of the theories that deal with people and conditions of life. Roughly speaking a distinction can be made between two theoretical views: one is based on the person as an individual and the other on the person as a member of a group or a community.

The Individual as a Point of Departure. A theory that takes the individual as a point of departure may result in completely different analyses of and proposals on how to influence the energy behaviour of the population.

One very widespread theory focuses narrowly on individual behaviour by investigating how, with the aid of external stimuli, human behaviour can be directly influenced in a certain area. When behaviour is perceived as a reaction to external stimuli, it can be influenced and regulated by means of rewards and punishment; the means employed are often economic. They will take the form of promises of economic benefit and a higher degree of welfare, or of threats (such as fines), if the given rules are not observed. These efforts can be used in a limited form: the dramatic rise in oil prices at the beginning of the 1970s actually made people consume less oil; subsidies for solar heating plants or insulation can actually encourage people to acquire them. But as long as the cost of energy is only a modest part of people's expenses, the results achieved in this manner will be limited. If energy taxes are raised drastically, a corresponding reduction in consumption cannot automatically be expected. Instead, the reaction may be a conscious and critical endeavour to evade influences (i.e. moonlighting to avoid paying taxes), and direct political opposition. A lack of genuinely practicable alternatives may, in addition, weaken the reaction. For this reason it is important that the influence is not only negative but also provides the consumer with the possibility of choosing alternatives and perhaps even get rewards.

In contrast to the behavioural theory based on a view of man as a being whose behaviour consists of patterned reactions there are theoretical positions that emphasise man as a conscious being who acts on the basis of knowledge. Traditional energy information using factual information and advice in trying to convince consumers that they can and should change their energy behaviour, is based on rationalist perception of the individual and the human learning processes. Common sense pedagogics assume that information in itself will bring knowledge to the individual, who thus motivated forms values and opinions. When these are strong enough, they will then lead to changes in behaviour. This has also been called "gas station pedagogics": it is a matter of sufficient input, and if there are no reactions, more inputperhaps in a more active form. This view has been critizied for describing human psycology in for too limited terms. Information is always processed relative to the orientation of the individual. Our knowledge is not just a collection of objective facts, but a generated means of orientation influenced by our specific experience of good and evil.

Investigations of the effects of the Danish information campaigns also show that there is no simple relation between information and action.

A third group of individual-oriented approaches take their point of departure in personal motivations and dispositions playing a part in environmental behaviour. Therefore, an attempt has been made to localise the characteristic features of the good consumer with a view discovering what to do about the "not so good" consumer. This can for instance be seen in market surveys which divide the population into different groups according to life style, attitude to the environment etc. Although this avenue of approach has proved not to be specifically applicable in connection with initiatives in the energy area, the groupings have contributed to a general view of the attitudes and priorities etc. of the population.

Others have more directly examined the mechanisms in connection with energy behaviour. What motives lie behind energy-reducing behaviour? What conditions make it possible for the individual to behave as desired? This research has shown that no clear connection exists between values, attitudes and energy-correct behaviour. For instance, a large scale Danish investigation of electricity savings⁵ shows that behavioural changes could take place without any perceptible change in the attitude of the control group. Important factors may for instance be the individual's abilities to and opportunities for practicing the desired behaviour. One model for these preconditions can be found in the Local Government Research Institute's model concerning the individual's comprehension, ability and willingness to save⁶; it can also be found in Thoegersen⁷ (based on Fishbein⁸), where environmental behaviour is seen as dependent on the motivation, abilities and possibilities of the actors.

When the Group and the Community are in Focus. Interest in group-oriented approaches has increased recently. These approaches point to the fact that all people are part of groups and communities, large and small, shortterm or long-term, and that the individual is influenced by the norms and patterns of behaviour in the groups of which he/she is a member. Group and community associations are important in relation to changing energy behaviour for two reasons: the one is a natural community involves more than energy consumption; the second is that people are strongly influenced by norms. Socio-psychological research⁹ has examined the degree to which people allow themselves to be influenced by values or norms. This has also been tested in experiments involving the sorting of household waste. The result is quite clear: norms and not values create changes in behaviour.

Groups and communities differ in character. Some are groups of which you become a member because you live in a society; for example family, social class, friendships, neighbourhood, school, workplace etc. Though a group has been formed for quite different purposes, energy consumption may be put on the agenda, for instance by neighbours comparing their electricity bills. Groups may also be specially formed with an objective linked to energy consumption, for instance a wind mill association. Reference groups are other kinds of communities, i.e. groups to which the individual is attracted but does not belong. If you hear that a family you regard as positive and exciting is experimenting with reducing energy consumption, you will try the same thing yourself. Yet another form for community is the imagined one, i.e. a group that acts and thinks in a way with which you identify and more or less feel you have something in common with, without there being any real group to join. These may for instance be, green consumers or people with solar collectors.

The individual belongs to many and varied groups in present society and memberships vary throughout life. Generally, social relations have become more divided, superficial and temporary, and less localized. This means that we are more and more divesting ourselves of our cultural traditions, the result beeing a greater individualisation. Being less bound by tradition and having more individual freedom also result in increased possibilities to which you want to belong, your values and the life you wish to lead. Thus, new communities arise that are individually based and characterised by active choices on the part of the individual. These community formations can be short or long term, loose or stable, superficial or profound. There may be a tendency towards looser organisation.

Groups and communities are characterized in creating norms which the individual sees as binding. Norms are rules of behaviour that are sanctioned positively or negatively. Apart from the significance of the norms and the strength of the sanctions associated with them, an important precondition for the norms' effect is the individual's abilityy to see, or somehow get to know, the extent to which the norms are actually adhered. Do other people do as the norm presives and am I forced to do so too? Making things visible is a vital element in connection with the impact of norms. So, making energy consumption visible is important if energy behaviour is to be changed.

But norms are no longer as binding as before. We live in an era where the authorities are getting less important. People want to discuss norms and feel that their own experience has a contribution to make to the discussion; furthermore they do not think that anything is unconditionally good or bad. Norms are dependent on the situation, so a person may adhere to one norm at home and another at his/her place of work. So, current norms must be based on agreements as to what they schould be. Thus, norms are negotiable. To create acceptable norms the parties involved must perceive themselves as active in establishing them and consider the other parties credible.

In the industrial society energy and environmental consumption has not been subject to independent establishment of norms, but has merely been a part of decisions and behavioral patterns in general. Its emergence and independence means that norms must be created i.e. there must be negotiations and deliberations, things must be put in order of priority, and the norms must be established as rules of behaviour. We are at present in the middle of this process.

We must, moreover, assume that the impact on the individual is stronger the more emotional energy the action takes. Emotional energy is linked to rituals and by performing rituals one confirms one's membership of a collective. Strong rituals require joint presence. In this connection it is interesting to see what types of energy savings that have the character of rituals. Building wind mills has some of this character and it is visible. But rituals might also be taken to be effective in the individual consumption where there is no community presence, for example by paying more for an energy efficient refrigerator. Throug this type of purchase you confirm your position as a member of a community of energy-conscious consumers of users of appliances.

It must be assumed that the influence of the group for the behaviour of the individual is greatest where group membership is most stable and has the greatest impact on the individual's life (i.e. where it is most difficult to leave the group). The family is an example of a group which is very stable and of vital importance, while a reference group such as those who consider themselves to be "green consumers" has a low stability and is less important to the behaviour of the individual¹⁰. Development in society in the course of time shows a tendency for communities to move from the vitally important and very stable towards less stability and a low engagement in individual behaviour.

RECOMMENDATIONS

One must start out with communities and groups as well as the individual when thinking in terms of measures or changing behavior, because things must be seen in the ordinary context. The points of departure must be reality, motives and consciousness of the target group. On these support of actions which arouse interest and engagement and from which people may gain experience schould be based. If they can discuss this experience with others and learn from them, they develop their own knowledge, values, norms, ability to act, and self-esteem. Thus the learning process does not begin with information, but with organizing conditions for people's conscious actions and subsequently for joint discussion of their experiences. Therefore it is important to create specific opportunities for action in people's daily lives which are not only useful from an energy point of view, but also gives the positive experience off doing something useful.

While the measures so far have usually been directed at the population as a whole, it is our opinion that future actions should be directed at certain social contexts.

A number of activities over the last twenty years have provided experience in influencing energy consumption and cause it to fall. These include:

- (1) information in the form of campaigns, leaflets and brochures, television spots and the like;
- (2) financial and technical incentives such as grant and subsidy schemes, requirements and orders, and greater availability of low-energy products;
- (3) support for local processes in the form of subsidies for activities and experiments;
- (4) development of organizational network organizations—i.e. within families or municipalities—and of energy ambassador schemes in the form of those responsible for energy at the workplace, energy conscious workmen, and energy competent shop personnel.

The latter two are particularly interesting from a life style perspective. They represent an intermediate level between the authorities and the individual citizen. This level schould support the local processes while ensuring the decision makers about feedback on specific experiences. Both are relatively new in the energy saving field. Examples of the first type (3) are the Brundtland Campaign, Green Municipalities, and the Brundtland Town Project. The Local Agenda 21 is part of the same trend. Examples of the second type (4) are town-ecological centers, Green Families, the Danish Energy Agency's tradesman schemes, and training of personnel in the appliance trade¹¹.

Listing the Recommendations

The recommendations fall into the following categories:

- strategic recommendations
- recommendations for initiatives
- recommendations for research and reporting

Strategic Recommendations

- Efforts must be integrated with other environmental elements and the social and cultural relations that people enter into. Obvious examples are joint efforts with town-ecological initiatives and in Agenda 21 contexts, as well as supporting involvement at places of work, in local associations, societies and so on.
- Efforts should be made to communicate the message using intermediate levels as "ambassadors", in order to shorten the distance to the population and direct communications through the network the authorities already have. The ambassadors may be local shopkeepers providing information about energy efficiency when a customers buys an appliance, craftsmen, various organizations or enthusiasts.
- We should be cautions in encouraging changes in behavior and life style. Bombarding people with information about the "correct" energy behavior is not enough. The road to change is never easy and often connected to many different conditions. We must try to bring about the best conditions for encouraging people to make up their own minds and to participate willingly.
- The measures in a given area should be seen as whole and the synergistic effect of the interaction of several measures should be exploited. At the same time these measures must not clash with economic and administrative policy.
- Creating possibilities for a green life style is a good idea. Those who already define themselves as green are important resources, but we must be aware of the gulf that may open up between green and non-green life styles.

Recommendations for Initiatives

- Making energy consumption at all levels of society visible which implies proposals for 1) informative as well as comparative resource statements for the total household energy (and to some degree environmental impact) and 2) individual municipalities preparing a green balance sheet for the local unit.
- Making energy and environmental consequences of modern consumption visible. All consumer goods should have environmental and energy declarations, directly by labelling and indirectly via information in databases. Although operational information is extremely important for energy-consuming equipment, since approximately 90pct. of the energy is consumed during operation, the whole life-cycle perspective

should be included. The declaration should cover all products: everyday goods, energy-consuming equipment, furniture/fittings, cars and houses.

- Rewarding groups who reduce their energy consumption. There are several different ways of doing this, financial and non-financial: supporting local initiatives, tax benefits, taxing "over-consumption", offers of assistance from consultants, favorable loans and the like. Currently many people find that trying to be energyconscious is regarded more of a punishment than a reward. Support for people or organizations wanting to do something means that they will be able to function as locomotives for changes which might influence people's life style in the long term.
- Supporting the establishment of local, regional, national and international groups and networks. Energy savings efforts can be linked to "ambassadors" such as craftsmen, and sales staff and the like as well as to local groups such as housing boards, schools, environmental groups and active individuals or to other network organizations centred around families, places of work or associations.
- Town ecological thinking should be characterized by all environmental problems being solved in one place. This requires cross-sectoral efforts; and if it is to function at a local level, it also requires cross-sectoral efforts centrally. Based on a town ecologyical view, one may also discover many of the activities that can lead to increased energy consumption.
- Support for building up expertise and developing competence. Correct knowledge of energy is a prerequisite, but not sole condition, for making correct energy choices. Efforts at all levels should be made to facilitate the acquisition of knowledge. Different initiatives at different levels can be pointed out, adapted to various needs, etc. Upgrading of children and youngsters as a target group.
- Focus on non-energy demanding growth. A distinction should be made between the kind of growth that is bound up with an increased conversion of energy and resources, and the kind of growth bound up with an unchanged or reduced conversion of energy and resources. Furthermore it is important not to equate economic growth with increased welfare, or increased welfare with increased consumption.

Recommendations for Research etc.

During work on the report a lack of knowledge has became obvious in many areas of development of theories as well as support for networks which might increase cross-disciplinary know-how. A number of specific research areas are listed in the report.

THE FINAL DANISH ENERGY PLAN; ENERGY 21

In the area of energy and environment Denmark is characterised by its ambitious objectives for reducing CO_2 emissions. At the same time Denmark has a very high per capita CO_2 emission, as it has neither nuclear energy nor hydro power. Denmark's internationally seminal role is contained in "Energy 21" which outlines a scenario that will halve its CO_2 emissions by 2030 in relation to 1988. The plan itself (Energy 21) is a slim 70 page report compared to the many thousands of pages, including the "life style report", that were published five months previously as background material for the plan, and for use in the debate phase which preceded it.

Much remains to be done on the supply and consumption sides if the objectives are to be achieved. It would seem that our preparatory work has been positively applied in "Energy 21" and that several of the strategic recommendations and



recommendations for initiatives have been followed. Some examples: there are plans to change the whole structure of information with a view to better co-ordination and communication, and to enhance the kind of information and influence that is based on the contexts in which the individual already is in.

Furthermore, the endeavor to change behavior may not longer solely depend on information campaigns but be integrated in a total strategy for energy savings in the area concerned.

In the preparation of the energy plan the product circle (figure enclosed)¹² is used as a planning tool. The idea is that savings could be achieved only by coordinated and simultaneous use of various incentives at the same time for a given product group. From that point of view the pedagogical instruments are closely integrated in the whole holistically oriented planning. This line of thought is maintained in "Energy 21".

ENDNOTES

- Professor Peter Gundelach, the Sociological Institute; Ole Michael Jensen, Senior Researcher at the Danish Building Research Institute; Grete Korremann, sociologist of the Grete Korremann firm of consultants; Jeppe Laessoee, psychologist, the Technical University of Denmark; Joergen Abildgaard, architect, DEA; and Lene Nielsen, Head og Section, DEA, (from Oct-96: Ministry of Environment and Energy, email: LN@mem.dk) (chairman of the working group).
- 2. Energistyrelsen (1995)/note 1; Energiforbrug, -livsstil og adfaed.
- 3. Lee Schipper, who contributes to the essay session of the report, takes his point of departure in this definition in his article: Det private forbrug er flyttet hjemmefra -Husholdningernes energiforbrug i bevaegelse (Privat Consumption is moving from Home).
- 4. Bourdieu, P. 1984. Distinction. Harvard University Press, Cambridge.
- 5. Nielsen, Lene. 1993. How to get the birds in the bush into your hand. Results from a Danish research project on electricity savings. Energy Policy. Nov.
- 6. Gjelstrup, Gunnar. 1989. Offentlige elbesparelser -teknik organisation og politik. AKF. Page 19.
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- 8. Ajzen and Fishbein. 1980. Understanding attitudes and predictiog social behaviour. Englewood Cliffs. Prentice Hall.
- 9. Ajzen and Fishbein. Op.cit.
- 10. Halkier, Bente. 1993. Nye udtryk for sociale bevaegelser—groent forbrug som eksempel. Dansk Sociologi nr 4, page 40 ff.
- 11. Listing specific initiatives here will be too extensive. Interested parties may contact the authers of this article for further information.
- 12. Nielsen, Lene. Danish Energy Agency. 1995.

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