

Towards sustainable lifestyles

DSDS special event on ‘Lifestyles, Energy Security, and Climate’: a report

Deepti Mahajan

The Energy and Resources Institute

Introduction

The pursuit of energy security and climate change mitigation has, over the last decade, registered a sharp rise on national and international agendas. In the context of growing energy demand to sustain growth levels, and related increase in GHG (greenhouse gas) emissions, the focus is on global, cross-sectoral action to chart a path of sustainable development. According to the *World Energy Outlook 2007*, the world’s primary energy needs are projected to grow by 55% between 2005 and 2030, at an average annual rate of 1.8% per year (IEA 2007). In the same period, GHG emissions are expected to jump by 57%. While the international negotiations under the UNFCCC (United Nations Framework Convention on Climate Change) have provided a legal framework to further global cooperation, there are significant domestic and international policy debates on the need for technological innovations, sound policy-making, and financial instruments to enhance efficiency and promote use of alternative fuels. It is notable here that a large proportion of

consumption accrues from energy-intensive lifestyles.⁷ Appropriately, therefore, there is now recognition of the need to push for ‘greener lifestyles’ through both micro- and macro-level interventions.

Without significantly compromising on comfort and convenience, individuals can contribute to reducing energy demand and climate risks. Clearly, the solutions offered to address the twin concerns of energy security enhancement and climate change mitigation are in consonance with each other, at times overlapping. The suggestions may be as simple as walking small distances instead of driving; using energy-efficient appliances; and minimizing wastage of resources, but their large-scale internalization and cumulative impact may go a long way in addressing energy and climate concerns.

To bring to the fore the important strand of lifestyle changes in the energy and climate debate, the Centre for Research on Energy Security, TERI, and the Asian Energy Institute organized a special event part of the Delhi

⁷ In India, during 2005/06, the residential sector accounted for 13.6% of final energy consumption (TERI 2007). This is exclusive of the energy used for transportation.

Sustainable Development Summit 2008. Supported by the Nand and Jeet Khemka Foundation, the event brought together a panel of eminent speakers: Dr R K Pachauri, Director-General, TERI, and Chairperson, Intergovernmental Panel on Climate Change; Dr Ajay Mathur, Director, Bureau of Energy Efficiency, India; Dr David Jhirad, Vice-president, Rockefeller Foundation; Dr Prodipto Ghosh, Distinguished Fellow, TERI; Mr Hideyuki Mori, Vice-president, IGES (Institute for Global Environmental Strategies); Ms Urvashi Sibal, Associate Producer, Headlines Today; and Mr Uday Khemka, Vice Chairman, SUN Group. The session was chaired by Dr Leena Srivastava, Executive Director, TERI. The event was attended by a distinguished audience that included important political and business leaders, educationists, academicians, research scholars, NGO (non-governmental organization) representatives, and students.

Rallying resources for lifestyle transitions

Lifestyle changes provide an important scope for intervention because patterns of conspicuous consumption exhibited by elites the world over today provide a huge possibility for energy use reduction. The issue though is a sensitive one, for economic growth and individual achievement are directly linked to a move towards more energy-intensive lifestyles. Lifestyle changes thus call for a multi-pronged effort that encompasses spread of awareness and building of synergies between policy, regulation, technology, market forces, and ethical imperatives.

An assessment of carbon footprints reveals differential contributions to GHG emissions from different countries. A large amount of GHG emissions can be attributed to a few countries. However, the growing demand for energy will see a growth in carbon footprints of all countries. Carbon reduction scenarios point towards immense possibilities for changes in lifestyles across the world, which can help reduce energy insecurity and emissions. Apart from launching large-scale information campaigns for conservation of energy, a range of technological and planning options are available for building greener homes, determining efficient land-use

patterns, following less-energy-intensive eating habits, making transportation environment friendly, and lighting and heating buildings in an energy-efficient manner. Increasing efficiency through adoption of energy-efficient technologies and processes spells a win-win situation, for it saves energy while reducing costs to the user.

In conjunction with raising the level of general awareness, it is important to ensure that policy and economic forces push consumers towards lifestyle changes. To promote the use of energy-efficient technologies, a series of economic signals is required, which reinforce each other. Dr R K Pachauri cited the instance of employing tax instruments to promote energy-efficient, green cars. According to Dr Ajay Mathur, three kinds of interventions are significant.

- *Inform people about the impact of their decisions*
Consumers must be equipped with the knowledge to make informed decisions. Appropriate labelling and price signals should be employed to draw people's attention towards the efficiency of the products they buy and use.
- *Establish building codes*
The application of energy conservation building codes can contribute in reducing the energy used in a building, by determining construction design and fittings, and heating and lighting mechanisms.
- *Institute codes and standards for efficiency of private transport, and promote public transport*
The use of efficient private vehicles should be incentivized, while keeping in view the long-term goal of increasing reliance on public transport.

Dr David Jhirad reiterated that energy efficiency needs to be the centrepiece of efforts towards both improving energy security and reducing GHG emissions, suggesting that not all new technological options put forth may be equally good for both energy security and climate change mitigation, or may even impact one adversely while helping the cause of the other (Figure 1). While raising automobile fuel economy standards increases energy security and reduces carbon intensity to different extents, coal liquefaction may be good for energy security but not for reducing carbon intensity. Special attention must, therefore,

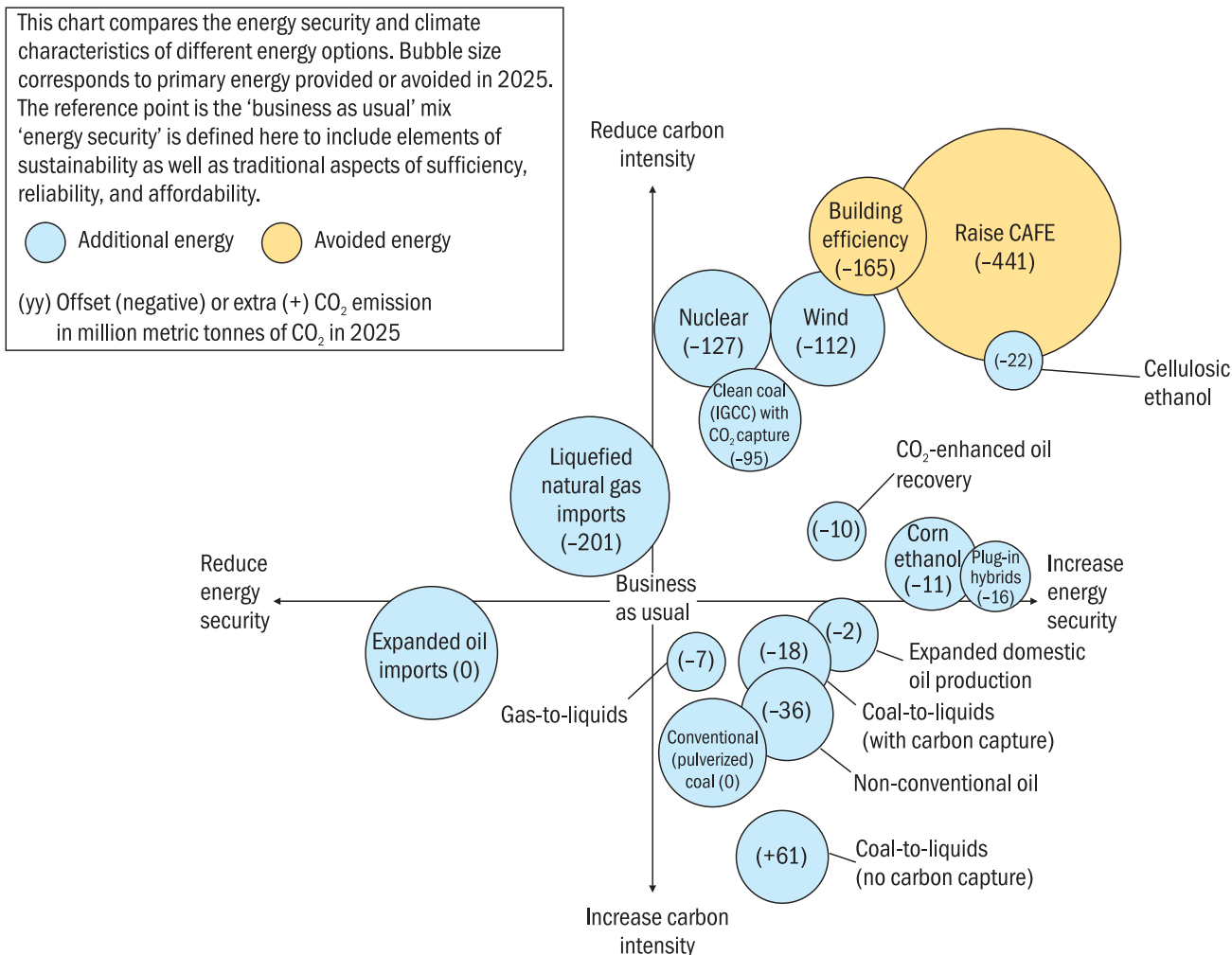


Figure 1 US policy options: energy, security, and climate impacts (World Resources Institute, cited by Dr David Jhirad)

be paid to end-use fuel efficiency, the switch from coal to gas and renewables, use of nuclear energy, and deployment of carbon sequestration and storage.

Assimilating equity and ethics

The intra-generational equity aspect of the energy security and climate change debate focuses on burden-sharing of GHG mitigation across countries/societies, and among different classes within a country. During the course of his presentation, Dr Prodipto Ghosh referred to possible equity formulations, as mentioned below.

- *Intra-generational*: 'Equal per-capita entitlements of GHG emissions globally' *versus* 'equal percentage reductions from current levels by all countries'.
- *Inter-generational*: 'Discount valuation of future impacts by (for example) 5% per annum

to arrive at present value of future impacts' *versus* 'do not discount'!

- *Responsibility for impacts*: 'Responsibility strictly in line with aggregate GHG emissions by countries' *versus* 'past emissions involve no guilt and hence each country bears its own costs'.
- *Determination of level of 'catastrophic impacts'*: 'Small island states may not drown' *versus* 'monsoon may not shift dramatically' *versus* 'cherry may not blossom in NY in December'.

The accepted equity formulations have immense practical consequences. In the context of lifestyle changes, the prevalent understanding of 'equity' and 'responsibility' may require messages to be narrow-casted to reach particular audiences. But it is questionable whether one can go beyond pure subjective intuition/decibel level/power (political/

military/economic) in deciding these issues. Dr Ghosh suggested that formal ethical theory can help structure and provide rational foundations to particular equity arguments, taking it beyond the ambit of sheer power. Equity is synonymous with 'fairness' and 'justice' and is a subset of 'ethics', which refers to the acceptability of 'goals/processes' of various actions. Clearly, the appraisal of goals/processes can only be with respect to some general principle(s) or standard(s), which must be rationally justified.

However, the determination of intra-country equity on the basis of consumption levels of class segments comes across some conceptual/technical problems: separation of activities involving energy use between consumption and production; and recognition of beneficiaries of diverse, interconnected activities involved in production or a productive activity involving consumption. Dr Ghosh pointed out that, in practice, the only feasible indicator of societal sustainability is societal per-capita GHG emissions.

Building a low-carbon society: lessons from Japan

A low-carbon society is characterized by actions compatible with the principles of sustainable development, while ensuring that the development needs of all groups (current and future) within a society are met; there are deep reductions in GHG emissions in order to avoid dangerous climate change; there is high energy efficiency and use of renewable energy sources; and there is emphasis on sustainable lifestyles and institutions with reduced carbon footprint. Mr Hideyuki Mori shared Japan's experience of working towards building a low-carbon society. Citing a study, Mr Mori remarked that in both a technology-oriented scenario and a slower, societal change oriented scenario, a 70% cut in Japan's GHG emissions is possible by 2050, at the additional annual direct cost of about 1% of the GDP (gross domestic product) in 2050. Both the scenarios, however, assume significant demand side management and thus lifestyle changes. Japan's initiatives have been targeted across sectors. Housing is now characterized by improved insulation (double glazing, sash insulation, use of insulation materials in ceilings, walls, floors, and soon); maximum use of sunlight (natural heating);

installation of solar heaters/panels; and promotion of roof gardens. Subsidies for the installation of solar panels and tax incentives have also been introduced. In the area of transport, purchase of low-emission vehicles (hybrid, small cars) and eco-driving (no idling) are being encouraged. Car pools, use of public transport, walking, cycling, and advanced traffic management systems are being promoted. The Japanese government has applied the environmentally sustainable transport model in 727 cities.

The country's Top Runner approach promotes manufacture and development of energy-efficient products. The use of energy-saving bulbs and energy-efficient appliances, maintenance of appropriate room temperatures, plugging-off of appliances during sleep mode, and recycling and reduced use of plastic bags are being encouraged. The IGES has piloted an innovative scheme as part of which it establishes a local consortium to diagnose a household's potential to improve efficiency and offers consultancy. The Cool Biz/Warm Biz campaigns that define appropriate clothing for summers and winters so as to reduce use of heating and air conditioning have had a huge impact on public awareness levels.

The Japanese experience suggests that a movement in the direction of lifestyle changes calls for the 'building of a coalition' amongst the various components of the social structure. According to Dr Pachauri, it is important that people in positions of political and social leadership highlight the significance of the matter, and draw public attention to the possibilities for change. Industry too has an important role to play, and more so because valuable business opportunities lie in the large emerging markets for eco-friendly products and services. Dr Jhirad highlighted the work of philanthropic organizations and political coalitions such as the US Climate Action Partnership that comprises about 27 large industries (GE, Caterpillar, British Petroleum, and others); policy research groups such as the World Resources Institute; and non-profit organizations that have called upon the US government to enact mandatory legislation to give a price to carbon and work towards strong cap and trade systems. In addition, what is required is a 'ground-swell of desire, opinion, and aspiration'

that moves people towards adopting lifestyle changes. It is important for people to identify with the cause of energy security and GHG mitigation.

Leveraging the media

Scientists use a language that is difficult for a layperson to understand. If consumers need to change the way they live to mitigate climate change and improve energy security, outreach through media has an important role to play. Documentary film-makers, radio content developers, and media persons from print and broadcast today are increasingly talking about the issues related to climate change and reporting the same. It is the media's task to initiate common people into thinking about these pertinent issues, and to convey messages to the public in a language that they can understand and relate to. Also, there are many who are willing to embrace a more climate-conscious lifestyle, but either lack the motivation to take action or are uninformed as to how they can contribute. Here, the media's role extends to empowering people with relevant information, and initiating and sustaining a revolution of ideas at the grass roots. The media is also in a position to influence policy-making by informing and engaging policy-makers.

Ms Urvashi Sibal shared that conveying the message – that energy saved is money saved – through the media is an important part of the movement to change lifestyles. She cited the example of a village in Haryana where CFLs (compact fluorescent lamps) have completely replaced inefficient bulbs. The consumers may not be able to explain the positive impact of their shift to CFLs on the environment but are aware that this saves energy and is therefore cost-effective. Reduced electricity bills are an important incentive for change.

Decoupling consumption and happiness

Large cuts in GHG emissions required to stabilize temperatures are clearly difficult, if not impossible to achieve, if we continue to think within a paradigm of growth that is based on increase in GDP per capita and rising living standards. Mr Uday Khemka urged the audience to look beyond the technocratic view of climate change

and interrogate the current paradigm of progress. The arithmetic dilemma that faces our civilization, with regard to addressing the problem of GHG emissions and climate change, can only be resolved by establishing a connection with human realities. Happiness thus needs to be decoupled from conspicuous consumption. Referring to Maslow's 'hierarchy of needs', Mr Khemka said that intuitively one realizes that the marginal return on happiness in the early parts of the hierarchy is enormously higher than that in the final parts of the hierarchy. The work of the New Economic Foundation, London, empirically corroborates this. The values created by utilitarianism and materialism in the context of capitalism were useful in bringing society up to a point, but a perpetuation of these values are pushing people to ever higher levels of unsustainable consumerism.

Humankind today needs to draw from ancient resources of knowledge and spirituality. To aid this, India has immense spiritual resources to offer to the planet. Today's times offer an opportunity to bring a different level of discourse and dialogue to the table that engages with the role world religions and spiritual training can play in addressing the problem of climate change and energy insecurity. Spirituality must be well-integrated into the education system and the focus should be on training the body, mind, the spirit, and the intellect. Mr Khemka articulated the need for a new *satyagraha* that implies 'holding to the truth'—one that has an 'institutional expression' in political and social life.

Conclusion

Societies often tend to *react* to environmental changes, which proves costly in the long term. Lifestyle changes provide a window of opportunity for, gradually and incrementally, enhancing energy security and mitigating climate change. A comparative analysis of countries with regard to energy inputs per unit of output energy delivered through food; waste generation and recycling; and energy and emissions per unit of passenger transportation movement reveals that 45%–55% of total energy used is influenced by consumers' choices with regard to personal transportation, personal services, and homes. The core question is

how to influence personal activities and choices in the interest of sustainability.

Educating the youth, and consumers in general, is crucial for initiating change in lifestyles. There is a need to recognize the ethical basis for change and the spiritual basis for happiness that values justice and economy of use. Clearly, none of this can be achieved without the support of policy changes, technological research and development, marketing of energy-efficient products, and financial incentives. Cross-sectoral involvement,

public-private partnership, and government-citizen collaboration can successfully chart the way towards sustainable lifestyles.

References

IEA (International Energy Agency). 2007
World Energy Outlook 2007
Paris: IEA

TERI (The Energy and Resources Institute). 2007
TEDDY (TERI Energy Data Directory and Yearbook) 2005/06
New Delhi: TERI