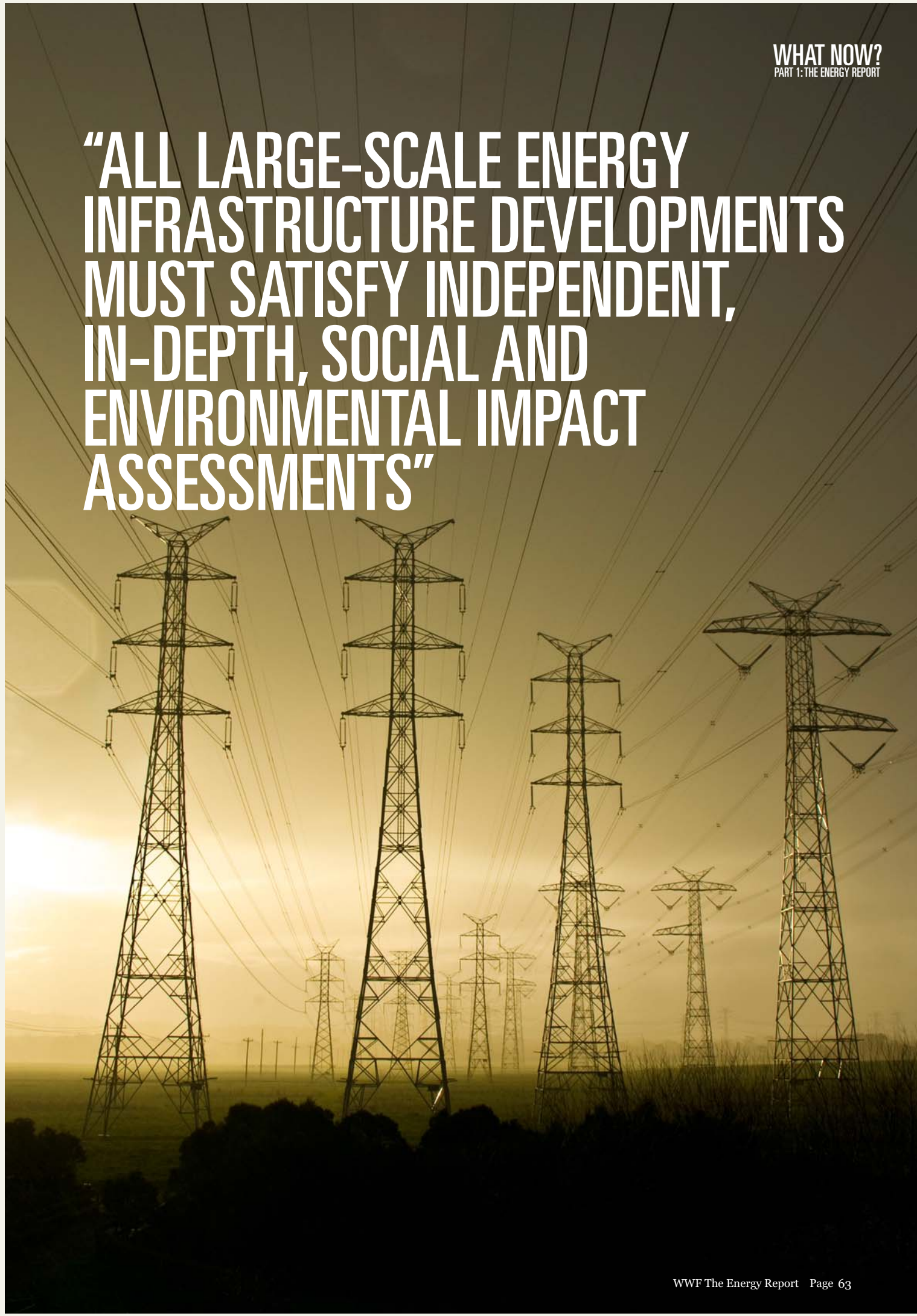


“ALL LARGE-SCALE ENERGY INFRASTRUCTURE DEVELOPMENTS MUST SATISFY INDEPENDENT, IN-DEPTH, SOCIAL AND ENVIRONMENTAL IMPACT ASSESSMENTS”



“THE SUGARCANE IS USED TO PRODUCE BIOETHANOL. CANE RESIDUES ARE FED TO THE COWS, MAKING-UP FOR THE LOSS OF PASTURE”



BIOETHANOL

In the Brazilian region of Ribeirão Preto, cattle farmers grow sugarcane on some of their land that was previously used for grazing. The sugarcane is used to produce bioethanol. Cane residues are fed to the cows, making-up for the loss of pasture. As there are still only a few cattle per hectare, animal welfare doesn't suffer, and farmers get an extra source of income.



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CASE STUDY

CRITICAL LIFE- STYLE CHOICES

LIFESTYLE

How do the choices we make in our own lives affect energy supplies?

Moving to a renewable energy future doesn't mean sacrificing our quality of life.



The Ecofys scenario shows that we can supply almost all of our energy needs from renewable sources by 2050 while maintaining rates of economic growth and leading prosperous, healthy lifestyles. Indeed, quality of life for many will improve immeasurably with access to electricity and clean energy.

We will, though, need to make wiser choices about the way we use energy. Lifestyle changes will allow us to reach a renewable energy future while reducing our impact on the planet. Since the anticipated need for bioenergy may push our forests, agricultural land and freshwater ecosystems to the limit, we particularly need to look at what we can do to limit bioenergy demand and land-use while aiming at 100 per cent renewables and make more land and water available to sustain people and nature.

To grow enough food to nourish a growing global population, while also having enough land available to meet potential demand for biofuels, many of us will need to change our diets. As mentioned, the Ecofys scenario places limits on meat consumption growth. If future meat consumption is to be split more equitably, this would mean a halving of meat consumption per person by 2050 in OECD countries, and an increase by a quarter elsewhere. If we eat even less meat than this, then more land will be available to grow food or biofuel crops, or to return to nature.

Wasting less food will also save energy and free-up more land. According to Tristram Stuart²⁵, around half of our food is lost between field and fork...

“Rich countries use up to four times more food than the minimum requirements of their populations (after adding/ subtracting

imports and exports); surplus is either fed inefficiently to livestock, causing a net loss in food calories, or it is wasted in the supply chain, or eaten in excess of dietary requirements. ... Poor countries have much smaller food supplies: fewer arable crops are fed to livestock, and less is wasted in the home”.

Reducing the distance that we transport food and other goods will also reduce the need for biofuels. The Ecofys scenario is based on established “business-as-usual” projections that predict steep rises in freight transport by 2050 – more than doubling in OECD countries and increasing fivefold elsewhere. If we cut rises in long-haul freight transport by a third compared to these projections, it would reduce the land needed for growing

crops for transport by around 8 per cent, or 21 million hectares.

Personal mobility is also predicted to rise by 2050. Projections show the overall distance people travel will increase by half in OECD countries, and treble in the rest of the world. Ecofys suggests we can manage these increases if we move towards more efficient forms of transport – walking or cycling short distances, taking buses, and taking the train instead of flying. Improved communications technology will make work more flexible and home-working more viable in many jobs, reducing the need to commute. This would reduce congestion and improve the work-life balance for many. All the same, we will need massive investment in efficient public transport systems, along with fundamental changes in attitudes and behaviour.

Particularly sharp increases are expected in aviation transport, in rich and poor

countries alike, and the Ecofys scenario includes these. Flying less would reduce the need for biofuels in the future, and substantially reduce carbon emissions today. A cut in passenger air travel by a third compared to Ecofys projections would reduce the land needed for growing crops for transport by an additional

19 million hectares. Videoconferencing and emerging innovative technologies could reduce the need for business travel. People may also choose to travel more slowly, or holiday closer to home.

Making lifestyle changes will take time. Communities that have collected firewood from forests for centuries will not switch to biogas cookers overnight. The attachment to large and fast cars runs deep in Western society. But history shows that people will change their behaviour when they understand the benefits and when policies steer them in the right direction: recycling is now second nature in many countries, while smoking rates have fallen with growing knowledge of the health risks. A better understanding of the impact of our own choices will help us move toward a fair and fully renewable future

in which people live in harmony with nature.

25. Waste - Uncovering the Global Food Scandal. Tristram Stuart, 2009



Source: placeholder



WHAT NOW?

- Every item we buy, all the food we eat, every journey we take uses energy. All people need to be more aware of the impact their lifestyle has, and what they can do about it. Public policy should help direct people to make wiser choices.
- Wealthier people everywhere should eat less meat, as part of a healthy, balanced diet. Governments, NGOs, individuals and the media need to raise awareness of the connection between our diets and energy needs, ecosystems and climate change. Regulations and pricing should reflect the true environmental and social costs of meat and animal products.
- Food waste by richer people needs to be minimized, and we need to raise awareness that about 50 per cent of all food is wasted and lost worldwide²⁶. Consumers can help by only buying and cooking what they need, while food companies and retailers should reassess the way they package and promote perishable items. At a global level we need to re-examine the way we produce and distribute food to rebalance a system in which some regions have more food than they can use, while people in other places struggle.
- Big investments in public transport systems, particularly in emerging economies where personal mobility is growing fastest, are needed to provide an attractive alternative to private cars. Long-distance, high-speed trains powered by electricity from renewable sources need to be developed as an alternative to air travel.
- We need to explore other ways to optimize the distances that people and products travel to deliver the least GHG emissions over the life-cycle of a service or product. In part this means promoting regional economies and the use of local materials. Restaurants and retailers could equally source more regionally produced food that is in season - reducing the need for refrigerated storage. In many walks of life, Internet and mobile phone transactions can reduce the need for travel; employers should support home-working. International businesses should invest in videoconferencing and emerging communication technologies.
- Not everything should be grown or manufactured regionally, and trade between nations is essential to ensure the most effective (and energy efficient) use of resources and goods. Production and consumption of certified sustainable products, e.g. Rainforest Alliance, UTZ Certified, Organic or Fair-Trade, particularly from developing countries, needs to be encouraged. The social and environmental benefits for communities producing these products, and associated environmental benefits, are frequently greater than the environmental impact of the long-distance transport.

26. Lundqvist, J., C. de Fraiture and D. Molden. Saving Water: From Field to Fork - Curbing Losses and Wastage in the Food Chain. SIWI Policy Brief. SIWI, 2008.



CASE STUDY

CUTTING AIR TRAVEL

Curbing the growth in air travel would mean less land is needed for growing biofuels. Under WWF-UK's One in Five Challenge, businesses and organizations are committing to cut 20 per cent of their business flights within five years. A dozen large employers have signed up to the programme, including the Scottish government. Audio, video and web conferencing provide alternatives to face-to-face meetings. It is no coincidence that a telecom firm, BT, became the first company to successfully meet the challenge.

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