

Climate of Opinion

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Commentary

Surviving the urban jungle – Gulya Isyanova¹

The urban animal

The emergence of urbanisation as a compelling force in human society has its roots in our transformation from a hunter-gatherer society to an agricultural one. In other words, the transformation from life ‘on the move’ to one of settlement created physical focal points for the concentration of human activity. As these settlements grew, the world’s first proper cities began to appear around 4000 - 3500 B.C. in Ancient Mesopotamia.² Over the subsequent millennia, urbanisation has been subject to a snowball effect to the extent that cities are now “the dominant landscape of human civilisation”.³ However, this growth has not only occurred in the number of cities, but also in the size of cities themselves. There are now approximately 20 ‘megacities’ in the world (cities whose inhabitants number 10 million plus) and more people now live in Tokyo, for example, than do in the whole of Canada.⁴

But what makes cities so special? And why is urbanisation such a seemingly relentless force? Is it likely to keep moving forward or will it be challenged?

Through proximity and concentration, cities allow for economies of scale and an efficient division of labour. It is precisely the proximity and concentration (and therefore the increased efficiency) afforded by cities which nurture the spillover effect which leads to progress. These key advantages explain why urbanisation has accelerated over the past few millennia.

However, cities are not all about advantages – the urban way of life also brings its challenges. Some of these have remained the same over the lifetime of the urbanisation process, such as sanitation and waste management concerns, for example, or the need to find and have access to reliable energy sources. Other challenges,

however, have emerged over time as a result of external factors and are very much the product of their time. In the early 21st century, for example, it is the threat presented to a large number of cities by climate change that is at the forefront of concern.

Cities are currently facing a number of challenges with respect to both energy and environmental issues. Although the term has different meanings for different stakeholders, in terms of both energy and environment, the key concern here is ‘sustainability’ – can cities sustain themselves in the face of these challenges?

Energy

With respect to energy, this question stems from a continuing growth in demand for energy, as well as issues surrounding supply. With more than half of the global population now living in urban areas, we have become a truly urban species. This is particularly significant, as although cities only cover 2% of the world’s surface area, they consume 75% of the world’s energy.⁵ As urbanisation continues to pick up pace (it is estimated that by 2030 60% of the global population will be urban),⁶ demand for energy is only set to grow.

The challenge, of course, is how to cater for this growing demand. From a historical perspective, the answer has always been technological innovation. Humans initially relied solely on human muscle power, but then learnt to incorporate the muscle power of animals. They subsequently adapted other widely-available resources, such as water power (e.g. waterwheels), wind power (e.g. windmills), wood and coal. Moreover, in the past couple of centuries innovation has accelerated and we have experienced a number of energy revolutions.⁷

First, steam power enabled industrialisation to take place and transform our world, in some respects for better, and in others, for worse. In other words, the extensive use of fossil fuels – coal, oil and gas – directly fed the industrialisation process and increasing productivity.

The second revolution was the electrification of the world, with the third being the discovery and adoption of nuclear power.

Finally, with concerns about the finite nature of fossil fuels, as well as the vast impact of fossil fuel use on our environment, we are now turning to renewables – a revolution which is very much in the initial stages.

Although energy supply issues now generally tend to be dealt with at the national policy level, policies such as improved energy efficiency of public facilities and stricter building standards and regulations are the sorts of policies that can be tackled at the city level too.

Cities can also look at utilising new energy sources, something that many are already doing around the world. In 2006, for example, the Solar Thermal Grant Program in the US city of Chicago granted 600 solar thermal collectors to health clubs, laundrettes, affordable housing units, and other businesses or organisations that use a high volume of hot water.

Environment

Cities face environmental challenges on two scales. In micro-climatic terms, this entails problems such as air pollution, the development of urban heat islands, and cities creating their own microclimates.

In macro-climatic terms, we have to look at the interaction between cities and climate change. As was mentioned previously, cities consume 75% of the world's energy. In environmental terms this means that they are therefore responsible for approximately 80% of man-made global CO₂ emissions.⁸

From a proactive perspective, i.e. mitigation of climate change, cities are already linking on national and international levels to cooperate with respect to climate policy, e.g. the C40 Cities Climate Leadership Group, ICLEI (an international association of local governments and their associations that have made a

commitment to sustainable development) and the U.S. Conference of Mayors Climate Protection Agreement.

From a more reactive perspective - i.e. how cities concern themselves with adaptation - some difficult questions arise. Climate change-related impact transpires in a myriad of ways. A higher incidence of extreme events – such as hurricanes and typhoons – can have an all too well-documented impact on cities. In the medium term, rising sea levels also spell a disaster for many coastal cities such as Miami, New York, Rotterdam and Guangzhou. In the face of these increasing dangers and difficulties, to what extent will cities turn to technologies to enable them to continue thriving where they are, or will some cities eventually be abandoned? After all, “cities could persist – as they have for thousands of years – only if their advantages offset the disadvantages”.⁹

Conclusion

Cities are at the centre of our modern existence. The challenges that they face and bring about in the spheres of energy and the environment encapsulate the challenges we face in living and surviving as an urban species. How do we sustain ourselves not only in the short term, but in the medium and in the long term too?

¹ Gulya Isyanova is a researcher at the Stockholm Network.

² <http://oi.uchicago.edu/OI/MUS/ED/TRC/MESO/cities.html> (Accessed on 3 October 2008)

³ Kim, Sukkoo. 'Urbanization' in *The New Palgrave Dictionary of Economics (2nd edition)* by S. Durlauf and L. Blume (2008).

⁴ <http://ngm.nationalgeographic.com/ngm/0211/feature3/?fs=travel.nationalgeographic.com> (Accessed on 3 October 2008)

⁵ <http://edition.cnn.com/2007/TECH/12/31/eco.cities/index.html> (Accessed 3rd October 2008)

⁶ Ibid.

⁷ <http://www.fi.edu/learn/case-files/energy.html>

⁸ <http://edition.cnn.com/2007/TECH/12/31/eco.cities/index.html> (Accessed on 3 October 2008)

⁹ O'Flaherty, B. *City economics* (2005), p.12.

Victims or leaders? Cities and global climate policy – Dr James Keirstead¹

2007 marked the first time in history that over half of the world's population lived in cities.² In Europe, over 80% of us already live in urban areas, and across the developing world increasing numbers of people are also moving from the countryside to seek a better life in town. But for all their economic and cultural benefits, cities have significant environmental impacts – approximately 75% of global resource consumption can be attributed to urban areas.³ This means that climate change is directly linked to cities: their energy consumption, the way they use their hinterlands, but also their potential to support global climate policy.

Cities: victims or leaders?

Cities have been described as both 'problem creating' and 'problem solving' nuclei⁴ and this division also reflects their possible roles in climate policy. Seen in a negative 'problem creating' light, cities could become the iconic victims of climate change and its worst effects. *Step Change*, one of Stockholm Network's *Carbon Scenarios*,⁵ noted how large-scale disasters could provide a tangible demonstration of the consequences of climate change, thus encouraging international and national policy action. Having seen the effects of Hurricane Katrina on New Orleans, the risk to cities from more frequent and severe tropical storms no longer seems like an abstract threat, and while some cities may have too much water, others might not have enough. This summer, for example, Barcelona suffered its worst drought in 60 years and had to import six shiploads of fresh water a month to meet demand.⁶

More positively, however, cities can also offer direct leadership on climate policy, acting with or without the support of their national governments. Whether it's solar power in Freiburg, the district heating of Copenhagen, or the shared best practices of the C40 climate group, cities already provide a testing lab for new technologies and policies. Successes here can subsequently encourage wider action as recently noted in the Shell Energy Scenarios:

"The success of individual initiatives boosts the political credentials of mayors and regional authorities, creating incentives for national and international leaders to follow suit. National and local efforts begin to align with and amplify each other, and this progressively changes the character of the international debate."⁷

Policy options and strategies

So what can cities do specifically to contribute to global climate policy? There are at least three starting points:

Quick wins

The most immediate strategy is for cities to tackle the low-hanging fruits of climate policy. By using their available powers in planning, transportation and local taxation, urban governments can promote energy efficiency, raise awareness, and importantly, demonstrate to other levels of government where additional action is needed. London's Climate Change Action Plan, for example, explicitly highlights the need for complementary central government policies if local initiatives are to have maximum impact.

Create partnerships

Often these 'quick win' policies are best delivered through partnerships. In cities like London, the power to develop and implement policy is scattered between the private sector, community organisations, regional, metropolitan and local governments. Forging alliances between these stakeholders can help accomplish specific tasks and also build a foundation for future success. Policy networks such as ICLEI's (International Council for Local Environmental Initiatives) *Cities for Climate Protection*⁸ or the pan-European *Energie-Cités*⁹ are also valuable, allowing municipalities to share best practices, to jointly seek project funding or simply to provide visible support for public officials pursuing a climate change agenda.

□ **Align horizons**

The divergence between the long-term horizon of climate change and the short-term demands of electoral politics can thwart even the most committed politician. It's hard to promote a policy that might be beneficial in the long-term if an opponent can portray it as a cynical short-term tax grab. However, cities can help to align these time scales, through their need for long-term infrastructure investments and their use of partnerships for policy delivery. Mega-projects like the Olympics offer a tangible starting point for such efforts but the challenge is to ensure that strategic climate policy becomes integrated into daily decision-making.

An important difficulty of urban climate policy is that experiences are hard to generalise. Cities are incredibly diverse and differences in population, climate, economic structure, and so on make it hard for the solutions of one location to be applied verbatim elsewhere. In the UK, for example, the remit of local authorities and their available policy tools are narrowly defined by central government; on the Continent, however, municipalities often have more flexibility to devise policy solutions. Market structures are clearly a part of this. Local energy utilities in Germany and Denmark, for example, operate under business models that facilitate the widespread use of district heat and power systems whereas the UK's liberalised and concentrated energy market makes such options more difficult.

Conclusion

It would be naïve to think that climate change can be solved entirely by the actions of cities. National and international markets and institutions have a crucial role to play and events can overtake even the most prescient and proactive of mayors. But equally, cities do not just passively receive and faithfully implement policy guidance from above. They do not need to sit idly by and risk becoming the victims of climate change. Instead, cities can provide “a

concrete space for politics”,¹⁰ helping to translate abstract climate threats into daily realities and providing an opportunity for policy experimentation and partnership. By pursuing this leadership role, cities could have a significant impact on global climate policy.

Recommended reading

Bulkeley, H. and Betsill, M. *Cities and Climate Change: Urban Sustainability and Global Environmental Governance* (London: Routledge, 2003).

Capello, R., Nijkamp, P., Pepping, G. *Sustainable Cities and Energy Policies* (Berlin: Springer, 1999).

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² UN Population Division (2008) <http://esa.un.org/unup/>

³ Girardet, H. *Creating Sustainable Cities* (Dartington: Green Books, 1999).

⁴ Rotmans, J., van Asselt, M.B.A. “Towards an integrated approach to sustainable city planning” *J. Multi-Crit. Decis. Anal.* 9: 1 (2000) pp. 10-124.

⁵ Please see the following link to the *Carbon Scenarios* site: <http://www.stockholm-network.org/Conferences-and-Programmes/Energy-and-Environment/carbonscenarios>

⁶ <http://www.guardian.co.uk/world/2008/may/14/spain.water>

⁷ Shell (2008), *Shell Energy Scenarios to 2050*.

⁸ ICLEI - *Local Governments for Sustainability* is an international association of local governments and national and regional local government organizations that have made a commitment to sustainable development. Please see: <http://www.iclei.org/>

⁹ *Energie-Cités* is the association of European local authorities for the promotion of local sustainable energy policies. Please see: <http://www.energie-cites.org/>

¹⁰ Sassen, S. “Afterword” in Gugler, J. (ed.), *World Cities Beyond the West: Globalization, Development and Inequality* (Cambridge University Press, 2004).

The sustainability benefits of a curious approach to combat climate change – Gary Lawrence¹

Sustainability and sustainable development are about a balanced interaction between the Earth's natural systems on the one hand and (individual and aggregate) human behaviour on the other, in such a way that the continued existence of either is not compromised.

However, we still do not fully understand all the long-term causes and effects at the intersection of Earth's natural phenomena and human behaviour – we simply do not have all the relevant information and the wider perspective necessary to demonstrate exactly what is going on or what best to do. This is, of course, a barrier to sustainability, although science is increasingly providing us with clearer insights regarding effects caused by human behaviour. Another major barrier, of course, is the large number of individuals and groups that pertain to be absolutely certain about things in this matter which are ultimately uncertain.

If our society is going to translate its 'sustainability' values into a more constructive approach to the future, we need a different approach. Rather than focusing on the rather abstract notion of 'sustainability' itself, we should shift our attention to practical efforts at safeguarding a happier and more secure future for people, through households, neighbourhoods, communities and nations.

We must realise that from the perspectives of rationality and morality, current elements of 'sustainability' – economics, environmental stewardship and civil society – should not just be considered as legitimate ends in themselves, rather as means for a preferred future that creates greater opportunity for humanity over a longer period of time.

Global climate change and its current and potential consequences for life, property and prosperity are accepted as the major challenge for human society in the next 100 years. Is it possible that we can actually focus on the present and those key issues that are near-term as we think about climate change and its longer-term

impacts? The translation of science into policy and practice that can abate the acceleration of greenhouse gas production (particularly carbon) while also ensuring social and economic development, is still in its infancy. However, the opportunities I have had to look at sustainability issues (from a variety of institutional points of view and in many communities and cultures) have yielded some ideas about what we could try and what we should avoid, and there are pioneers on each continent who are leading the way towards a more sustainable, secure future for their inhabitants.

The Industry Greenhouse Program

Melbourne, Australia

Melbourne has reduced its CO₂ emissions by 1.1 million tonnes per annum by making energy audits mandatory for 300 sites with Environmental Protection Agency (EPA) licences that emit large amounts of CO₂. The 300 participating companies have reduced their energy bills by a collective US\$34 million a year. The Industry Greenhouse Program is administered by the State EPA and requires over 300 sites with EPA licenses that emit large amounts of CO₂ to undertake audits, develop action plans and implement their actions. Significantly, a three-year payback period for energy efficiency requirements has meant that businesses are guaranteed to save money in the medium term. In many instances, payback periods are much shorter, with projects paying for themselves within months. The focus on economic return has delivered immediate and sustainable reductions in consumption and CO₂ emissions. Its success means it will be expanded beyond energy to also address water and waste.

The wisdom of this approach goes beyond the tangible economic benefits experienced by the participating companies. In a city such as Melbourne that is dependent upon the automobile to move workers and goods into and around the city it is clear that any CO₂ reduction strategy targeting car owners and automobiles would negatively impact the local economy. This policy, targeting large industrial CO₂ emitters, is sensitive to the need to offset community resistance in the face of creating cost.

Solar Hot Water Ordinance

Barcelona, Spain

Barcelona is the first European city to have a Solar Thermal Ordinance making it compulsory to use solar energy to supply 60% of running hot water in all new buildings, renovated buildings or buildings changing their use. It applies to both private and public buildings and is designed to harness Barcelona's 28,000 average hours of annual sunshine.

The key to the success of this project has been ensuring that people are educated on the use and maintenance of their solar panels. The Barcelona Energy Agency (BEA), a consortium made up of a number of local institutions directly involved in sustainable energy and environmental management and responsible for managing the program, runs a successful education campaign known as *Porta a Porta* (Door to Door). They work with the neighbourhood associations and corporate bodies of buildings to ensure that tenants/the public measure their energy savings and check to ensure that their solar installations are working.

The success of Barcelona's Solar Thermal Ordinance inspired a piece of national legislation requiring minimum levels of Solar Hot Water and photovoltaics in new construction and renovation projects.

The genius of this program is that it recognises the high opportunity costs for each decision about how a city draws energy from regional and national grids. By focusing on public education through neighbourhood organisations, and nurturing commitment, the City of Barcelona has helped avoid the costs and consequences of new large-scale power generation facilities. Because of the public's intuitive understanding of the relationship between hot water and energy, the City has found a pathway that makes common sense rather than presenting an economic rationale.

City Green Building

Seattle, Washington, USA

During a period of unprecedented capital development in the city, Seattle proactively seized

the opportunity to improve sustainability by requiring all new city buildings over 500,000 square feet to meet new state LEED™ (Leadership in Energy and Environmental Design) building ratings, and by providing financial, height and density incentives for private projects meeting LEED™. As a result it now has one of the highest concentrations of sustainable buildings in the US and a powerful sustainable building industry worth US\$671 million. An economic development study commissioned in 2006 by the Seattle Office of Sustainability and Environment and the Office of Economic Development found that the green building industry is one of the city's strategic economic 'clusters'.

Seattle's sustainable building policy recognises that any strong economic future for the nation has to be in part built upon creating employment in the environmental technology sector. There is a conflict between conventional wisdom and the recognition that conventional practice is inconsistent with today's real energy constraints. Even in Seattle, where over 86% of the city's electrical consumption is provided by hydroelectric generation, Seattle City Light recognises that climate change may negatively impact the water sources the city relies upon for its power. In proactively taking steps to implement energy efficiency, Seattle is reducing the potential need to build new substations and the associated impact of rate hikes on consumers.

Our Future is a Political Choice

Sustainability is both a physical reality and a political choice. The physical reality is that there is a limited amount of land, fresh water and natural resources. As we use these up or alter them so they no longer provide benefit, we limit our future potential. Technological innovation can help clean up some of our messes, translate underutilised resources into useful entities, and occasionally provide substitutes for resources that are scarce. However, so long as we are confined to Earth, limits that will result in population collapse are inevitable.

The political choices have to do with how we approach the inevitability of limits. Should we worry about limits that are inevitable but not

immediate? Should those of us who are doing just fine feel any obligation to our fellow humans whose local systems are in collapse? Should we take steps to make life better for future people we will never know? These and many more questions are in play when we ask ourselves, “Should we try to make human development more sustainable?”

For too many people, sustainability is perceived to be about maintaining the status quo. For others, it is about returning to some preferred past that we only imagine existed. Neither point of view is likely to be successful in getting us the future we want because change is the status quo. The lesson in this, I believe, is that we need to be

more humble in choosing actions to make things better or avoid making things worse based on the conclusions we draw. We must accept the limitations of our knowledge and embrace doubt if we are going to move beyond the ideological struggles associated with policy debates and the sustainable development movement in general.

¹ Gary Lawrence is a principal at Arup and a global leader for sustainable urban development. His views have been shaped by academic and professional practice, most profoundly through his experience as planning director for the city of Seattle.

The role of cities in driving global climate policy – Mayor David Miller¹

Climate change is the most pressing challenge facing the planet and reducing carbon emissions is high on the agenda for national governments and international organisations. However, progress on taking Kyoto forward is proving to be painfully slow. In the meantime, a real difference is being made at a local level much closer to the grass-roots, where day-to-day political, corporate and personal decisions are made.

Cities are home to about half the world’s population but consume 75% of the energy and emit 80% of the CO₂ from human activities. They are also highly vulnerable to the effects of changes to the climate – more frequent violent storms and floods, droughts, heat island effects and, above all, rising sea levels. Many of the great cities of the world are on low-lying land on the sea or estuaries. A rise of a couple of metres could have catastrophic implications.

Cities also have the means to cut their carbon emissions. By definition, they are concentrations of people and activities at high densities, able to use resources such as energy, materials and land efficiently. Secondly, city governments have the powers and responsibilities to address the reduction of carbon emissions across the spectrum. Municipalities control the development of land, they regulate transport and often manage

public transport systems, they own and manage buildings and vehicle fleets, organise the collection and processing of waste streams and have varying degrees of responsibility for the environmental infrastructure such as energy and water. They are able to form partnerships with private interests as well as mobilising and co-ordinating community action. It is at city level that innovation and progress on climate change action is most likely to be achieved.

C40 is a group of the world’s largest cities committed to taking action on climate change. In October 2005, representatives of 18 leading world cities met in London to discuss joining forces to tackle global warming and climate change. The representatives saw the need for action and cooperation on reducing greenhouse gas emissions and pledged to work together towards achieving that goal. At the end of the conference, a communiqué was signed which recognised the need for cities to take action and to cooperate on reducing climate emissions. The cities also promised a number of action points, including most notably the creation of procurement policies and alliances to accelerate the uptake of climate-friendly technologies and influence the market place.

In August 2006, the initiative was further strengthened when a partnership between this group of cities (since then renamed the “C40”) and the Clinton Climate Initiative pledged to

reduce carbon emissions and increase energy efficiency in large cities across the world.

Participation of the C40 now spans the globe: including Berlin, Buenos Aires, Cairo, Caracas, Chicago, Delhi, Dhaka, Houston, Johannesburg, London, Los Angeles, Madrid, Melbourne, Mexico City, Moscow, New York, Paris, Philadelphia, Rome, Sao Paulo, Seoul and Toronto. It constitutes a global partnership that can rapidly accelerate greenhouse gas emission reductions, even if negotiations between national governments continue to stall.

The C40 cities were chosen because of their commitment to reduce greenhouse gas emissions and their geographical distribution. C40 cities are expected to act as catalysts for change within their country or region. Any initiatives or programmes developed within the C40 cities will become available to any other city that requires them.

Delivery is high on everyone's agenda and we have plenty of best practices to share.

All C40 cities are achieving dramatic greenhouse gas emission reductions through energy retrofits of existing buildings, often combining energy and cost savings with green job creation and neighbourhood revitalisation.

For example, in Denmark, the Copenhagen district heating system is one of the world's largest, oldest and most successful, supplying 97% of the city with clean, reliable and affordable heating. Set up by five Mayors in 1984, the system simply captures waste heat from electricity production - normally released into the sea - and channels it back through pipes into peoples' homes. The system cuts household bills by 1,400 euros annually, and has saved the Copenhagen district the equivalent of 203,000 tons of oil every year - this is equivalent to 665,000 tons of CO₂.

Here in the City of Toronto, we have built a district cooling system, using cold water from

Lake Ontario to cool downtown high-rise office towers, reducing energy use by 90%.

It is these straightforward, amenable and yet extremely effective means of reducing emissions that can encourage others to implement change.

Thirty-two Mayors attended the C40's second summit that took place in New York last year, with representatives from over 50 cities as well as senior executives from the world's largest companies and financial institutions. Throughout the four-day event, delegates shared best practices, identified collaborative projects and charted future actions relative to reversing dangerous climate change and realising economic development benefits. The C40 will hold its third summit in Seoul in May next year.

Several C40 workshops have taken place over the past year on topics such as airport emissions and port city emissions. London and Stockholm co-hosted a workshop on transport and congestion in London last December and Tokyo will host a conference on Adaptation in October 2008.

Adaptation is a crucial area of engagement, the reality being that many cities will be hit hardest by the climate change that is already underway. C40 has an important role to play in ensuring that best practise is shared between cities and that adaptation measures are consistent with reducing emissions.

A majority of the world's energy consumption either occurs in cities or as a direct result of the way that cities function and cities are therefore key to alleviating climate change. Cities are often centres of new thinking and policy innovation - and sharing best practise and expertise through international cooperation is a valuable weapon in the fight against climate change.

¹ David Miller is Mayor of Toronto, Canada.

Microclimates – Top stories in energy and environment

EU 'not listening' to cities, says Commission

National governments' privileged access to EU decision-makers in Brussels limits cities' access to funding instruments necessary for dealing with significant climate change-related challenges, according to a Commission official and urban policy experts. The 'filter of member states' is blocking cities' access to EU funding, Fabrizio Barbato, deputy director-general for energy in the Commission's energy and transport service (DG TREN), told a small audience in Brussels yesterday (8 October) during a workshop on sustainable cities organised as part of the European Week of Regions and Cities.

<http://tinyurl.com/3klctg>

China to become world's largest investor in green energy

China is on the verge of becoming the world's largest investor in green energy as it struggles to reverse the catastrophic effect its industry has wreaked on the environment. Last year, China spent £6 billion on renewable energy projects, just slightly short of Germany, the world leader. This year, the Communist Party has vowed to redouble its efforts. Li Junfeng, an energy expert at the National Development and Reform Commission (NDRC), said that in terms of the "overall scale of renewable energy development", China already leads the way. Greenpeace believes China can shortly produce half of its energy from renewable sources.

<http://tinyurl.com/66hvqr>

US House approves offshore drilling

The US House of Representatives passed legislation that lifts a longstanding ban on offshore oil drilling, opening most of the US coastline to exploration. The package proposed by Democrats would give states the option to allow drilling between 50 and 100 miles (80 and 160 km) off their shores. Areas more than 100 miles from the coast would be completely open to oil

exploration and drilling. The House voted 236 to 189 in favour of the package. Until recently, Democratic leaders in Congress strongly opposed lifting the moratorium on offshore drilling, saying it would have only a small impact on gasoline prices in the immediate future. But as gasoline prices rose to levels above \$4 a gallon this summer, public opinion shifted in favour of offshore drilling. Republicans made removing the ban on drilling a key campaign issue for their party in this election year.

<http://tinyurl.com/6es5cg>

North Pole becomes island with passages free of ice

The North Pole has become an island for the first time as climate change has made it possible to circumnavigate the Arctic ice cap. The historic development was revealed by satellite images showing both the north-west and north-east passages open.

<http://tinyurl.com/69obmm>

Japan to launch carbon footprint labelling scheme

Japan is to carry carbon footprint labels on food packaging and other products in an ambitious scheme to persuade companies and consumers to reduce their greenhouse gas emissions. The labels will show how much carbon dioxide is emitted during the manufacture, distribution and disposal of each product under a government-approved calculation. Although the labelling scheme is voluntary, few firms want to be seen to be lagging behind rivals in the rush to corner the growing market in eco-friendly produce.

<http://tinyurl.com/6bwnyd>

US states set for obligatory CO2 trade scheme

The first mandatory US inter-state carbon trading system will open on Thursday with the auction of carbon permits to power stations. It will be widely watched across the country for lessons in how a nationwide cap-and-trade system could function. The long-awaited Regional Greenhouse

Gas Initiative (RGGI) places limits on the amount of carbon dioxide that 233 power stations and factories in 10 north-eastern states can emit. Companies will buy, at auction or from each other, permits to cover the amount of carbon dioxide they produce over three years from 2009 to 2011. Both presidential candidates have pledged to introduce a federal cap-and-trade carbon system, so RGGI is seen as a potential template.

<http://tinyurl.com/4492g6>

E.ON looks at £300m investment to build Britain's largest biomass plant

E.ON, the German-based energy firm, has proposed building one of the largest biomass power stations in the UK. The firm intends to invest around £300 million in the plant at the port of Bristol, in a development which will generate 150 megawatts (MW) of electricity - enough to power more than 200,000 homes.

<http://tinyurl.com/64c47g>

Brussels told to pursue Azerbaijan pipe dream

The EU has been advised by its energy commissioner to redouble its efforts to build the \$12bn Nabucco gas pipeline and reduce its dependence on imports from Russia. The conflict in the Caucasus has led many experts to dismiss Nabucco, the planned 3,300km pipeline from Azerbaijan to Europe via Georgia and Turkey. But Andris Piebalgs countered that the aim of diversifying energy sources and routes was even more important now. The ultimate aim of the six partners in the Nabucco project and the EC is to import gas from the Middle East, including Iraq, via the pipeline.

<http://tinyurl.com/5rhh69>

Romania to get Europe's largest onshore wind farm

On 27 August, Czech electricity giant CEZ announced a €1.1 billion investment in Romania to build what will become Europe's largest onshore wind farm project. CEZ, the largest electricity producer in central Europe, has bought into a Continental Wind Partners project near the Black Sea port of Constanta. The first phase will be ready next year, when 139 turbines - each with a 2.5 megawatt capacity - will be installed. The second phase will be completed in 2010 when more than 200 turbines with a total capacity of 600 MW will come into operation. Europe's current largest wind farm, which has a generating capacity of 208 MW, is in Guadalajara, Spain. The project is the first large wind-power project to be realised in Romania and will represent almost 30% of the renewable market in the country when fully operational.

<http://tinyurl.com/6fw4ea>