coal and politically risky Russian gas imports. And there is no reason to think the development will stop there.

The good news is that natural gas is the cleanest fossil fuel available. Compared with coal, burning gas roughly halves carbon dioxide emissions and eliminates the release of toxic chemicals such as mercury and sulphur dioxide. It is often regarded as a bridge fuel to a low-carbon economy, one that can squeeze out coal and supplement wind and solar energy. Indeed, an abundant and relatively cheap supply of natural gas should spell the end of new coal plants and could to a certain extent allow old coal plants to be replaced.

Deployed without forethought, however, natural gas could hamper the transition to clean energy by outcompeting currently more expensive technologies such as wind and solar. Although natural gas seems clean compared with coal, drilling operations scar the landscape, disturb sensitive ecosystems, increase regional air pollution and may, some fear, pollute groundwater. Then there's the carbon dioxide problem. Building new gas-fired plants would lock in emissions for decades to come — unless they have technologies that would allow the carbon dioxide to be captured and either buried or recycled.

Some have recommended that the United States deploy its newly abundant natural-gas resources in the transportation sector, but that would require vast new infrastructure for what is, in the end, a transition fuel. Congress should avoid such single-shot solutions and keep its eye on the target: a solid greenhouse-gas regulatory programme that sets short- and long-term goals while pricing energy according to the damage it inflicts on the environment.

In the short term, regulators and policy-makers should look for ways to encourage the use of natural-gas plants that are currently fired up only when demand is highest. There is a lot of spare capacity; better to use it wherever possible and retire the dirty, inefficient coal plants that are, in any case, unlikely candidates for the carbon-capture retrofit technologies down the road. But the endgame must bring a halt to greenhouse-gas emissions. From this perspective, power plants that run on gas, like coal, will eventually need carbon-capture technology if they are to remain viable.

It is too early to predict how the natural-gas market will play out, and it would be foolhardy to focus on supply to the detriment of energy efficiency, which should be the top priority. Nonetheless, it seems that the world has much more gas at its disposal than was believed only a few years ago. It should be used wisely. ■

Inspiring non-scientists

Those wishing to reveal scientific ideas should learn from the engaging style of TED conference talks.

A conference that charges £4,500 (US$7,440) to attendees, attracts sponsorship from the likes of Nokia and GE, and stuffs 600 participants into a stiflingly hot Oxford theatre (as happened last week) had better deliver. And if what you want is to find yourself in intelligent and engaging company, to be addressed comprehensibly by achievers about their ideas across a diverse range of interests, if you have the money, and if the organizers think you're interesting enough to attend, TED conferences do indeed deliver.

The acronym stands for 'technology, entertainment and design', but in recent years the TED presentations have extended well beyond these topics into culture, management, religion, science, extreme sports and more. Founded in 1984 and long established as annual events in California, TED conferences have recently begun to be held in other countries. They are now run by the not-for-profit Sapling Foundation in New York City, established in 1996 by TED talks curator and one-time publishing entrepreneur Chris Anderson. The visibility of the conferences has expanded hugely since videos of the best talks became available for free on YouTube in 2006 (see http://tinyurl.com/kpmvbo).

TED succeeds in part because participants are encouraged to talk about the unexpected. The title of this year's UK conference was 'The substance of things not seen'. Thus the advertising guru Rory Sutherland's dissection of how Kemal Atatürk, the first president of modern Turkey, sought to prohibit the public use of the veil not by banning it, but by insisting that it be worn by all prostitutes. And thus the activist Evgeny Morozov's discussion of the 'spinternet' — ways in which the Russian and Chinese governments subtly disseminate propaganda using a supposedly open medium. And so on.

But perhaps the most critical key to success is the style of the talks. And here, those scientists wishing to inspire public audiences could take a few tips from the speakers in Oxford who addressed themes as various as biomimicry (Janine Benyus), the neuroscience of other people's rational and moral judgements (Rebecca Saxe) and supermassive black holes (Andrea Ghez). Their videos and many others should become available over the next few weeks.

The talks have a strict time limit of 18 minutes — no interaction with the audience, and no questions except the informal ones asked in the extended conversation breaks. Academics used to talking for 30 to 45 minutes might imagine this to be severely constraining. But TED demonstrates that, for a general audience, 18 minutes is plenty for getting across context and key issues, while still forcing each speaker to focus on a message — whether it be advocacy or the celebration of new knowledge.

There is also a welcome absence of PowerPoint presentations. Instead there are plenty of images — but precious few professional scientific diagrams, which can quickly lose the audience's attention. This forces speakers to craft talks that can engage sophisticated but scientifically untutored listeners at their level. And it also encourages speakers to try for a freely flowing, relaxed presentation style, without notes. This can take hours of practice, and indeed it should — the YouTube postings of these talks offer a potential audience of millions.

After many talks have passed by, a listener may notice another factor at work: TED talks tend to have a strong feel-good aspect, often featuring calls to make the world a better place. Rarely is the audience provoked or seriously challenged. But that's not necessarily bad — the attendees have paid thousands of pounds apiece in this case to have an uplifting time, after all. They are eager to hear about new ideas. And the process does spread those ideas among people who are themselves influential and well connected.

Scientists wishing to inspire non-scientists should look at a few of these talks online and learn a thing or two. ■