

Make a start to climate action by cutting flaring

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The most recent International Panel on Climate Change (IPCC) report frames the growing challenges of unmitigated climate change in terms of risk: the risk of sea level rise, risk of inland inundation of cities, risks of food insecurity, risks to infrastructure. I could go on. The report makes clear that climate change is adding to uncertainty and it paints a picture of a world very different from the one we live in today, for everyone. "Everyone" includes the oil and gas industries.

This is not news for those in petroleum. But where does this put those who have played an important role in economic development to date? Where does that leave an industry whose involvement in fossil fuel extraction and methane's escape to the atmosphere, now understood without scientific argument to be contributing to risks that threaten to undermine the industry itself, as well as the world it has traditionally served?

At the World Bank Group we are dedicated to ending extreme poverty and boosting shared prosperity. Support for low-carbon growth and investment in resilience are now central to our work.

The costs of failing to act are staggering in the lives affected and investments lost. Globally, weather related losses and damage have risen from an average of about US\$50 billion a year in the 1980s to close to

US\$200 billion a year over the last decade. In the poorest countries, climate change threatens to increase the cost of development by 25-30 per cent.

Back to the science, the IPCC makes clear that the warming will affect every region differently, but no one will be exempt. That includes Russia. Russia is not only a contributor to global GHG emissions, but especially vulnerable to its effects. In 2008, the National Hydro-meteorological service (Roshydromet) warned that Russia experiences climate change to a greater extent, with temperatures increased by 2-3 degree Celsius in Siberia over the past 120-150 years, in contrast with average global temperature rise of only 0.7 degrees over the same period.

The implications are potentially alarming. The recent fires that devastated Russian lives and the economy contributed to the food price spikes that played a role in the events of the Arab Spring. They can be repeated. The melting of the permafrost will not only be a global concern with releases of methane that will speed warming, but it will threaten the structural integrity of infrastructure, large buildings, power stations and airports, as we have seen in Yakutsk. Damage to oil and gas infrastructure 93 per cent of natural gas and 75 per cent of oil production is in areas of discontinuous permafrost will significantly increase the economic and social costs to the country. That threatens, according to Russia's own estimates, up to 5 per cent of GDP. The cost of dealing with extreme weather events would amount to US\$2 billion each year.

Russia is not alone and should not be singled out, but it is impossible to curb emissions to arrive at a world with an increase of only 2 degrees celsius, which is the internationally agreed arrival point for climate action, without oil and gas producing countries and companies deciding to act, and act now. They need to mitigate their impact as much as possible, while the bigger conversation takes place about energy transitions away from concentration on fossil fuels and about business models to accompany this necessary and inevitable trend.

So, at this point, what does leadership

Gas flares burn at a refinery near the Russian town of Achinsk





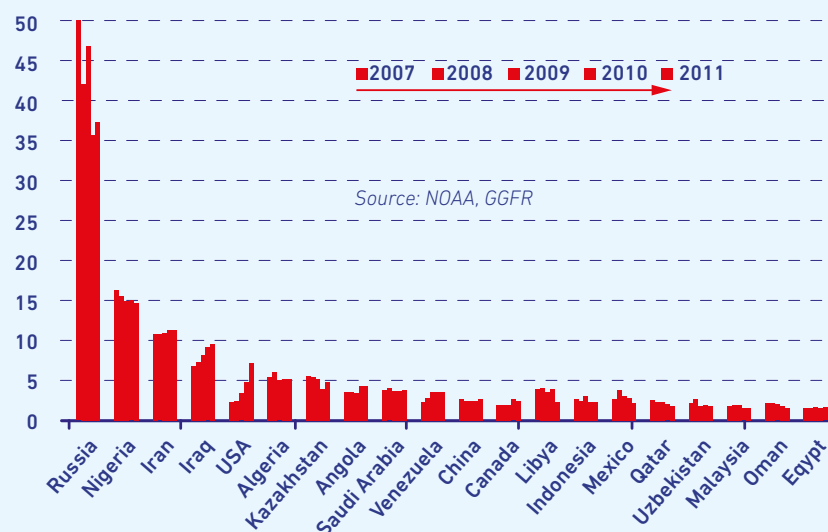
look like for the industry? First is the recognition that climate change does not threaten individual companies and individual business lines it threatens the industry itself. We know from our interaction with leading companies in the sector that this conversation has advanced, but this industry, unlike others, has not yet embraced the need for collective leadership. Collective leadership from the bulk of the industry will be needed to make progress. Key questions to be addressed include the shape of the industry, over-investment, over-valuation of upstream assets, adaptation, and inevitable prices on carbon whether through explicit taxes, emissions trading or implicit policies. Coinciding with these questions is the issue of how to develop carbon capture, utilisation and storage at scale.

But there are short-term actions that can have an immediate impact. These actions can show the industry in a different light and can hint at the roles it will play in the future, from the industry's technological depth to the strength of its R&D.

I want to focus on just one: ending the wasteful flaring of natural gas. We realise that any action needs partners downstream but this industry can show leadership right now by rallying behind the 32 oil companies and oil producing countries that are part of the Global Gas Flaring Reduction (GGFR) Partnership. Launched in 2002, with representatives of governments of oil-producing countries, state-owned companies, major international oil companies, and donor countries, this partnership has broken ground on an issue that had been neglected for too long.

About 140 billion cubic metres (bcm) of gas is flared or burned every year around the globe, resulting in about 350 million tonnes of carbon dioxide in annual emissions. This is equivalent to almost one-third of the European Union's gas consumption. Eliminating the flaring would, in emission terms, be equivalent to taking some 70 million cars off the road.

The top 20 gas flarers based on satellite data (bcm)



GGFR is working with its partner governments and companies to stop wasting this gas, and to create markets in which to sell it and put it to productive use. It promotes effective regulations and government incentives to unlock the opportunities now burned into thin air. Tapping this energy resource requires infrastructure development. GGFR is monitoring technology advancements and widely disseminating information to help ensure that the otherwise flared and wasted natural gas can be utilised to support growth and progress in underdeveloped regions across the world.

Gas flaring is a contributor to another climate forcing agent – black carbon. While flaring may be a relatively minor source of black carbon emissions globally, it is particularly important in the Arctic. Early-stage research suggests that flaring may contribute 40 per cent or more to the black carbon (soot) deposited on snow and ice in the Arctic because it absorbs heat in the atmosphere and reduces the ability to reflect sunlight when deposited on snow and ice (albedo).

Back in 2004, GGFR introduced a "Voluntary Standard for Global Gas Flaring and Venting Reduction." The standard provides guidance on how to achieve reductions in the flaring and venting of gas associated with crude oil production worldwide. The parties that support the standard have chosen to endorse the



principles laid out and to work in cooperation with GGFR partners to overcome barriers that prevent flaring and venting reduction. The standard also implies that countries and companies will avoid flaring in new oil developments.

The GGFR partnership experience has shown that cutting flaring to a minimum is possible. In some countries, the change has been dramatic.

In Mexico, for example, gas flaring has been reduced by 66 per cent in just two years, mainly from its Cantarell field. Mexico's Ministry of Energy, PEMex, and the country's regulators deserve credit for this achievement.

In Azerbaijan, the national oil company (SOCAR) reduced gas flaring and venting by almost 50 per cent in two years.

The Republic of Congo implemented a 350-megawatt gas-to-power project that feeds two power plants with associated gas from the M'Boundi oil field. Over 300,000 people in Pointe Noire are now getting electricity as a result of this project.

In Nigeria, GGFR partners invested more than US\$3 billion to cut gas flaring by 4 bcm over five years. Going forward, we hope that partial risk guarantees provided by the World Bank will make a positive impact on the financial integrity of the delivery chain for gas to power

plants in order to support access to reliable electricity for more households and businesses.

Saudi Arabia, Qatar, the UAE and Kuwait, some of the largest oil and gas producing countries, have implemented huge programmes worth tens of billions of dollars to reduce gas flaring and bring associated gas to productive use. As a result, these countries have now reached levels of flaring intensity that are among the lowest of the oil producing countries.

According to satellite data (see graph on the previous page), Russia is by far the world's largest flarer.

Russian regulation required that by 2012 oil companies would have to utilise a minimum 95 per cent of their associated gas or be subject to fines. Unfortunately, the utilisation rate is far from the required level, but it seems clear that these and other measures have accelerated utilisation of associated petroleum gas by companies such as Rosneft, Sibur, Surgutneftegaz, Lukoil, TNK-BP, and Gazprom Neft, as well as local governments in Khanty-Mansiysk AO, Yamal-Nenets AO, and the Republic of Tatarstan. All are working to reduce flaring while also seeking gas utilisation projects.

The World Bank Group and GGFR stand ready to work with all interested parties to help develop and implement solutions for eliminating flaring of

gas associated with oil production. We must raise the bar and further deploy existing and emerging technologies, collaborate more, and build the needed infrastructure for gas utilisation.

At this 21st WPC Congress, I challenge all of us to do more to pursue a world free from routine flaring of natural gas. If natural gas finds its place as a fuel that helps the transition towards a low-carbon future, productive use of flared gas is essential. We simply cannot afford to waste it anymore. And neither can our climate-challenged planet. ■

A natural gas flare is seen outside of Williston, North Dakota

