

The Oil and Gas Climate Initiative: A catalyst for change

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Climate change is a significant global challenge. Transforming the ways we produce, supply and use energy in the future requires innovative thinking, new technologies and greater collaboration. Such unprecedented change also presents us with significant opportunities to shape and improve the oil and gas industry of tomorrow.

Solutions cannot be looked at in isolation. Enabling the transition to a low emissions future while ensuring there is enough energy to meet the needs of a growing global economy and population is central to delivering sustainable development both now and in the future.

OGCI Climate Investments is a billion-dollar investment fund focused on initiating practical actions to deliver solutions for a sustainable, low-emissions future. It was launched in November 2016 by the Oil and Gas Climate Initiative, a voluntary initiative led by the CEOs of ten major global oil and gas companies. We invest in innovative low emissions technologies that have the potential to significantly reduce greenhouse gas emissions on a significant scale

Working together to be part of the solution

By working together, OGCI member companies can multiply the impact of their efforts to deliver the transition to a lower carbon future. Collaboration is the key to achieving this – both amongst OGCI member companies and OGCI Climate Investments, as well as with our partners and policy makers. By sharing knowledge and collective resources we aim to accelerate the use of innovative solutions.

OGCI Climate Investments invests in areas where we believe we can make the most impact on emissions reduction now, as well as removing obstacles to the development, deployment and scale-up of technologies which are needed to achieve long-term climate goals. We have initially allocated funds in four programme areas where the development of new technology is needed to reduce the carbon footprint of the oil and gas industry: methane reduction; increasing industrial and transport efficiency, and carbon capture, utilisation and storage.

Reducing methane emissions – This is an urgent short-term climate priority to ensure that the full climate benefits of gas can be realised.

Improving energy efficiency in industry: We aim to lower the GHG emissions of industrial processes and applications by advancing the demand-side efficiency of energy utilisation and consumption.

Reducing transport emissions: We have a unique opportunity

to deploy technologies in our own respective operations – greatly amplifying the scale and impact of our initial investments.

Carbon capture, utilisation and storage: Transforming energy systems will be too slow and costly without CCUS, if the foundations are not built now – reaching net zero emissions will be difficult. The oil and gas industry has the technical ability and motivation to help solve the obstacles to widespread deployment, in conjunction with supportive governments and society.

Investments so far

OGCI Climate Investments is investing in technologies which can be integrated into existing operational environments, which are commercially viable, and have the potential to be deployed at scale. OGCI member companies are ready to take advantage of these solutions and technologies to enable fast deployment in their own supply chains: this means we have a market and can have an immediate impact.

Our investments are already creating results and showcase our broad reach both in terms of geography and technology areas. These projects are:

Solidia Technologies, a US-based cement and concrete production company. Their patented technology allows for the production of cement in a way that generates far fewer emissions; CO₂ is then used rather than water to cure the concrete. Solidia's innovative technology has the potential to lower emissions in concrete production by up to 70 per cent and water consumption by up to 80 per cent. Companies like Solidia demonstrate how carbon dioxide can be re-used successfully from both an environmental and a commercial perspective.

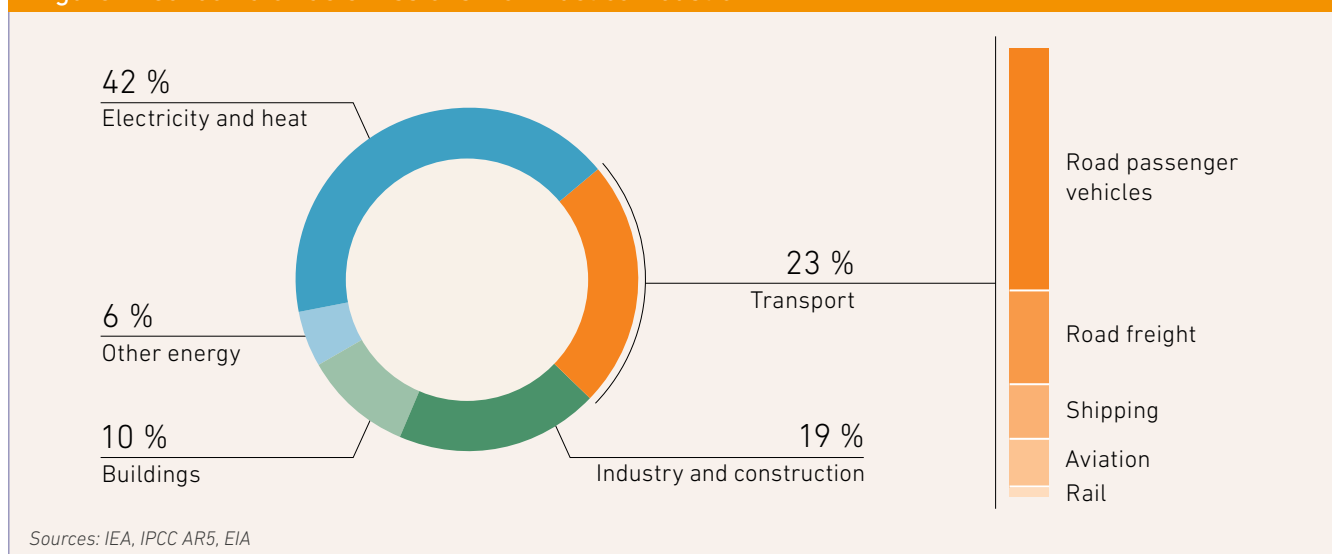
Achates Power, a company developing more efficient commercial vehicle engines. Achates Power develops innovative high-efficiency opposed-piston engines with the potential to substantially reduce the greenhouse gas emissions produced by vehicles. With investment from OGCI Climate Investments, as part of a broader consortium alongside engine makers, Achates Power aims to accelerate its technology deployment worldwide.

A clean gas project that aims to design a full-scale gas power plant with carbon capture and storage, including industrial CO₂ sequestration capability. OGCI Climate Investments will work with the project team on a commercially viable concept and basic engineering design that can receive government support and attract private sector investors.

Econic Technologies, a company that creates new value from CO₂ waste for the plastics industry. The funding will be used to further develop Econic's pioneering catalyst systems that



Figure 1: Carbon dioxide emissions from fuel combustion



enable up to 50 per cent by weight CO₂ to be incorporated as a raw material into the manufacture of polyols, the base of all polyurethanes. By unlocking the positive potential of CO₂ waste and incorporating it as a feedstock, Eonic's technology reduces the reliance on fossil fuels and potentially enhances industry margins.

Venture Day, a deployment accelerator

In June 2018 OGCI Climate Investments held its inaugural Venture Day, focused on methane and encouraging entrepreneurs working in the areas of methane detection, measurement, and mitigation to apply for US\$20 million funding. From 56 applications from around the world, including the US, Canada, Europe, the UK, Australia, New Zealand, and Singapore, 10 applicants were shortlisted and invited to pitch their ideas. Winners will be announced at the Oil and Gas Climate Initiative's annual CEO event in September, to be held this year in conjunction with Climate Week in New York.

This was the first in a series of Venture Days that will be held to align with our focus areas, creating an opportunity for start-ups and companies to submit ideas or funding proposals to OGCI Climate Investments and our venture partners.

Strategic Partnerships

In addition to investments we continue to collaborate with other organisations working to reduce greenhouse gas emissions.

One example is the Breakthrough Energy Coalition, co-founded in 2015 by Bill Gates. The Breakthrough Energy Coalition has brought together governments, research institutions and nearly 30 leading private investors to create a new model for investing in sustainable energy innovation. By collaborating with the Breakthrough Energy Coalition and its partners and by leveraging our strengths, we believe that we can accelerate the commercialisation and deployment of new technologies. This coalition of public and private partners is a significant step in identifying, supporting and delivering the worldwide sustainable energy solutions necessary to help solve climate change.

Looking to the future

It is hard to anticipate what the world will look like in the second half of the century. Oil and gas are expected to remain in the global energy mix over the long-term, but their relative share is likely to change over time with the growth of alternative energy sources, and the introduction of negative emissions technologies.

By working and investing together we can create solutions and accelerate the transition to a lower carbon future. OGCI combines the scale, depth of expertise and reach of ten oil and gas majors with an ecosystem of potentially ground-breaking start-ups. We are confident that collectively we can lead our industry's action to help tackle climate change and support sustainable development.