Energy transition

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Contents

1 Background

The last 30 years have seen a number of historic events that have had a major impact on the global energy system. The 1973 oil crisis, for instance, caused a shortage of oil in many Western countries. This made it necessary to make more efficient use of fossil fuels (oil coal and gas). In the 1980s, acid rain was a topic that caused much commotion. The switch from coal to gas for our electricity production made it possible to tackle the problem of acid rain effectively. In the same period, the emergence and development of the nuclear industry was blocked for many years by the ramifications of the fatal accident in Chernobyl in 1984. The Brundtland Commission Report of 1987 played an important role in focusing attention on the concept of sustainable development.[1] Liberalisation of the energy market was high on the political agenda in the 1990s. Competitive energy companies were introduced in place of state-run corporations. Thanks to the Kyoto Protocol, the business of reducing greenhouse gases was opened up to market forces, for example by the introduction of carbon emissions trading.[2] The disruption of the gas supply from Russia in 2006 helped to accelerate the development of new transport routes and storage facilities. Finally, the seemingly impossible disasters in the Gulf of Mexico (2010) and at Fukushima (2011) once again reminded the world of the risks of both oil drilling and nuclear energy.

A climate agreement was reached during the climate summit in Paris in 2015. The Paris Agreement sends a clear signal to the business community and the financial world that the process of ending the fossil economy must be started. The European agreements were based on maximum global warming of 2 degrees Celsius. It has now been agreed in Paris that the target for global warming should be a maximum of 1.5 degrees. By signing the Paris Pledge for Action, ACTIAM is supporting this agreement to cut greenhouse gas emissions.

Our global energy system will undergo further drastic changes in the coming decades. As the world population and prosperity increase, demand for energy is rising. Cheap fossil fuels will become scarcer, energy prices will rise in the long term and further warming of the planet is very likely. These developments mean that an energy transition is necessary. An energy transition is a major, fundamental change from the current energy system to a future-proof energy system capable of meeting global challenges. It would be wise for ACTIAM to have its own policy on this. This position paper explains the ACTIAM policy.

1 *The Brundtland Report is the name by which the report entitled 'Our Common Future' has become known. The report thus bears the name of the chair of the commission that drew up the report, namely the then Norwegian Prime Minister Gro Harlem Brundtland.*

2 *The Kyoto Protocol is an international agreement linked to the 1992 United Nations Framework Convention on Climate Change. It was drafted during the climate conference held in Kyoto, Japan, in 1997. In the Protocol, all EU Member States and 164 other countries committed themselves to reducing greenhouse gas emissions in the period 2008-2012 by 8 percent below their 1990 level. Ultimately, greenhouse gas emissions fell by 17.5% in the European Union in the period from 1990 to 2011.*

2 Objective and scope

ACTIAM has three main solutions for responsible investment in the transition to a future-proof power supply:

- Support innovation and transition through positive selection and green bonds.
- Encourage behavioural change throughactive ownership.
- Exclude companies from its portfolios if, despite active ownership, they continue taking irresponsible risks with the generation of nuclear energy or the extraction and combustion of fossil fuels or make an insufficient contribution to the energy transition.

Active ownership Instruments ACTIAM can use to further reduce the carbon footprint of its investments are **voting at general meetings**, filing or supporting **shareholder resolutions** and **ESG integration**, where sustainability indicators are included in the financial analysis. This policy document will also consider ACTIAM's strategy in relation to oil and gas companies, mining companies and utility companies with operations in:

- Arctic oil
- Nuclear energy
- Tar sands
- Shale gas and/or shale oil
- Coal

3 ACTIAM's view on the energy transition

The energy transition is not a choice but a necessity. Various benefits can be achieved by supporting the emergence of renewable energy sources (including second-generation biofuels, solar energy and wind energy) and energy conservation. Not only does this benefit people and the environment, but it is also good for trade and industry. New technologies create opportunities for the business community. In view of global developments and challenges, a transitional phase in which fossil fuels, nuclear energy and renewable energy sources coexist is inevitable. However, this phase should be kept as short as possible to ensure that we scale back our dependence on fossil fuels and nuclear energy as fast as we can. The choices facing all stakeholders are tremendously important. Moreover, it is necessary to act quickly in order to ensure that fossil fuels and nuclear energy are dealt with responsibly and to manage the risks.

One of the ways in which ACTIAM is putting its views on energy transition into practice is through active ownership. The aim is to bring about behavioural change. Table 1 below sets out the criteria for determining what companies are suitable for shareholder engagement.

Action	Activity
ACTIAM engages with	oil companies drilling for oil in the Arctic.
ACTIAM engages with	utility companies that have been involved in a series of nuclear incidents giving rise to possible safety risks.
ACTIAM engages with	oil and gas companies that refuse to provide transparency about both the social and environmental consequences of shale gas/oil and their use of the best available techniques.
ACTIAM engages with	oil companies if more than 20% of their production is dependent on tar sands.
ACTIAM engages with	utility companies if more than 50% of their energy mix comes from coal.[1]

1 There are various types of coal. Utility companies use thermal coal for power generation. Many more sustainable alternatives to thermal coal are available for a transition to a clean, affordable and secure power supply. Different types of coal are used, for example, in the steel industry (cokes) and in the production of cement. For these industries, alternative sources of energy are much more scarce, which is why they are disregarded here.

ACTIAM excludes companies of which more than 15% of the total revenue comes from thermal coal mining.

Active ownership involves a combination of idealistic and financial motives. The physical consequences of the average rise in temperature, such as flooding and storms, are causing increasing damage. Insurers have seen their weather-related pay-outs quadruple in the past 30 years. They are concerned about the increasing risks incurred by their clients. The World Bank, the Bank of England and the G20 have also issued statements about the risk of investments in energy-intensive industries. According to the Dutch Central Bank (DNB), too much has been invested in fossil fuels and technologies and there is a real risk that assets will have to be impaired. These impairment losses are already being recognised. For the time being, they mainly concern coal as the main polluting energy source in terms of particulates, nitrogen dioxide, greenhouse gases and heavy metals.

3.1 ARCTIC OIL

Oil and gas exploration in the Arctic has been under way for many years. Over the next few decades, oil and gas will be extracted just outside and inside the polar circle. The risks for people and the environment will not always be equally great. For example, the depth of ice varies from place to place and in some areas there is actually none. Moreover, daylight hours and the distance to the coast differ from one drilling location to the next. All these factors affect the risks a company incurs. What is clear, however, is that the consequences of an offshore oil spill will be huge and irreversible. For this reason, ACTIAM is researching the precise nature of the investment risks of offshore drilling in the Arctic through a shareholder engagement process with 11 oil and gas companies. On the basis of this risk assessment, one company, which has taken irresponsible risks in extracting North Pole oil, has already been excluded. In the context of climate change and the 2 degrees scenario, ACTIAM shares these concerns and believes that the large oil and gas resources of this region should never be exploited. As many companies are discontinuing their search for oil in the Arctic, mainly due to low oil prices, we see no reason for the time being to exclude more companies and will therefore continue our dialogue with them.

3.2 NUCLEAR POWER INCIDENTS

Where utility companies are concerned, ACTIAM looks out for possible involvement in incidents and accidents on the basis of the International Nuclear Event Scale (INES). Companies are considered to have dealt with nuclear energy irresponsibly if, as a result of their own activities or conduct, they cause accidents and/or allow incidents

to escalate. INES qualifies events at levels 1, 2 and 3 as incidents. Incidents have no consequences for employees or the surrounding area. Level 4 events may entail safety risks within the nuclear facility, including release of radioactivity within the buildings. From level 5 onwards, an accident may have consequences for the area around the facility. A level 7 event is a very serious accident involving the release of a high level of radioactivity into the atmosphere around the nuclear facility. The accidents at Fukushima and Chernobyl qualify as level 7 events. Utility companies are excluded where it is demonstrated that the Fundamental Principles on Nuclear Safety of the International Atomic Energy Agency (IAEA) have been infringed.

3.3 SHALE GAS / SHALE OIL

Oil and gas extraction from shale rock has grown sharply in recent years, particularly in the United States. Shale oil is oil found in porous shale formations. It is often found in combination with shale gas and has the same origin. The mixture is pumped to the surface to be converted into useable gas and oil. The main risks are the impact on the landscape, the use and storage of water and waste water, social and health impacts and greenhouse gas emissions. The production of shale gas and oil results in higher emissions than gas and oil produced by conventional means because of two reasons. First, as more wells are necessary for the extraction of shale gas and oil than for extraction by conventional means, this results in higher energy consumption. In addition, more flaring and methane emissions occur in the open air. As these emissions involve the greenhouse gas methane (many times more potent than carbon dioxide), this has a major negative impact.

When engaging with these companies, ACTIAM first ascertains whether sufficient measures have been taken to prevent a possible upward trend in operational oil and/or methane leakages. During the engagement process, ACTIAM also enquires about the implementation of the best available techniques in relation to used chemicals, water and waste management and methane leakage detection.

3.4 TAR SANDS

Tar sand is a natural mixture of sand, water, clay and bitumen, and generates higher carbon emissions than conventional sources of oil. The water-intensity of the production process and the risk of local water contamination also make this source of energy controversial and mean that consequences for people and the environment are possibly irreversible.

In the process of engagement with tar sand companies, ACTIAM actively challenges them about their climate policy so that it can test the credibility of any alleged change to a more low-carbonmode of operation, in particular the clear phasing out of tar sand production in accordance with a schedule.

3.5 THERMAL COAL

To mitigate climate change, both coal-mining and power generation from thermal coal (a highly carbon-intensive source of energy) must be limited as far as possible. That is why ACTIAM wants to identify utility companies that indicate willingness to change course by generating less revenue from coal-mining and coal-generated power respectively. This change of course may take place through:

- discontinuing investments in new coal-fired power stations;
- phasing out existing coal-fired power stations;
- replacing assets by more sustainable alternatives.

4 Conclusion

A feature of the energy transition is the inevitable transitional situation in which the use of renewable sources will have to increase while at the same time we remain dependent on fossil fuels and nuclear energy in order to meet the increasing demand for energy.

ACTIAM sees shareholder engagement as the ideal instrument for promoting behavioural change on the part of companies that currently take irresponsible risks in their use of fossil fuels and nuclear energy and/or make insufficient contributions to the energy transition. If the companies concerned refuse to be open about these topics, they will ultimately be excluded.

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