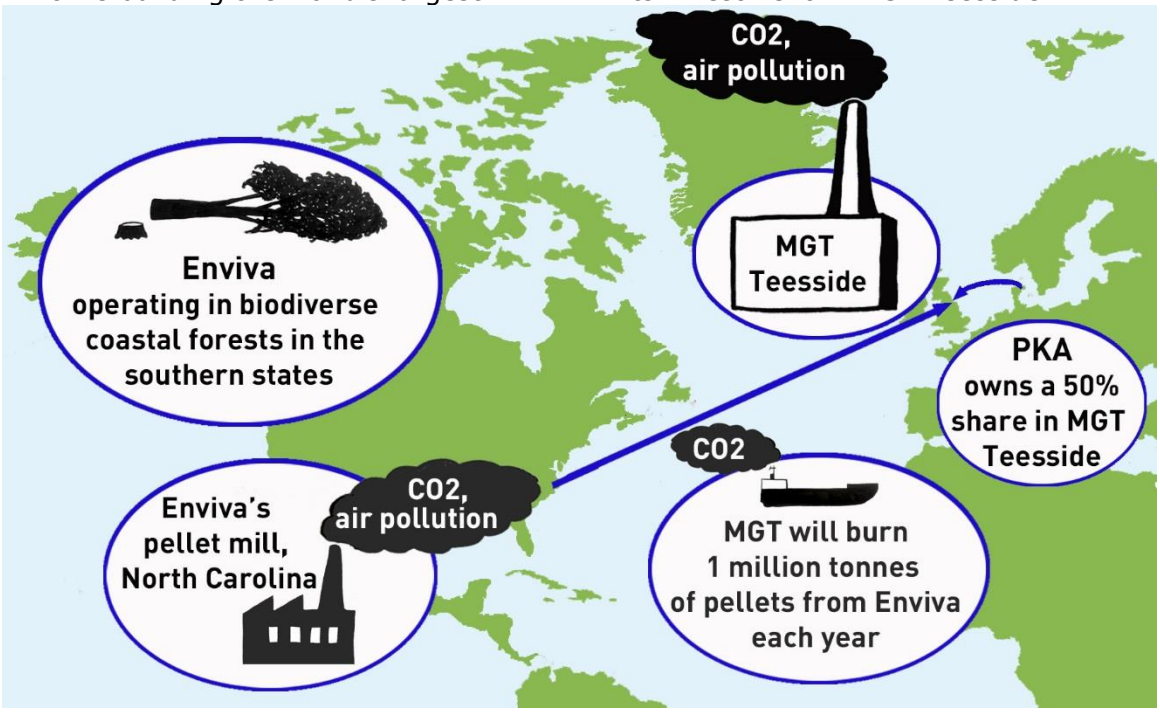
# Why PKA must divest from MGT Teesside if it wants to live up to its green credentials

The Danish pension fund PKA prides itself of its responsible investment[1], having divested from almost 50 coal companies and from five companies involved in tar sands, while increasing investments in 'green energy'. In doing so, PKA has set a positive example to other pension funds and investors worldwide. However, one of PKA's largest supposedly green energy investments is nothing of the sort and risks undermining the pension fund's reputation. In 2016, PKA acquired 50% of shares in the UK company MGT Teesside, which is building the world's largest purpose-built biomass power station at Teesport. The plant will burn up to 1.5 million tonnes of wood pellets a year, of which around 1 million tonnes will be supplied by Enviva[2], a US pellet producer known to source wood by clearcutting biodiverse, coastal, hardwood forests in the southern US[3].

The MGT Teesside plant will contribute to forest destruction and biodiversity loss, will harm public health, and will be no better for the climate than burning coal. PKA cannot claim to be green and maintain its investment in MGT Teesside.




## Undermining efforts to reduce greenhouse gas emissions:

MGT Teesside's biomass power station smokestack will emit more $CO_2$ per unit of energy than that of an average coal power station in Europe[4]. The UK government and the EU currently ignore all of the $CO_2$ which comes out of smokestacks of plants burning biomass, arguing that new trees will sequester the carbon emitted from burning wood in future[5]. Although the UK has introduced greenhouse gas standards for all subsidised biomass energy, those allow operators to ignore virtually all emissions other than those associated with the fossil fuels used in processing and transporting the biomass. Therefore, the basis for PKA claiming that its MGT Teesside investment is carbon neutral or at least low-carbon is scientifically unsound.

The assumption that wood-based bioenergy is inherently carbon neutral has been discredited by a large and growing number of peer-reviewed studies and science reviews. This includes reports by the independent UK thinktank Chatham House[6], the European Academies Science Advisory Council (EASAC)[7], and the UK's former Department on Energy and Climate Change[8]. Bill McKibben, founder of the international climate campaign 350.org

has been amongst those who have strongly criticised the burning of trees for electricity and its classification as 'carbon neutral'[9]. Evidence of adverse climate impacts is particularly strong in relation to burning biomass derived from whole logs, i.e. roundwood[10], which NGOs and prominent media outlets have time and time again shown to be the main feedstock for pellets, including those produced by Enviva[11].

Meeting the Paris Climate Agreement goal of keeping global temperature rise to within 1.5°C requires a rapid phaseout of carbon emissions and an increase in global carbon sequestration. The only proven and available options of increasing carbon sequestration involve natural ecosystems, especially biodiverse forest ecosystems. Increased logging of forests for bioenergy releases large quantities of $CO_2$ from vegetation and soils, and also significantly reduces carbon sequestration in coming decades, thus seriously undermining efforts to stabilise global temperatures. Even if the upfront $CO_2$ emissions from biomass burning could be sequestered again in future, this would not happen for many decades, resulting in a carbon debt which we cannot afford if we want to have any hopes of avoiding the worst impacts of climate change. PKA's investment in MGT Teesside is an investment in the destruction of one of our best carbon sinks at a time when we most need those sinks to remain intact.

## Contributing to forest destruction and biodiversity loss:

*Photo: Logging site from which Enviva pellets have been sourced, North Carolina, Dogwood Alliance*

All pellet mills operated by Enviva, with whom MGT Teesside has signed a supply agreement for around 1 million tonnes a year, are based in the North Atlantic Coastal Plain region. This area was declared a global biodiversity hotspot in 2016 and contains some of the most biodiverse temperate forest and freshwater ecosystems in the world. Enviva's own data shows that at least half of the wood it sources is obtained from hardwood forests, much of it from wetland forests[12]. Hardwood from the region comes entirely from biodiverse natural forests, with tree plantations consisting entirely of softwood species. An Enviva document confirms that around 80% of its pellets are made from roundwood, rather than from residues[13]. Enviva's wood sourcing is thus putting great pressure on an ecologically sensitive region. Conservation organisations and media reporters have compiled detailed evidence of logs from clearcut hardwood forests being transported to Enviva pellet mills[14].

Enviva is currently developing a new pellet mill in Richmond County, North Carolina, with the specific purpose of supplying the MGT Teesside plant[15]. The site is located near sensitive wetland forests and the location, coupled with Enviva's record elsewhere, has given rise to concerns that those forests will face clearcutting unless an ongoing court action to revoke the plant's Air Quality Permit due to a lack of proper public consultation is successful[16].

## Harming public health in the southern US and UK:

Residents living close to pellet mills, including Enviva's Northampton plant in North Carolina (NC), have complained about high levels of wood dust, air pollution from electricity generation to power the mill, and constant noise[17]. Furthermore, Enviva's Sampson plant in NC raised levels of particulates by 75% compared to what they had been before the plant opened[18]. Peer-reviewed studies have linked wood-dust exposure to allergic and non-allergic respiratory and nasal problems, allergic eye irritation, and skin problems[19]. The International Agency for Research on Cancer classifies wood dust as "carcinogenic to humans"[20], due to the strength of evidence linking it to cancer of the nasal cavity, the paranasal sinuses, and of the nasopharynx[21]. In Richmond County, where Enviva wants to build a new pellet plant to supply MGT Teesside, air pollution levels are already significantly worse than average in the US and in NC, and the county ranks 87th out of 100 for health outcomes in the state[22].

On the other side of the Atlantic, burning the wood in MGT's power station will release considerable levels of harmful air pollutants, including NOx (which convert to NO2 and ozone), small particulates (PM10 and the smaller PM2.5), and polycyclic aromatic hydrocarbons (PAHs). The mix of pollutants emitted from biomass power stations is linked to increased risks of respiratory and heart problems, strokes, and, in the case of PAHs, cancer. The local authority in which MGT's site is located warned in its latest air quality report that the legal air quality limit for PAH might already be breached in the area that would be most affected. This has been confirmed by modelling carried out on behalf of the UK government[23]. The local authority had hoped that levels would reduce with the closure of a steel plant, however wood burning emits significant amounts of PAHs, so MGT's power station will therefore worsen the problem again[24].
The power station will thus adversely affect the health of communities in Teesside and in the southern US.

## Conclusion:

PKA's investment in MGT Teesside contradicts the pension fund's stated commitment to responsible investment in the face of climate change. MGT Teesside's biomass power station threatens biodiverse forests in the southern US, which play a vital role in helping to stabilise the climate, and they threaten public health both in North Carolina and in Teesside, UK. We therefore urge PKA to divest from this project and, in doing so, set an example to other investors. Large-scale wood burning in power stations is not climate friendly and not sustainable and we hope that PKA will refrain from any such investments in future.

NOAH Friends of the Earth Denmark
DOGWOOD ALLIANCE
VERDENS SKOVE .ORG HVAD VIL DU GIVE VIDERE?
biofuelwatch
MARKETS FOR CHANGE

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[4] CO2 emissions from burning biomass in power stations are higher than those from burning coal (per unit of energy) because burning biomass is less efficient. This is due in part to the higher moisture content of wood compared to coal, which increases energy inputs. Drax plc is believed to have achieved the highest electrical conversion efficiency for biomass, yet even their power station has higher upfront CO2 emissions from the biomass compared to the coal-fired units: drax.com/wp-content/uploads/2017/03/Drax-Group-plc-annual-report-and-accounts-2016-Smart-Energy-Solutions.pdf
[5] Under UNFCCC reporting rules, the CO2 emitted when biomass is burned should be recorded, but not included in reporting about greenhouse gas emissions from countries' energy sectors. Instead, the loss of carbon from forests and soils caused by logging should be attributed to the land sector of the country where it occurs, and carbon emitted during transport to the transport sector. When those rules were adopted for accounting purposes under the Kyoto Protocol, they created a dangerous loophole by which countries could declare their biomass energy to be carbon neutral, simply because the carbon emissions associated with it were not attributed to other sectors or countries. Furthermore, reporting requirements for the land sector have been widely criticised as flawed. See for example https://link.springer.com/chapter/10.1007%2F978-1-4471-2717-8_36
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