

# SUSTAINABLE BIOMASS

DONG Energy is converting a number of its power stations from coal and natural gas to biomass. But not all biomass is sustainable. It depends on how it is produced. DONG Energy only uses biomass that is sustainable, leads to significant CO<sub>2</sub> reductions and preserves the ecosystems and biodiversity in the forests.

## PROGRAMME

DONG Energy requires that the wood pellets and wood chips we use on our power plants must be sustainable. Heat and power production based on sustainable biomass is CO<sub>2</sub>-neutral. If we take into account processing and transport of the biomass the emission are reduced by 80-90% compared to coal and natural gas. DONG Energy ensures our biomass is sustainable through our Programme for Sustainable Biomass Sourcing.

The programme:

- Sets up specific sustainability requirements that our suppliers have to comply with.
- Requires that our suppliers' documentation for being in compliance with the requirements are certified and audited by independent third-party auditors.

Today our suppliers must be in compliance with our sustainability requirements in our programme. When the programme is fully implemented in 2019, all the wood pellets and wood chips we use will be certified by a third party auditor. Already in 2016, we will be able to start documenting that the biomass is in compliance with our requirements.

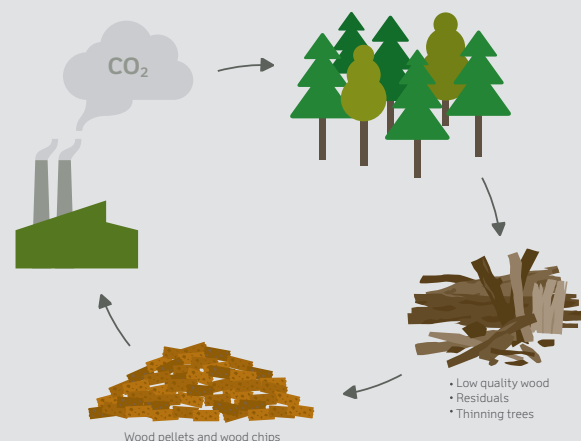
The controls we undertake as part of our programme ensure we can differentiate between sustainable and unsustainable biomass and ensure we only use the biomass that leads to significant CO<sub>2</sub> reductions and preserves the forests' ecosystems and biodiversity.

## GOVERNANCE

DONG Energy's business unit Thermal Power procures the biomass and is responsible for implementing the Programme for Sustainable Biomass Sourcing. The Executive Vice President of Thermal Power is a member of Group Management and reports on the progress of the programme.

DONG Energy's department for CSR & Responsible Sourcing owns and develops the programme.

### CO<sub>2</sub>-NEUTRAL CLOSED LOOP LIFE CYCLE



In modern forestry, when trees are cut down new trees are planted so the size of the forests is maintained. When trees are replanted, they absorb the same amount of CO<sub>2</sub> that was emitted when they were cut down. This creates a CO<sub>2</sub>-neutral, closed loop life cycle.

**SUSTAINABILITY REQUIREMENTS FOR OUR SUPPLIERS**

Power stations fuelled on wood pellets and wood chips can complement more unstable wind and solar energy. DONG Energy is converting a number of our Danish central power stations to sustainable biomass.

Using biomass for energy production can be a sustainable solution when the CO<sub>2</sub> emission from combustion of biomass is reabsorbed into new biomass in a relatively short period of time.

To ensure this, the size of the forests supplying wood materials for wood pellets and wood chips, must be maintained or increase. New trees must therefore be planted on an ongoing basis to make the forest continuously able to recapture and store the CO<sub>2</sub> emitted from combustion of the biomass on a power station. The closed-loop life cycle makes the CO<sub>2</sub> balance stable and sustainable.

**DONG Energy's Programme for Sustainable Biomass Sourcing**

To ensure the biomass we use is produced sustainably, we have developed the DONG Energy Programme for Sustainable Biomass Sourcing which was launched in December 2014. Under this programme, our suppliers must comply with specific sustainability requirements. These will ensure that the wood materials for the wood pellets and chips only come from forests, where:

- Trees are continuously replanted to maintain or increase the forest's ability to continuously recapture and store the CO<sub>2</sub> emitted from burning wood pellets and chips.
- The forests ecosystems and biodiversity are protected to ensure the forest's health and vitality.
- Social and labour rights are respected.

Today, there are no international regulatory guidelines for when biomass can be characterised as sustainable. In addition, existing sustainability certifications as FSC and PEFC have not been widely implemented in the key sourcing areas and do not meet all the energy sector's demand and specific needs, such as existence of data on greenhouse gas emissions throughout the biomass supply chain, including processing and transport.

For these reasons, DONG Energy has teamed up with six other European energy companies in the initiative Sustainable Biomass Partnership (SBP) to define and implement strong requirements for sustainable biomass across the European market.

SBP has developed a certification scheme for woody biomass which enables energy companies to document that they meet the most strict and ambitious requirements implemented in Europe, such as the British biomass regulation.

The SBP requirements form the basis of DONG Energy's Programme for Sustainable Biomass Sourcing, as well as the Danish energy industry agreement on sustainable wooden biomass, launched in December 2014.

**CO<sub>2</sub> reductions**

As a consequence of our sustainability requirements, the biomass that DONG Energy use on our power stations will reduce carbon emission by 100% compared to coal and gas. With reference to the Danish Industry Agreement, DONG Energy has chosen also to include the carbon emissions from the production and transportation process of wood pellets and chips in the carbon reduction targets of our requirements.

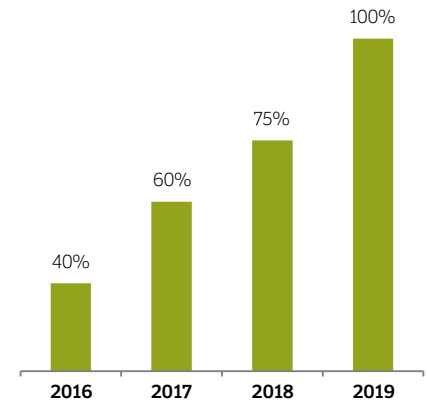
When including the production and transportation of biomass, we can reduce the total CO<sub>2</sub> emissions by 80-90% compared to energy generation based on coal and gas.

**ENSURING COMPLIANCE**

DONG Energy's suppliers must document that they comply with the sustainability requirements. DONG Energy will use the SBP certification system for the certification and supervision of DONG Energy's suppliers and expects to conduct the first audits in 2015.

When our programme is fully implemented, we will only source from suppliers that have documented to third party auditors that they live up to our requirements. In addition, all suppliers must comply with DONG Energy's general supplier requirements, including our Code of Conduct for suppliers.

DONG Energy will gradually ensure compliance with our sustainability documentation requirements. The implementation will take place from 2016 to 2019.



Share of DONG Energy's wood chips and wood pellets (measured in weight) which meet our sustainability documentation requirements.

Read more about DONG Energy's Programme for Sustainable Biomass Sourcing: [www.dongenergy.com/sustainablebiomass](http://www.dongenergy.com/sustainablebiomass)

**THE ORIGIN OF OUR BIOMASS**

**Wood pellets**

Today, DONG Energy imports wood pellets mainly from the Baltics, Russia and Southern Europe. In the future, when our power plants will be able to use larger amounts of biomass, DONG Energy expects to supplement with wood pellets from North America.

**Wood chips**

Our wood chips today come from Danish suppliers. In 2020, we expect that approximately 50% of the wood chips will continue coming from Denmark. The second half, we expect to source from the Baltics and Southern Europe.

