

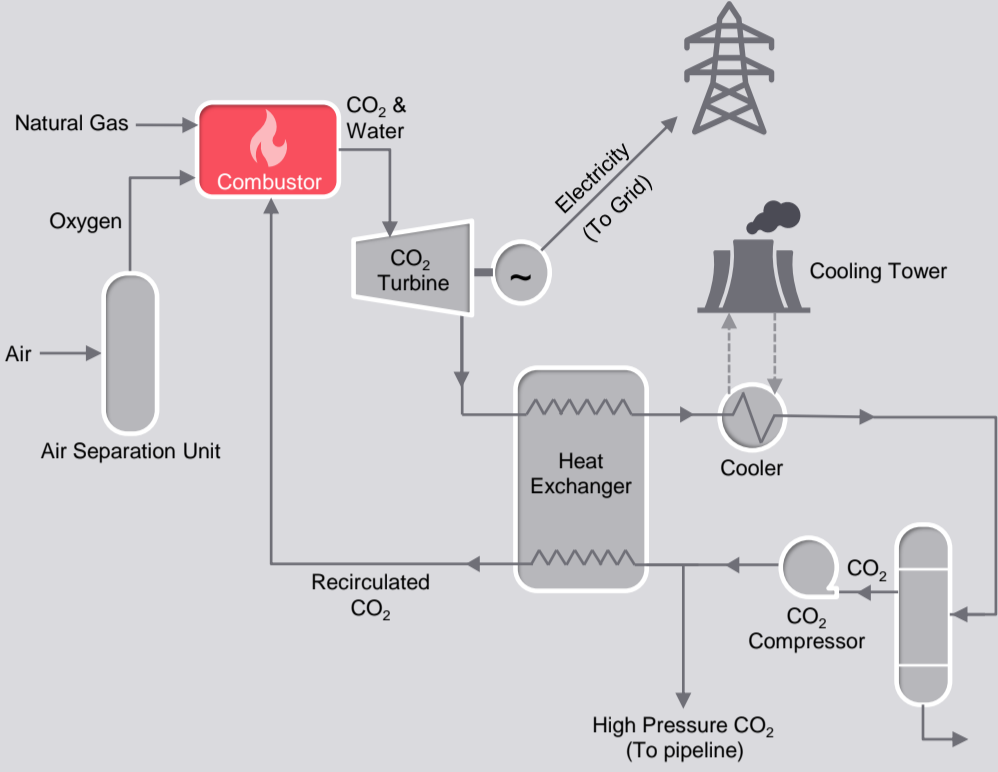
ALLAM-FETVEDT CYCLE



The Allam-Fetvedt is the **novel supercritical carbon dioxide (sCO₂) power cycle** which is used to reduce emissions. It utilizes a highly recuperated cycle with oxy-combustion of carbon fuels and a high-pressure supercritical CO₂ working fluid to absorb all emissions by design. Liquid water and a stream of ultra-pure, pipeline-ready CO₂ are the sole by-products.



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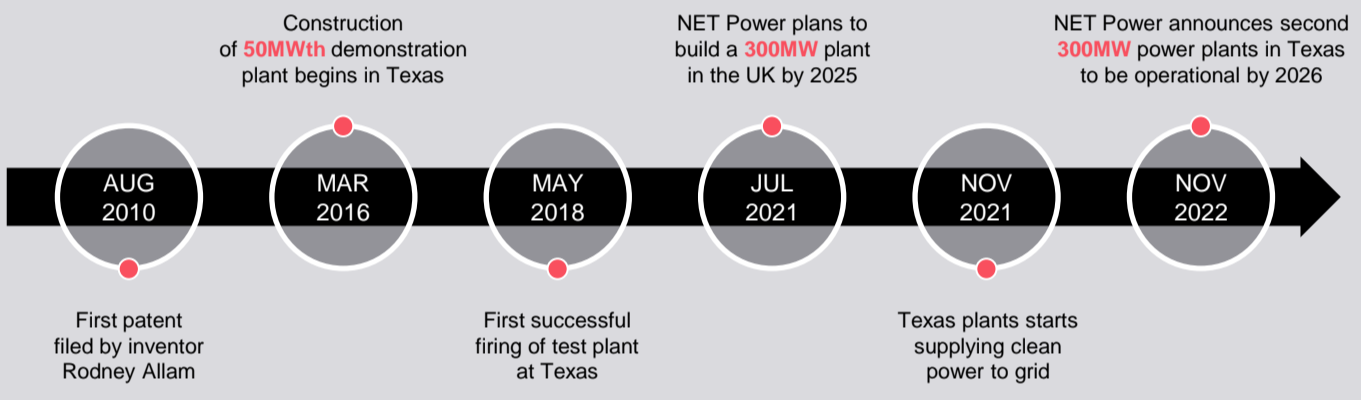
Flue gas containing CO₂ and water vapor drives a special sCO₂ turbine to produce electricity, after which water is separated to get a pure CO₂ stream. This CO₂ is then compressed, and part of it is sent for sequestration, while the other part is recirculated to mix with incoming oxygen in the combustor

Source: NET Power



Allam-Fetvedt cycle's rapid growth

Rapid development from the first patent to large-scale plant

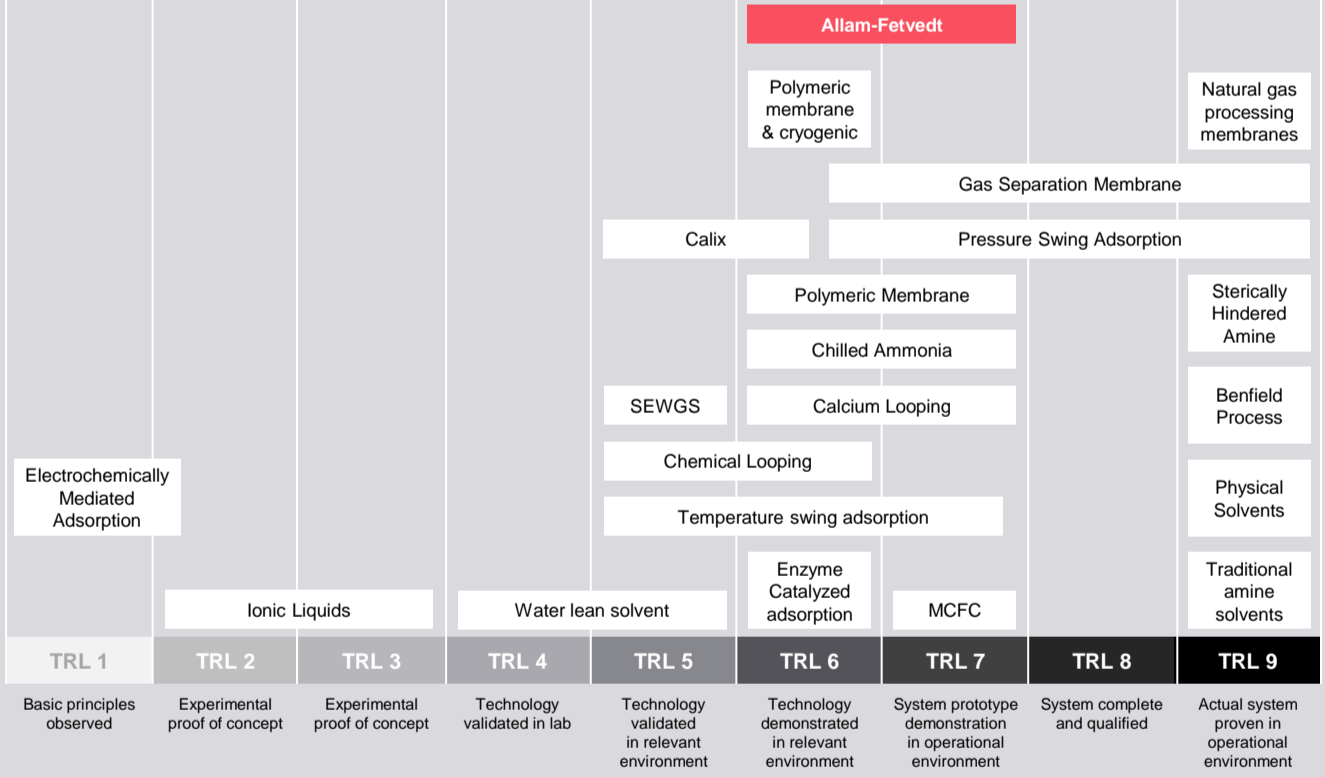


Source: NET Power



Allam Fetvedt cycle-based projects are actively being explored on a commercial basis

The Allam-Fetvedt cycle is deemed to gain popularity soon because of its ability to abide with net zero emission standards. The technology has the potential to deliver clean, dependable, and cost-competitive load-following electricity, which is the ultimate goal of energy security

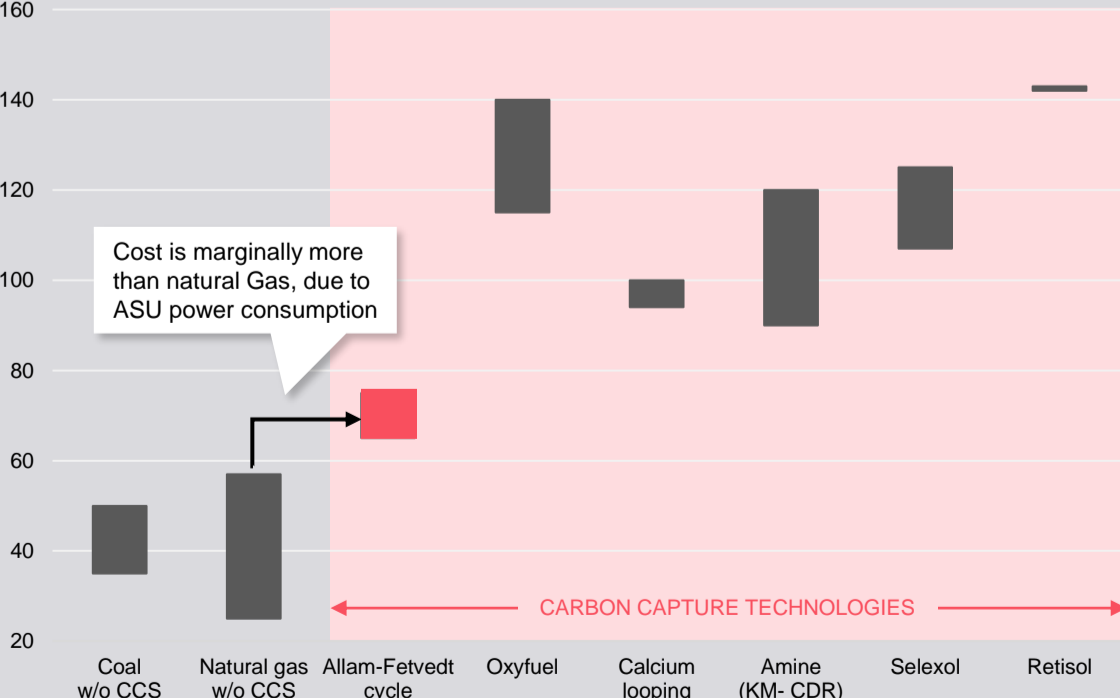


Source: Global CCS Institute, FutureBridge Analysis



The Allam-Fetvedt cycle is capable of reaching cycle efficiency up to 59%

Cost of electricity from power plants with CCS (€/MWh)



Cost is marginally more than natural Gas, due to ASU power consumption



If adopted, the cycle will be the most affordable carbon capture method

Source: ScienceDirect

About FutureBridge

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