NX AdWinMethanol® Suite

Our solution for Methanol production

NEXTCHEM
MAIRE Sustainable Technology Solutions

About NEXTCHEM

NEXTCHEM is MAIRE's company dedicated to Sustainable Technology Solutions. Leveraging our deep expertise in nitrogen, hydrogen, carbon capture, fuels, chemicals, and polymers, we deliver innovative solutions and processes that support and accelerate the energy transition.

Building on the rich legacy of our group for over 70 years, we are dedicated to developing and offering technology solutions, processes, basic engineering designs, as well as proprietary equipment and catalysts, to drive global decarbonization efforts forward.

Methanol: the new sustainable fuel

Methanol is anticipated to play a pivotal role in advancing the energy transition across diverse sectors. It is expected to serve as a crucial energy carrier for decarbonizing the maritime transport sector and, through the production of Sustainable Aviation Fuel (SAF), also the aviation sector.

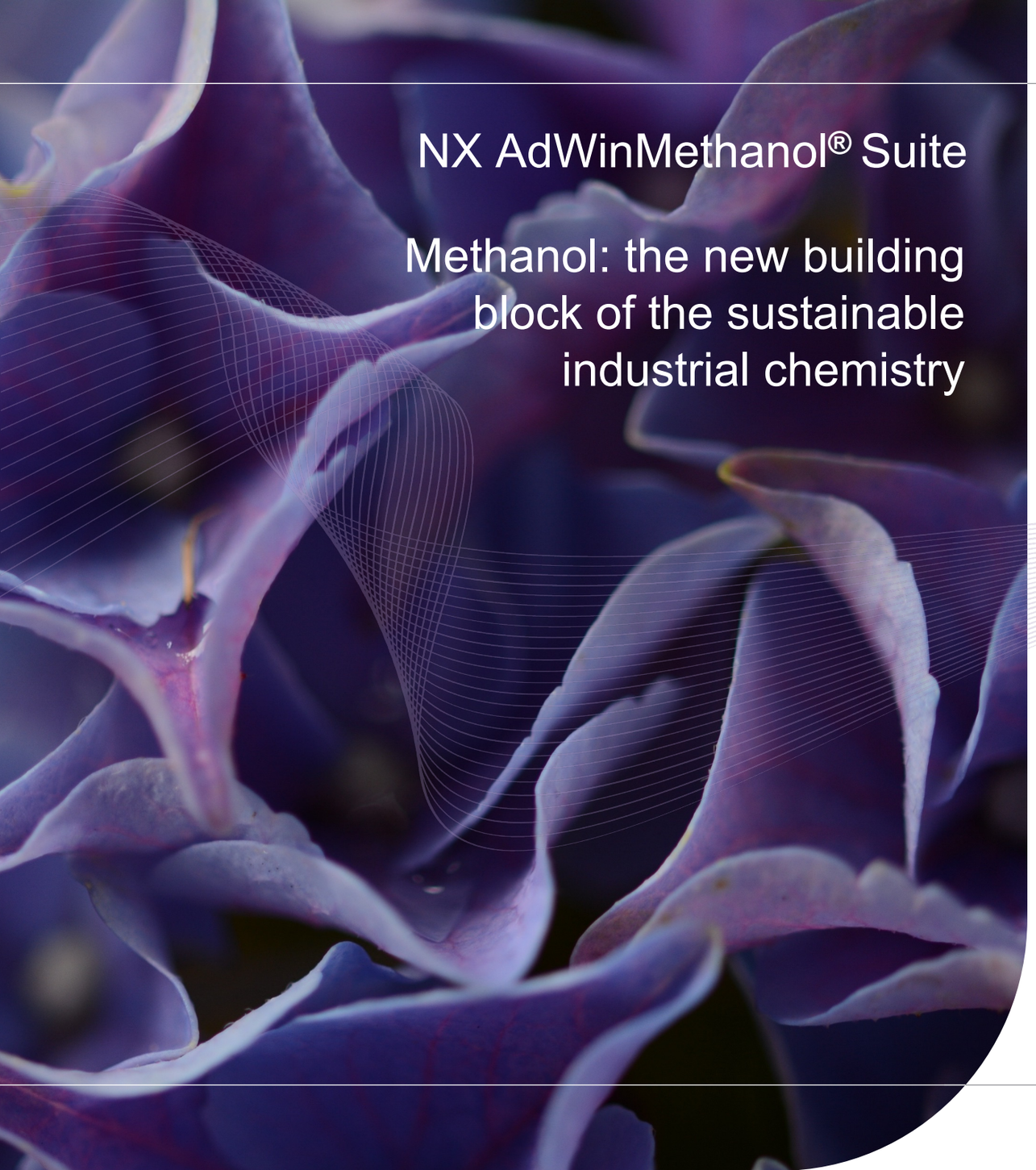
Additionally, methanol is well-known for being a key intermediate for producing polyolefins via the MTO process or gasoline through the DME route.

Hence, this versatile molecule will be an important building block of a new sustainable industrial chemistry.

Our solution for sustainable Methanol

NX AdWinMethanol® Suite technology relies on well-established isothermal catalytic reactors for producing methanol using syngas or CO_2 and H_2 as feedstocks for any specific methanol product quality (e.g., Grade AA). NX AdWinMethanol® Suite can be combined with NX AdWinHydrogen® or with electrolyzers to produce methanol at reduced carbon footprint.

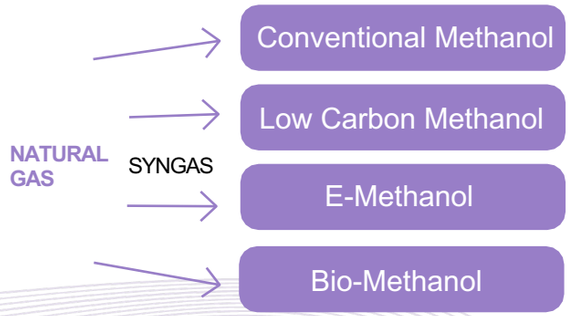
NEXTCHEM offers license, process design package (PDP), proprietary equipment (PEQ), training, digital & post-PDP services.



NX AdWinMethanol® Suite

Methanol: the new building block of the sustainable industrial chemistry

Applications

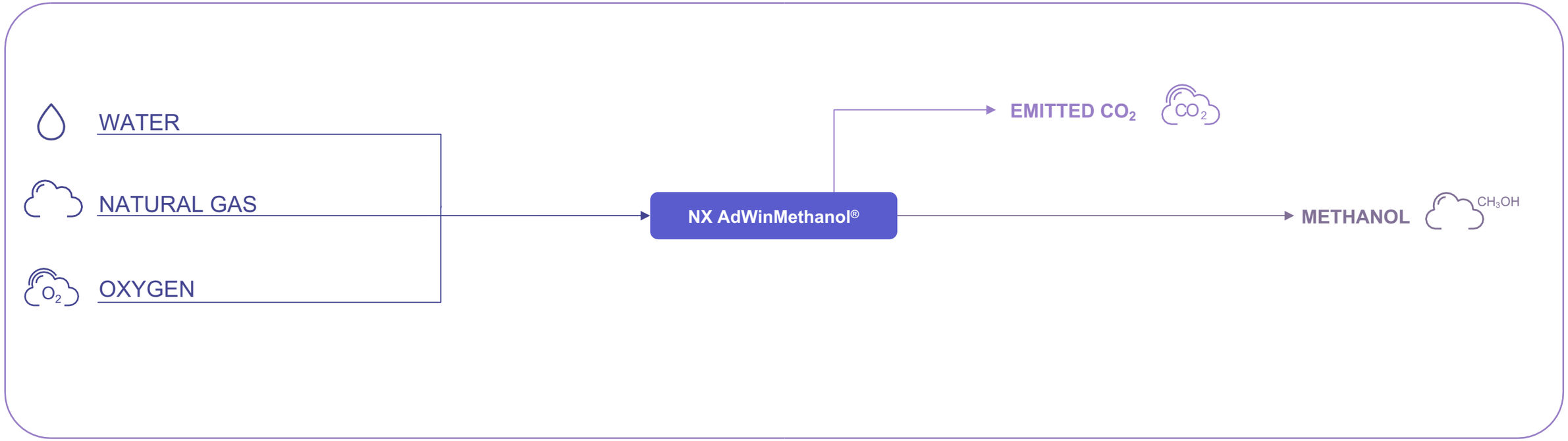


Your benefits

1. Suitable for large scale plants (up to 10,000 tpd) in a single train
2. Scalable technology for the development of small-scale optimized methanol plants (200-600 tpd)
3. Grade AA methanol production aligned to the best standards of the industry
4. Flexible technology for designing different methanol production routes with various carbon footprint

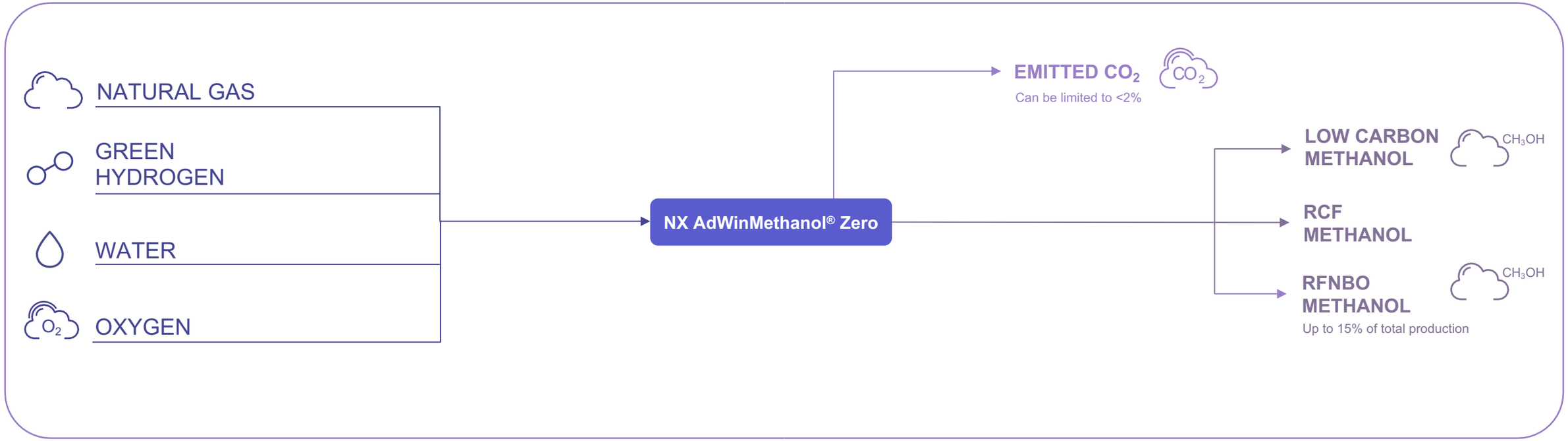
Technical overview - NX AdWinMethanol®

Large scale high-pressure ATR technology for grey/conventional Methanol production based on natural gas.



Technical overview - NX AdWinMethanol® Zero

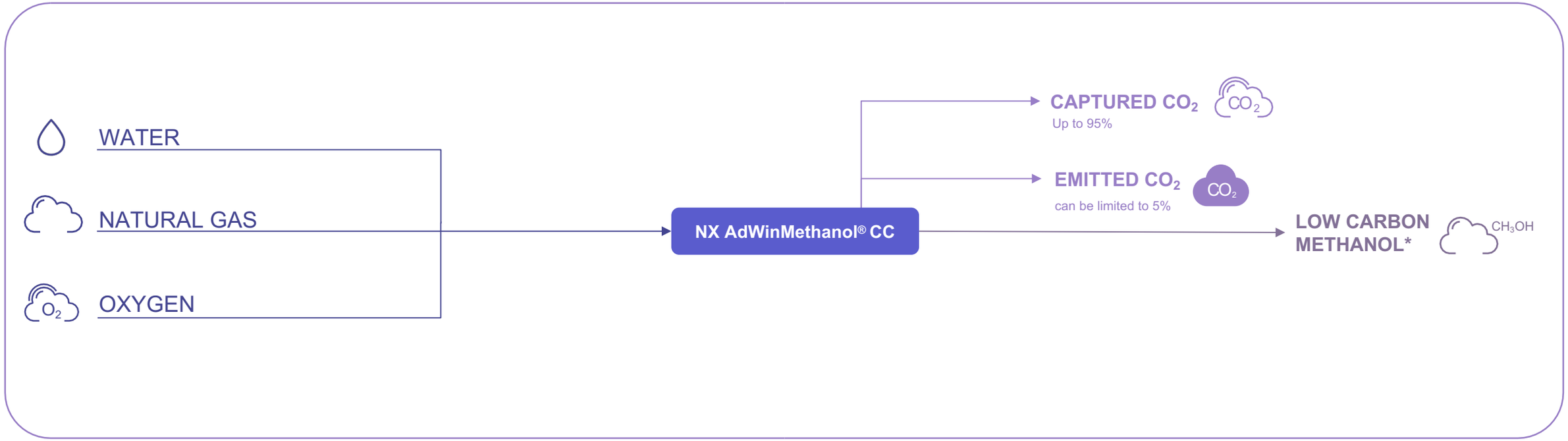
Large scale high-pressure ATR technology integrated with green H_2 production for low-carbon (RCF & RFNBO & blue) Methanol production with almost zero CO_2 direct emissions.



Acronyms: RFNBO (Renewable Fuels of Non-Biological Origin), RCF (Recycled Carbon Fuel)

Technical overview - NX AdWinMethanol® CC

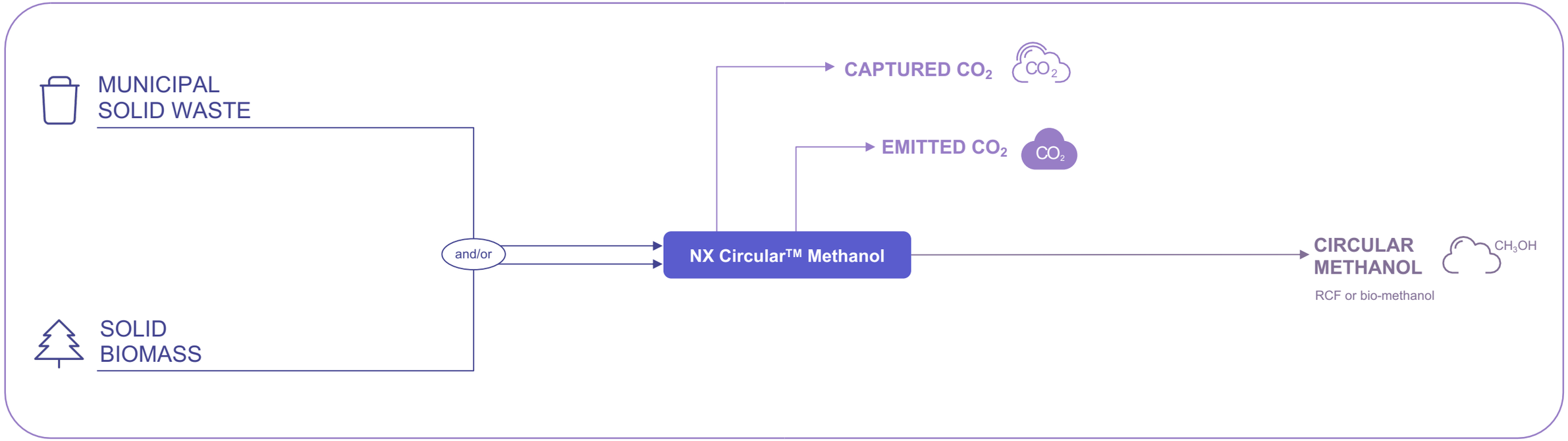
Large scale high-pressure ATR technology for low-carbon (blue) Methanol production with very low CO_2 emissions in the Methanol production process based on natural gas.



* Produced from low carbon process configuration

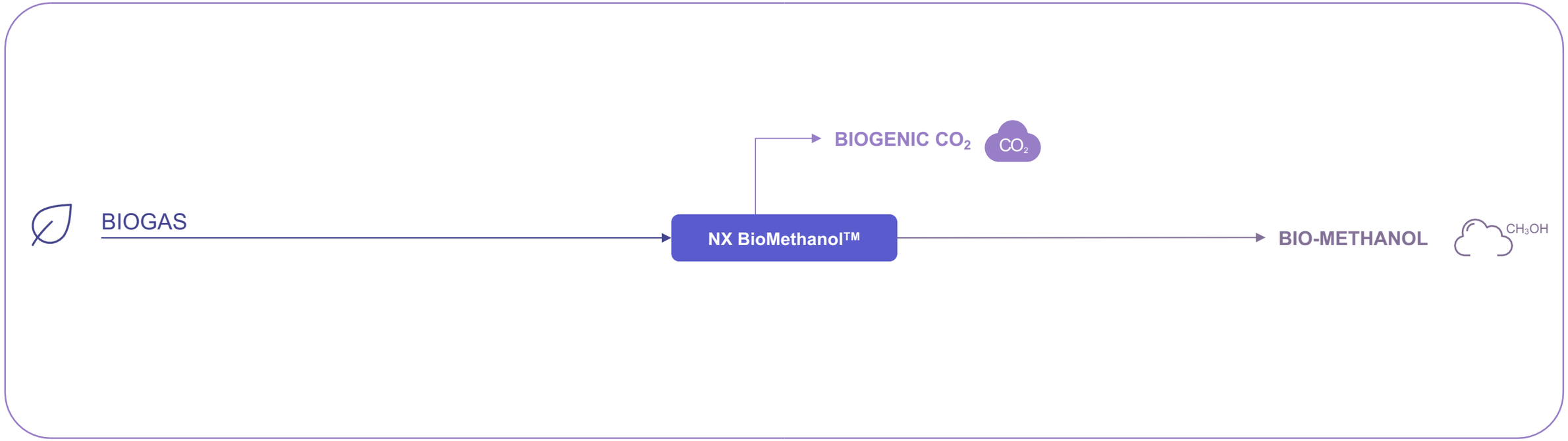
Technical overview - NX Circular™ Methanol

Small-medium scale sustainable Methanol production (bio-methanol & RCF) based on waste and solid biomass gasification.



Technical overview - NX BioMethanol™

Small-scale technology for bio-methanol production from upgrading and reforming of biomethane produced from agricultural waste and manure.



Technical overview - NX eMethanol™

Small-medium scale green Methanol (RFNBO) production based on green H_2 from electrolysis and captured CO_2.