

# Africa has enormous potential for solar power, hence also green or yellow hydrogen production



Gas pipelines

Long-term PV daily average (kWh)



Source: Verisk Maplecroft, 2021

## The hydrogen color chart

### Green hydrogen

Produced through use of clean electricity from surplus renewable energy sources, such as solar or wind power, to electrolyze water.

### Blue hydrogen

Produced typically from natural gas, using a process called steam reforming, which brings together natural gas and heated water in the form of steam. Carbon dioxide is produced as a by-product, and is captured and utilized or stored. Blue hydrogen is sometimes described as “low-carbon hydrogen” because the steam reforming process doesn’t actually avoid the creation of greenhouse gases.

### Grey hydrogen

Currently the most common form of hydrogen production. Produced by burning natural gas (typically methane) using steam methane reformation but without capturing the greenhouse gases produced.

### Black and brown hydrogen

Using black coal or lignite (brown coal) in the hydrogen-making process.

### Pink hydrogen

Pink hydrogen is produced using nuclear energy as the power source (also sometimes referred to as purple hydrogen or red hydrogen).

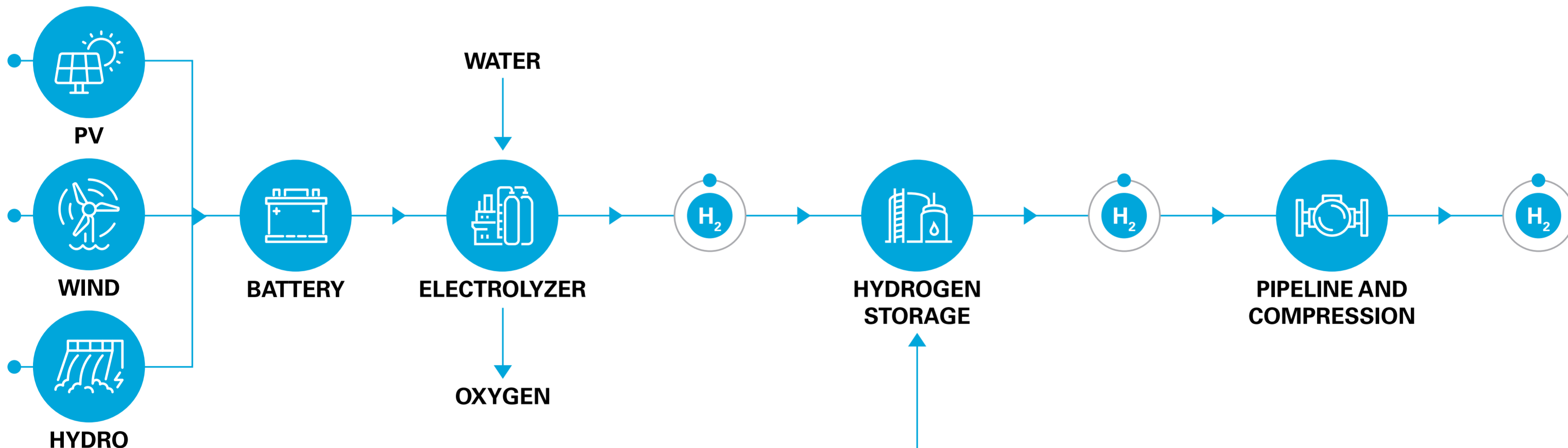
### Turquoise hydrogen

Produced using a process called methane pyrolysis, which yields produce hydrogen and solid carbon. This is a new entry in the hydrogen color charts, and production has yet to be proven at scale. In the future, turquoise hydrogen may be valued as a low-emission hydrogen.

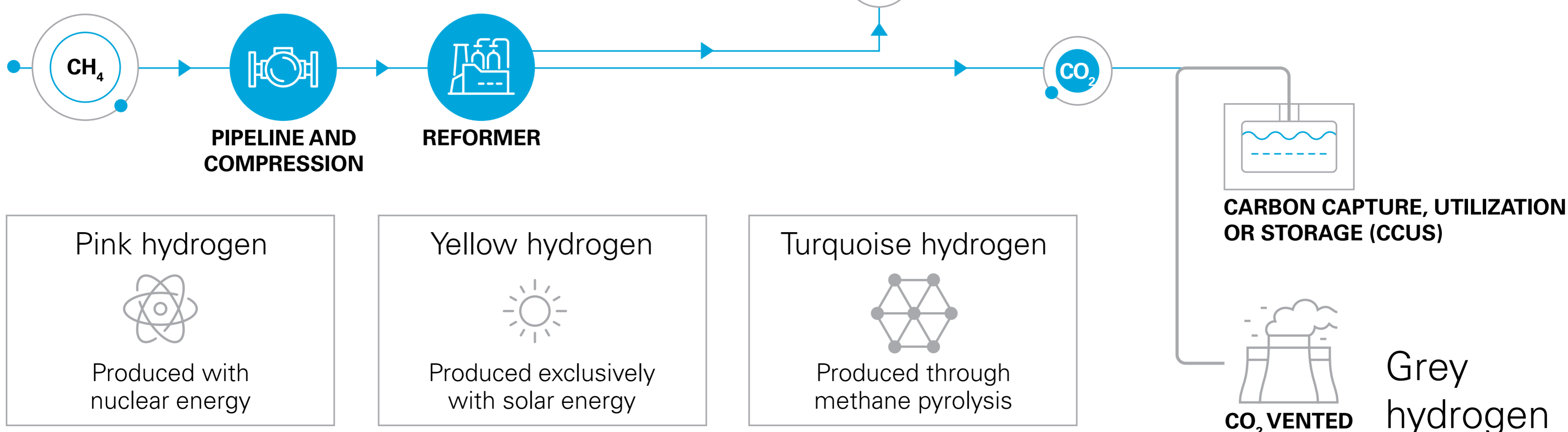
### Yellow hydrogen

Yellow hydrogen is a relatively new phrase for hydrogen made exclusively through electrolysis using solar power.

## Green hydrogen



## Blue hydrogen



Source: White & Case

Sustainable hydrogen can be produced using a range of energy sources, the different kinds being named using colours