

## 9. Further developing renewable gases

Renewable gases have considerable potential for growth. Biomethane from waste or biomass, synthetic methane and hydrogen from power-to-gas facilities can be used in stand-alone equipment or blended with natural gas in the existing infrastructure.

Biomethane holds similar specifications as natural gas; existing **consumers can convert to low-emission fuel without further investment.**<sup>17</sup>

The number of **biomethane plants** in Europe has reached **over 500 units** and further development of the biomethane sector expected in the coming years.<sup>18</sup>

Synthetic methane can be **directly injected into natural gas grids.**

**Production of synthetic methane and biomethane can be combined**, by using renewable power to produce hydrogen in combination with CO<sub>2</sub> that becomes available from upgrading of biogas to biomethane. This **greatly improves the efficiency** of the conversion process.<sup>19</sup>

Power-to-gas processes convert surplus power from renewable sources into combustible gases that can be injected into the natural gas infrastructure. At present, **32 power-to-gas demonstration installations are operational in Europe**, and **16 additional installations are planned.**<sup>20</sup>