



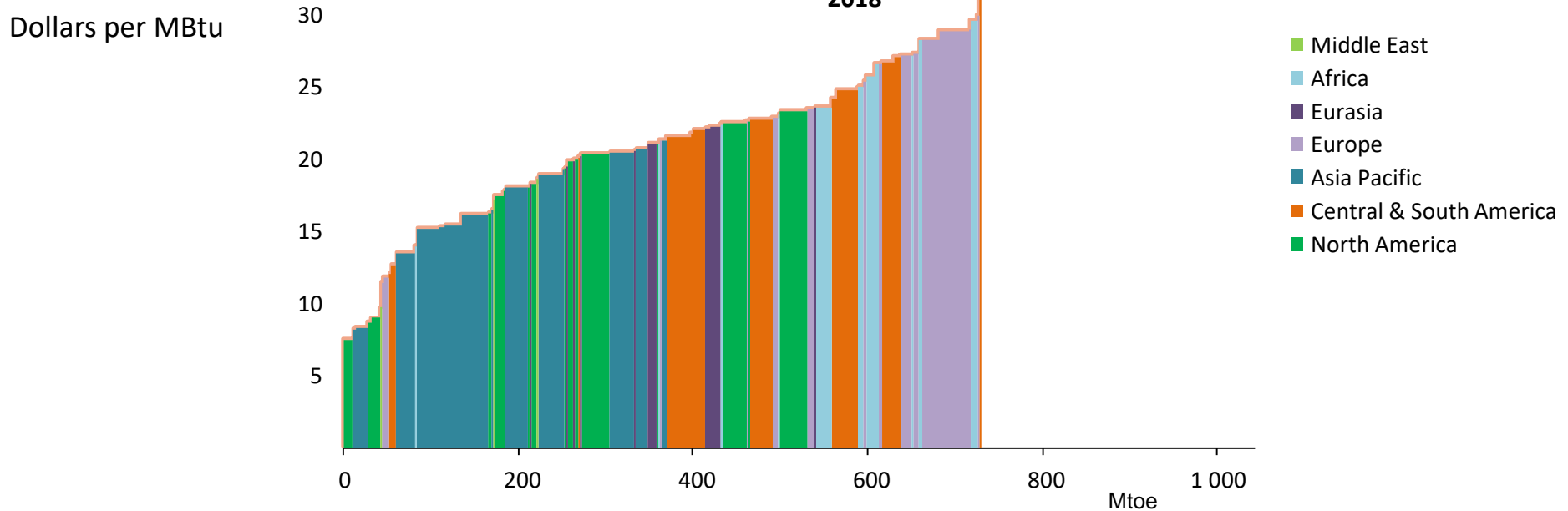
Outlook for biogas and biomethane: Prospects for organic growth

Keisuke Sadamori, Director, Energy Markets and Security, International Energy Agency

World Biogas Summit, 6th July 2021

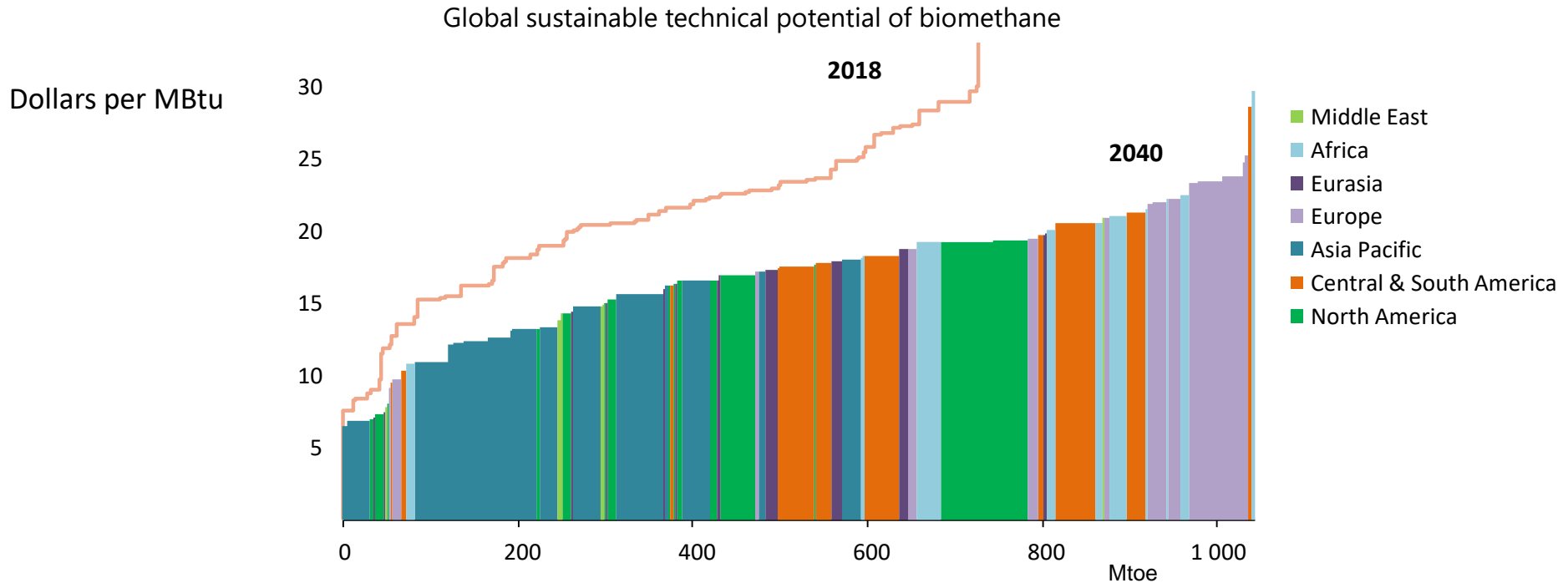
A global assessment of the costs and potential of biomethane

Global sustainable technical potential of biomethane



A bottom up assessment of sustainable feedstocks globally shows huge potential to develop biomethane at scale. This potential also has a wide geographic spread.

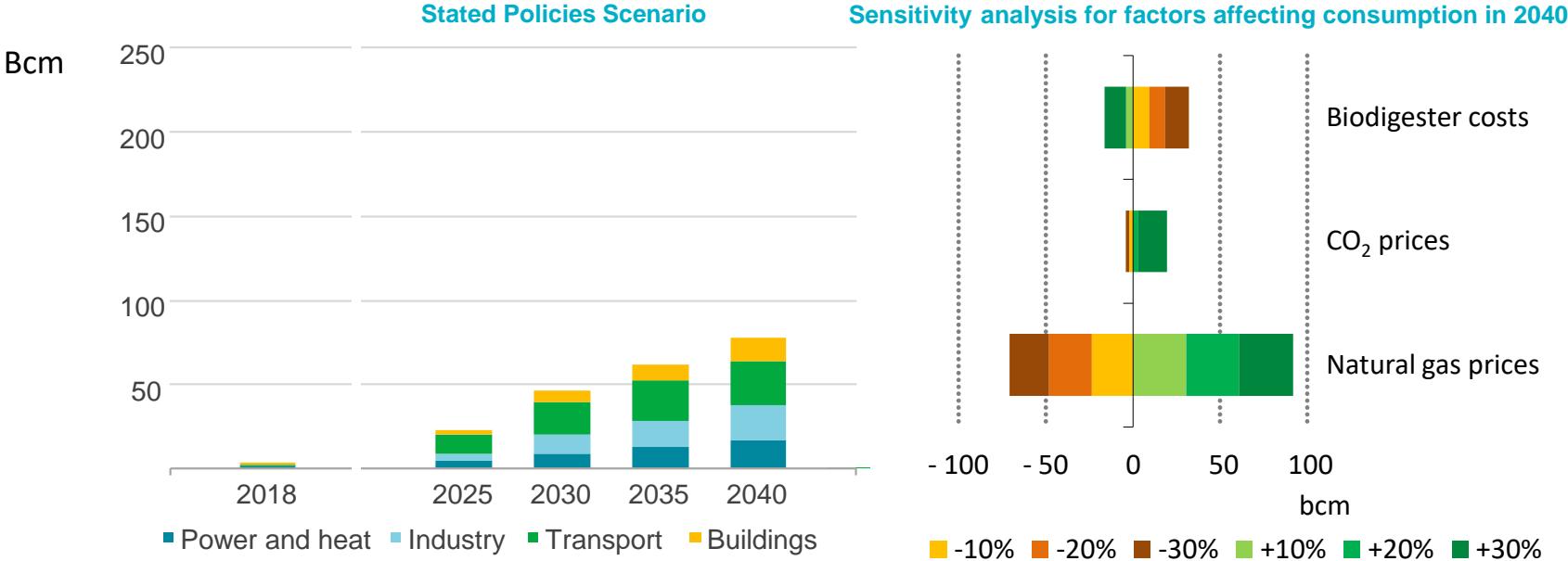
A global assessment of the costs and potential of biomethane



By 2040, over 1 000 Mtoe of biomethane could be produced globally, with average costs falling by 15%.

Effective policies can see biomethane grow across all sectors

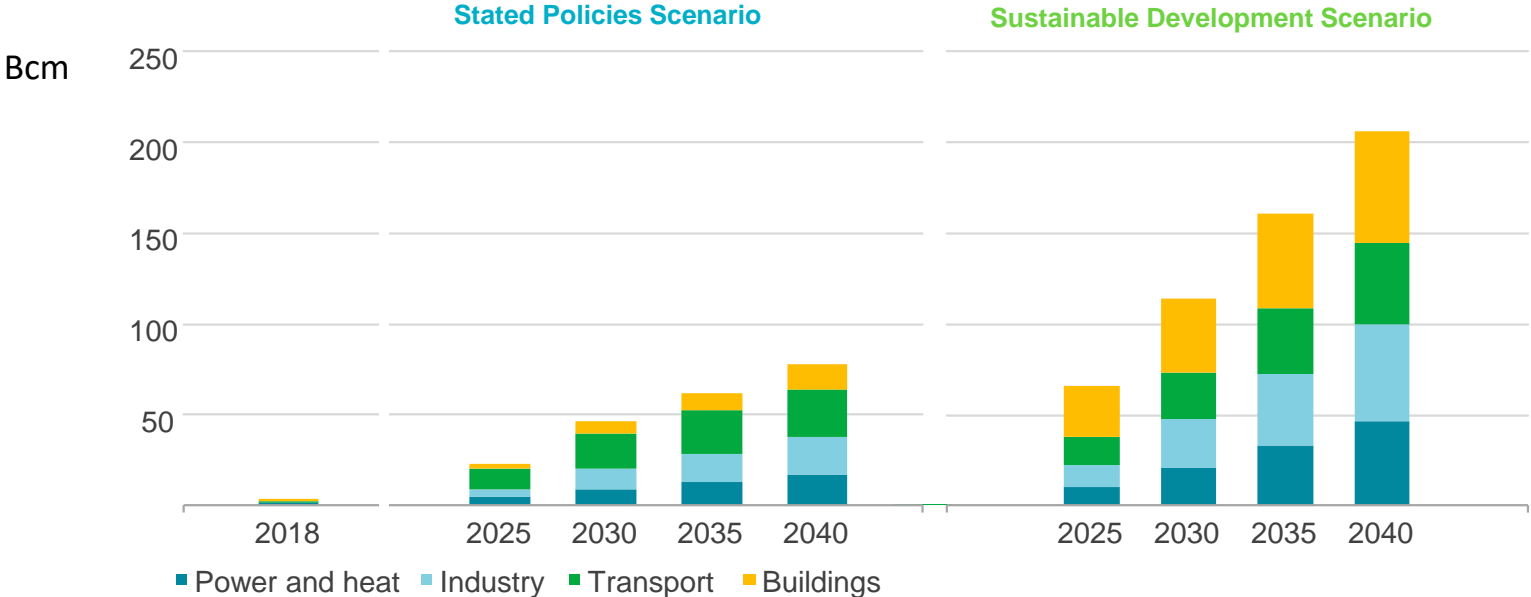
Global biomethane demand in the STEPS by sector and key sensitivities



In the Stated Policies Scenario, policy support for biomethane translates into substantial growth across all sectors, particularly transport. Natural gas prices can also have a large influence on potential deployment.

Effective policies can see biomethane grow across all sectors

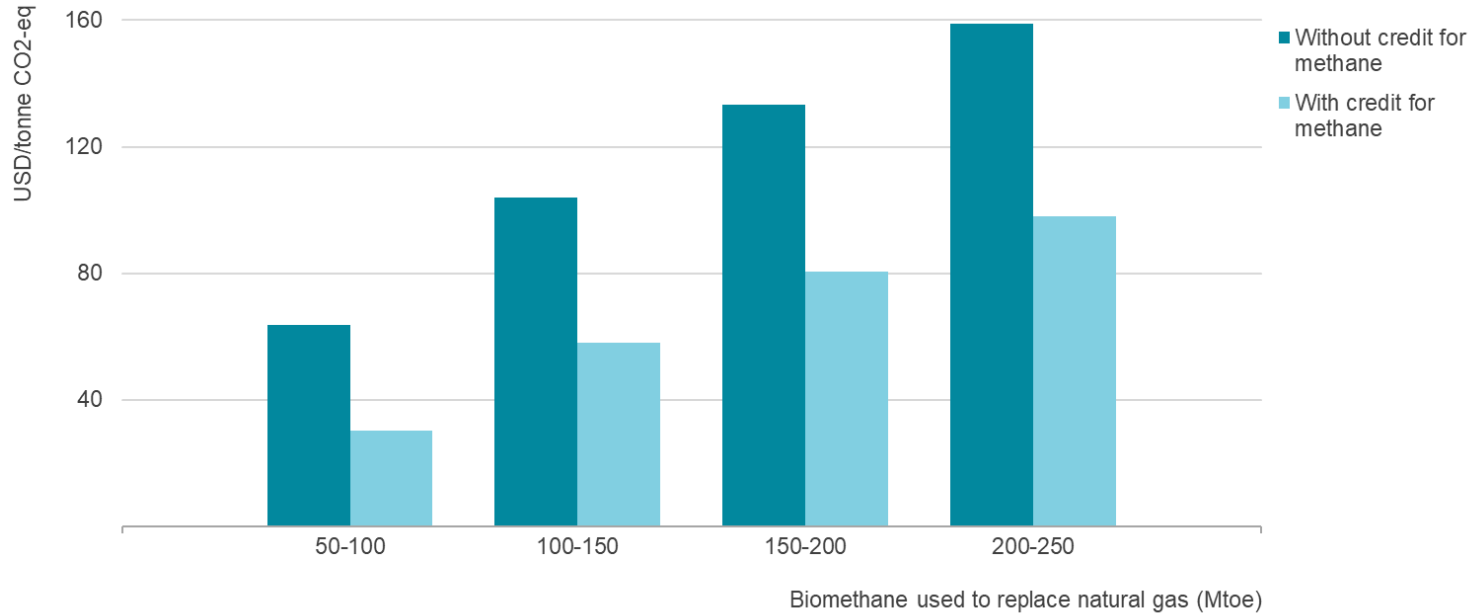
Global biomethane demand in the STEPS and SDS by sector



In an ambitious decarbonisation scenario like the SDS, biomethane makes key contributions in hard to abate sectors such as high-temperature heating and road freight, and delivers wider societal benefits.

Avoided methane emissions can be incorporated into policy design

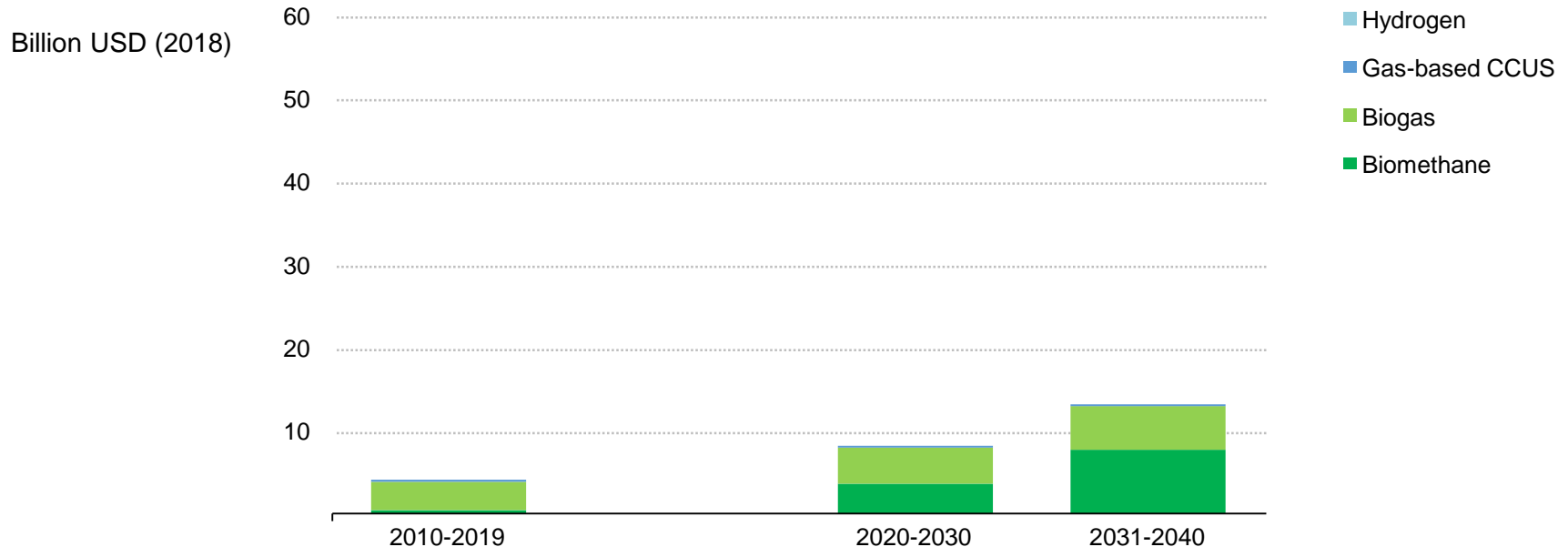
Global marginal abatement costs for biomethane to replace natural gas, 2018



Producing biogas and biomethane avoids methane emissions from the decomposition of feedstocks, policies that valorise this could dramatically improve deployment prospects.

An attractive investment landscape critical to grow low carbon gases

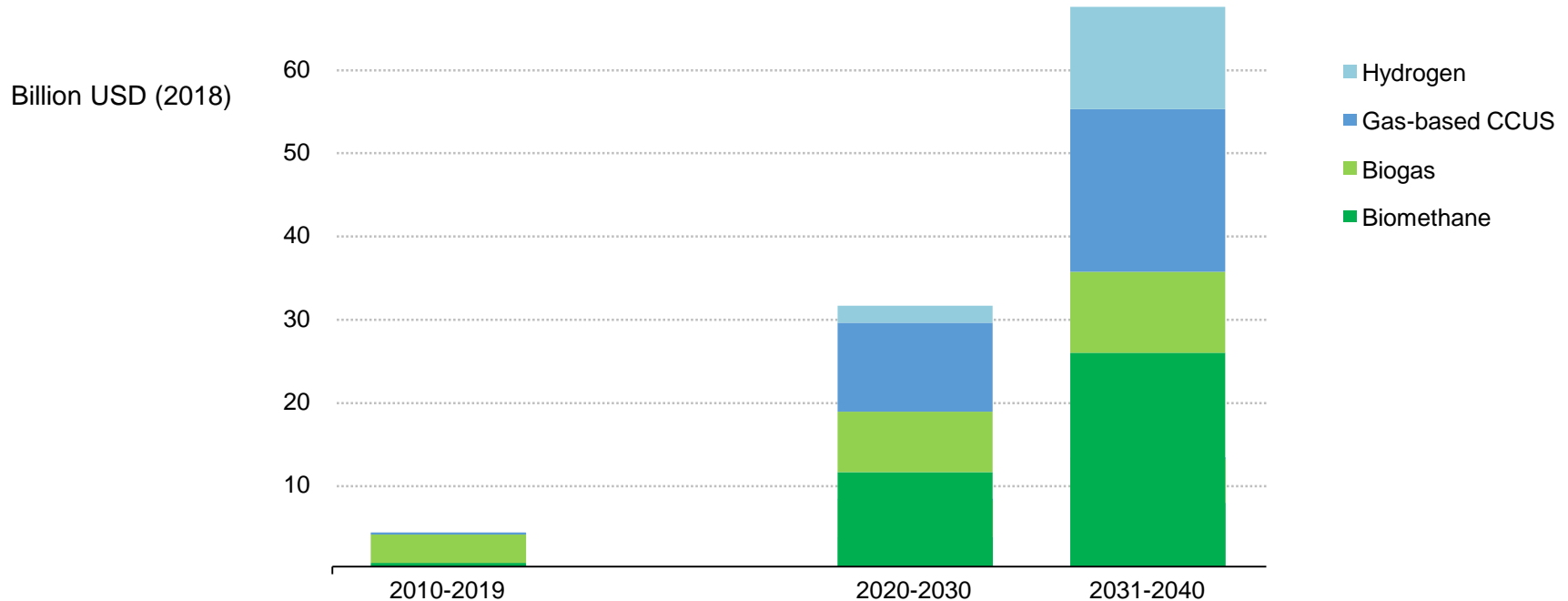
Annual average investment in low-carbon gas and CCUS in the **Stated Policies Scenario**



New business models and access to financing are crucial to scaling up markets for low carbon gases. Biomethane and biogas represent the largest chunk of low-carbon gas investment in the SDS.

An attractive investment landscape critical to grow low carbon gases

Annual average investment in low-carbon gas and CCUS in the **Sustainable Development Scenario**



New business models and access to financing are crucial to scaling up markets for low carbon gases. Biomethane and biogas represent the largest chunk of low-carbon gas investment in the SDS.

Conclusions

- Biomethane has a key role in a low carbon energy transition, especially in sectors where emissions are hard to abate, while biogas has potential as a means of providing baseload renewable electricity and clean cooking, especially in developing economies.
- There is huge untapped resource potential to scale up biogas and biomethane production.
- Biogas and biomethane offer multiple co-benefits, such as better waste management and enhanced security of supply. Policies that recognize these are crucial in order to overcome the competitiveness gap with lower cost fossil fuels. Measuring and verifying methane emissions are crucial to demonstrating the environmental benefits of biomethane projects.
- Prospects are also linked to wider investments in gas infrastructure and the financing landscape.

To download the report and see key findings: <https://www.iea.org/reports/outlook-for-biogas-and-biomethane-prospects-for-organic-growth>