

Global Vision for Gas



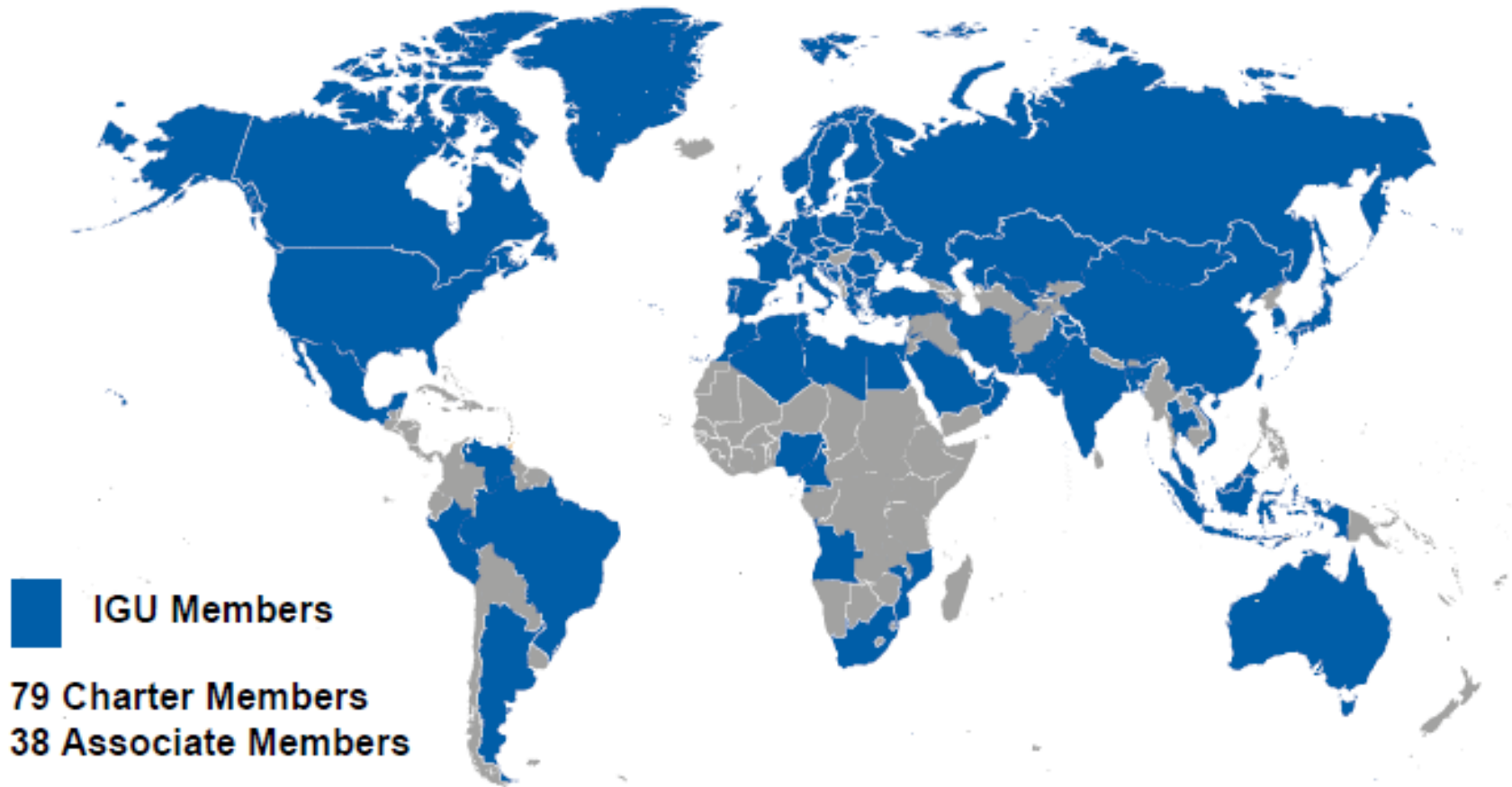
The Pathway to a Sustainable Energy Future

Carolin Oebel
Senior Advisor to the Secretary General

Budapest, 5 October 2012



IGU represents more than 95 %
of the global gas market



The global energy future

Impacting the global framework:

- Rising population – from ca. 7 to 9 billion in 2050
- Human strive for a better life
- Technological progress
- Air quality & climate change concerns



The world needs:

- More energy
- Cleaner energy
- Safe energy
- Affordable energy

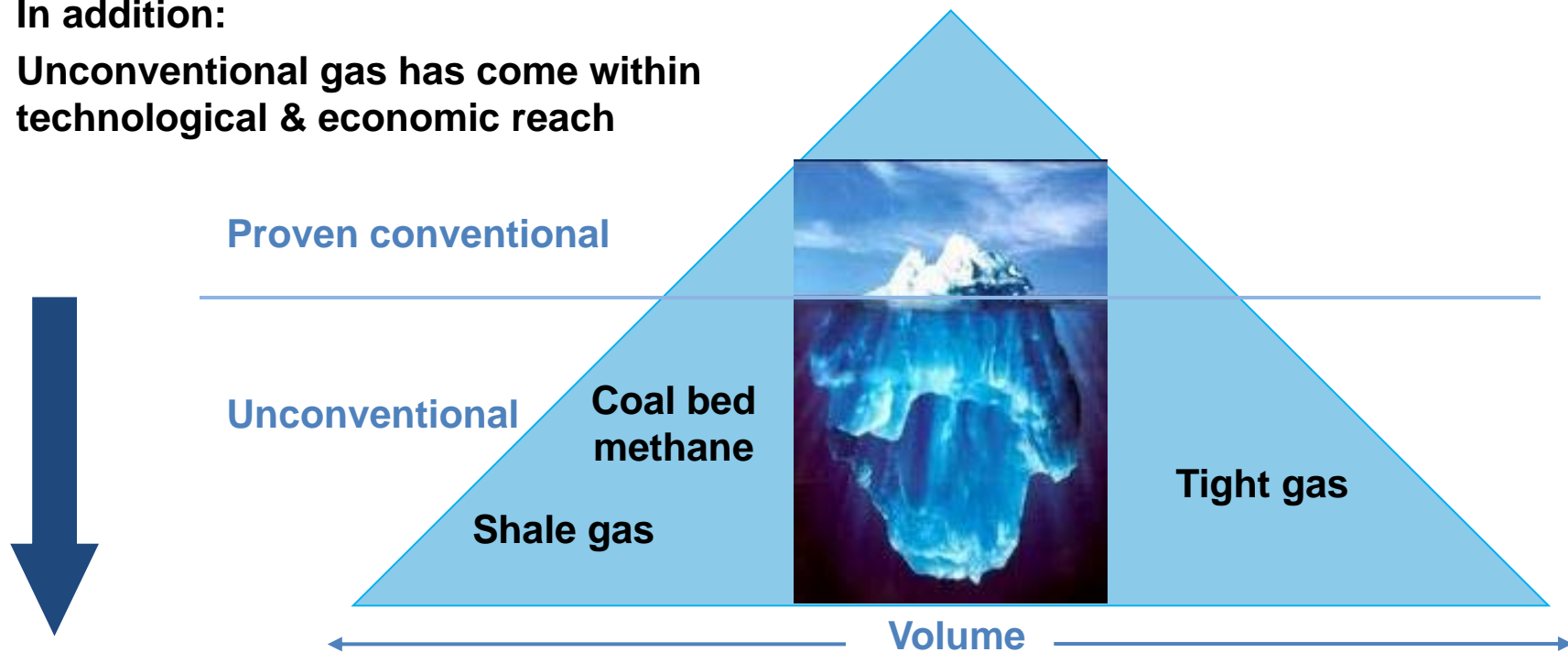


Natural gas resources are abundant

Proven conventional reserves* are growing

In addition:

Unconventional gas has come within technological & economic reach



The total long-term recoverable conventional gas resource base is more than 400 tcm, another 400 tcm is estimated for unconventional: only 66 tcm has already been produced.
- IEA-Golden Age of Gas 2011-

* 190 tcm in 2010

Natural gas can enable renewable energy

Natural Gas - Wind - Solar

Natural gas can produce clean base load support for variable renewables



An ideal combination

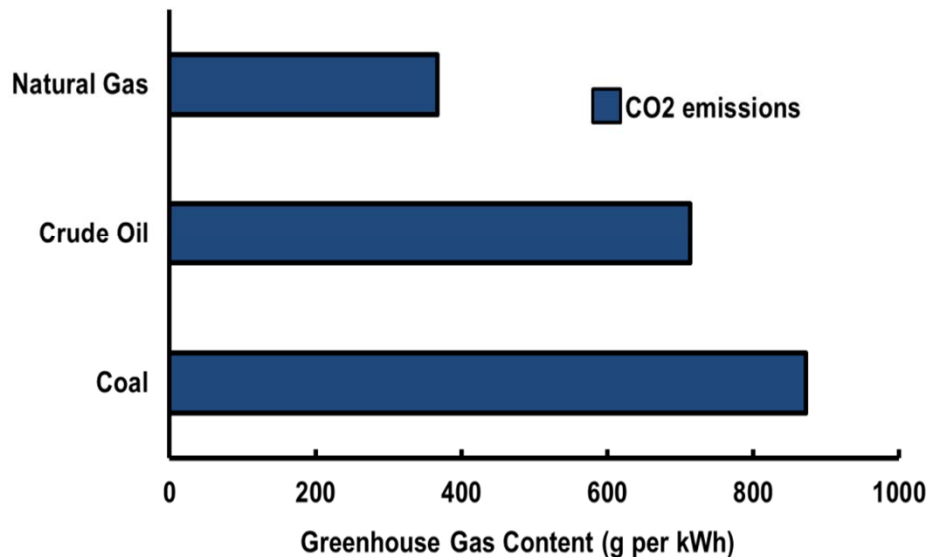


Natural gas can contribute to better air quality and to mitigating climate change

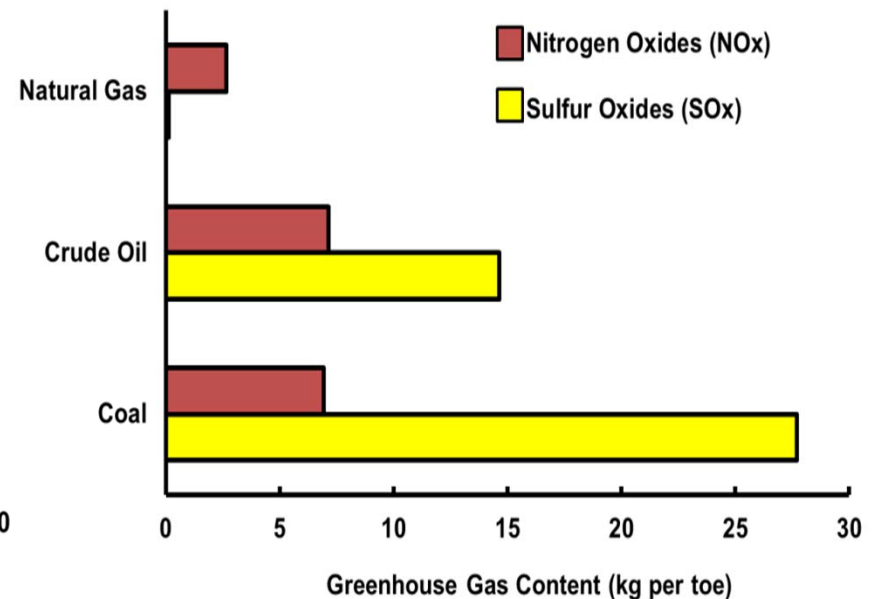


Natural gas is a clean-burning and low carbon fuel

Carbon dioxide emitted during electricity generation by fuel*



NOx and SOx content by fuel



Ad *: Power generation efficiencies assumed: Natural gas 55%, crude oil 37%, coal 39%

Natural gas for transportation



Natural gas is applicable for most kinds of transportation

Investment in natural gas infrastructure does not predetermine future energy landscape

Adaptability of natural gas is key advantage:

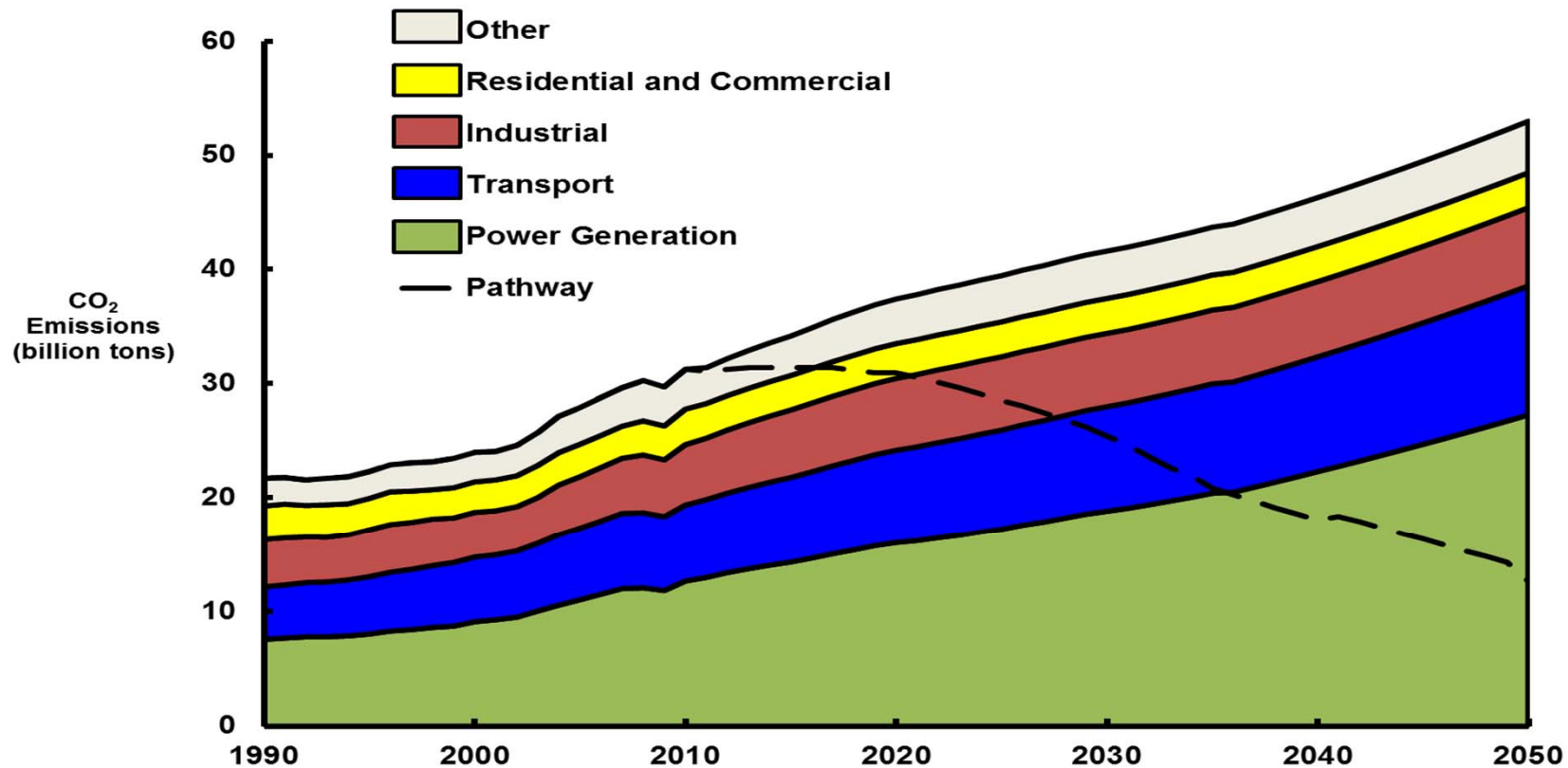
- **Gas-fired generation can evolve in a variety of directions:**
 - Capture carbon through retrofit technology
 - Partnership with variable sources of renewable power generation
 - Greater inclusion of carbon-neutral biogas
- **Gas pipeline and storage system provides further future options for:**
 - CO₂
 - Biogas
 - Hydrogen



The Pathway towards a sustainable future

Meeting future global energy needs – whilst addressing air quality and climate change concerns

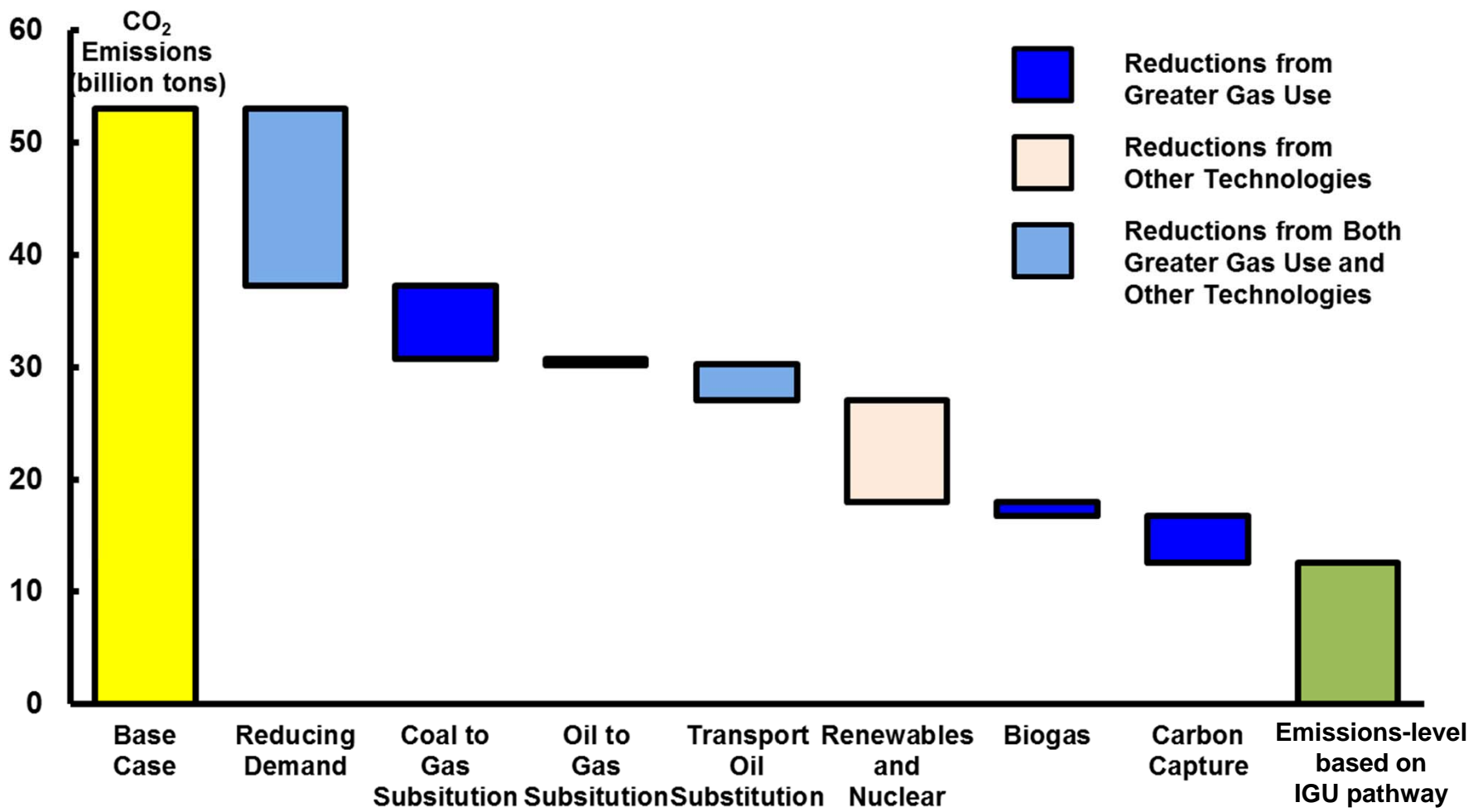
Global Emissions Trajectory Base Case



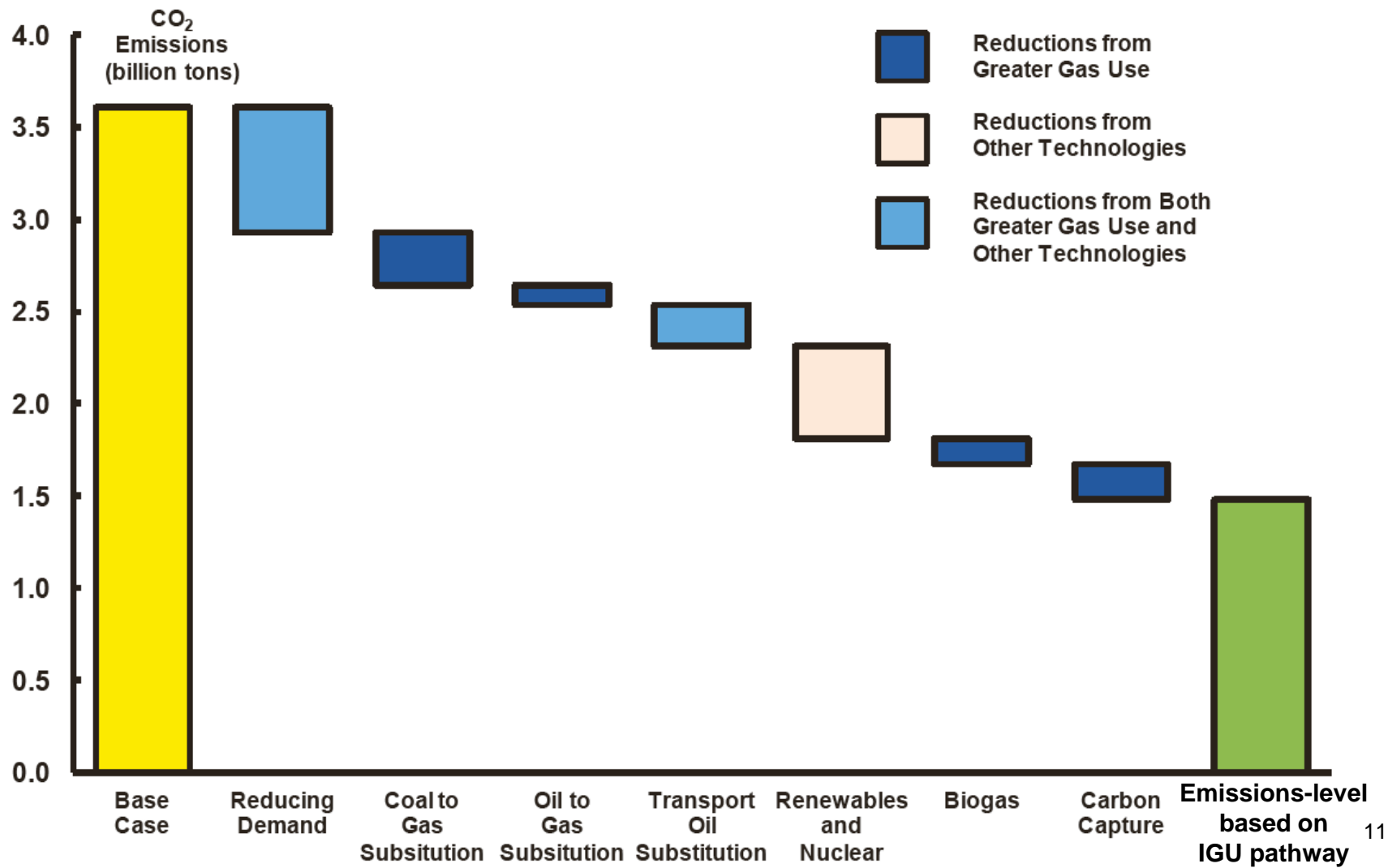
Vision Pathway highlights various CO₂ abatement options and technology choices



Global calculation for 2050



Also in Europe, the most energy-efficient of regions, there is still potential for CO₂-reductions



Requirements to realise a sustainable energy future



Politics

- Ensure a stable policy and regulatory framework
- Support low-carbon energy & act quickly

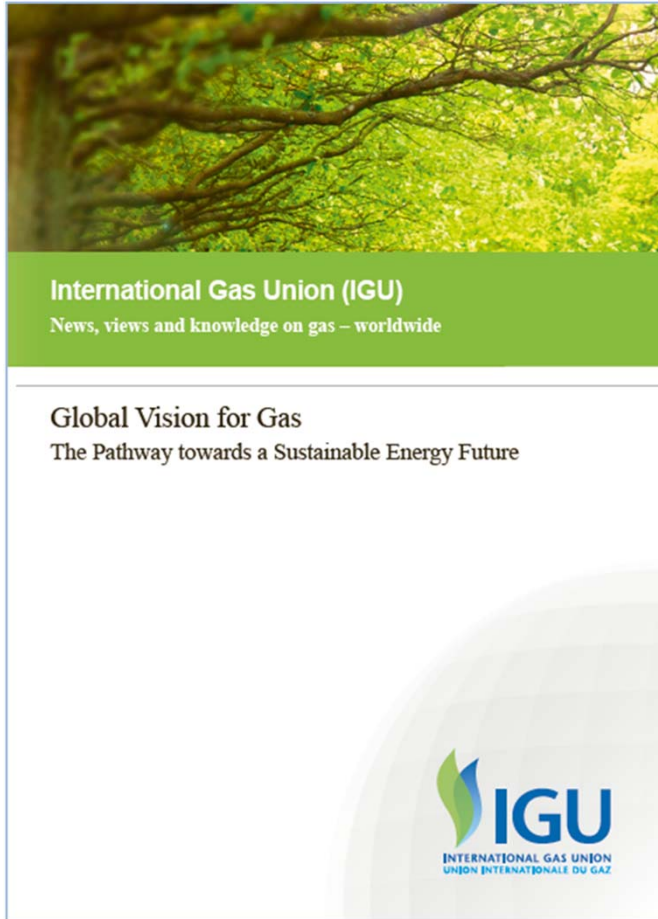
Industry

- Continuously improve technology and productivity
- Establish trust with all stakeholders

All

- Realise the synergies of integrated energy concepts
- Increase energy efficiency
- Reduce demand

Global Vision for Gas: The Pathway towards a Sustainable Energy Future



Download from:

<http://www.igu.org>

Thank you



For your attention

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