



International
Energy Agency

Secure • Sustainable • Together

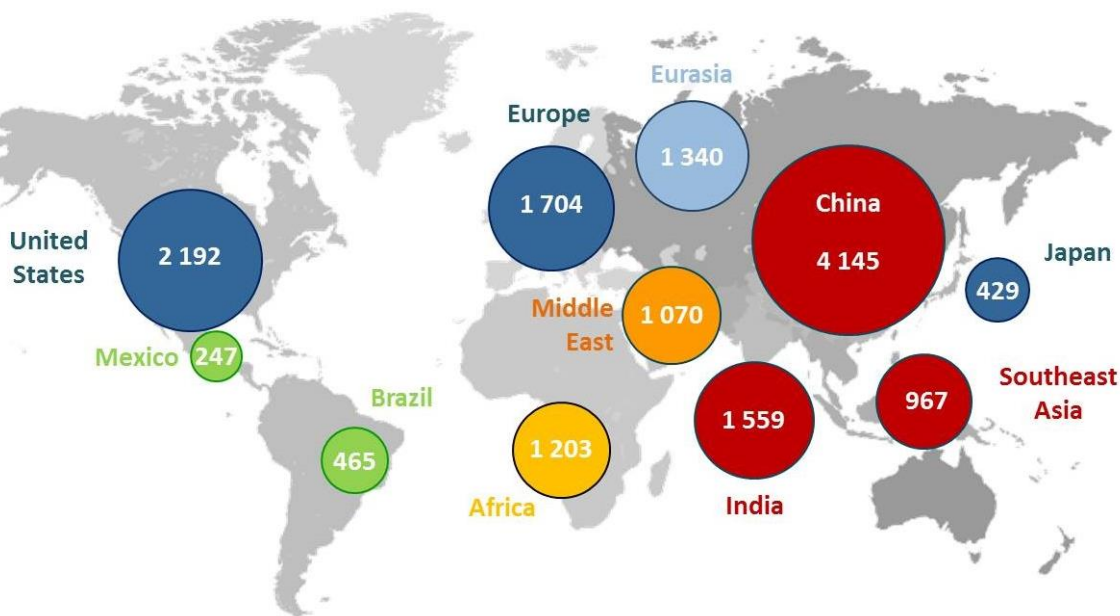
AEEP Second Stakeholder Forum

Tyler Bryant

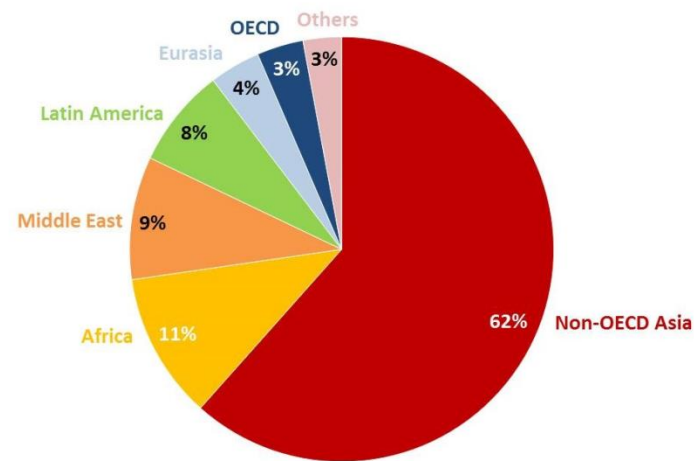


Growth in Global Energy Demand

Primary Energy Demand, 2035 (Mtoe)

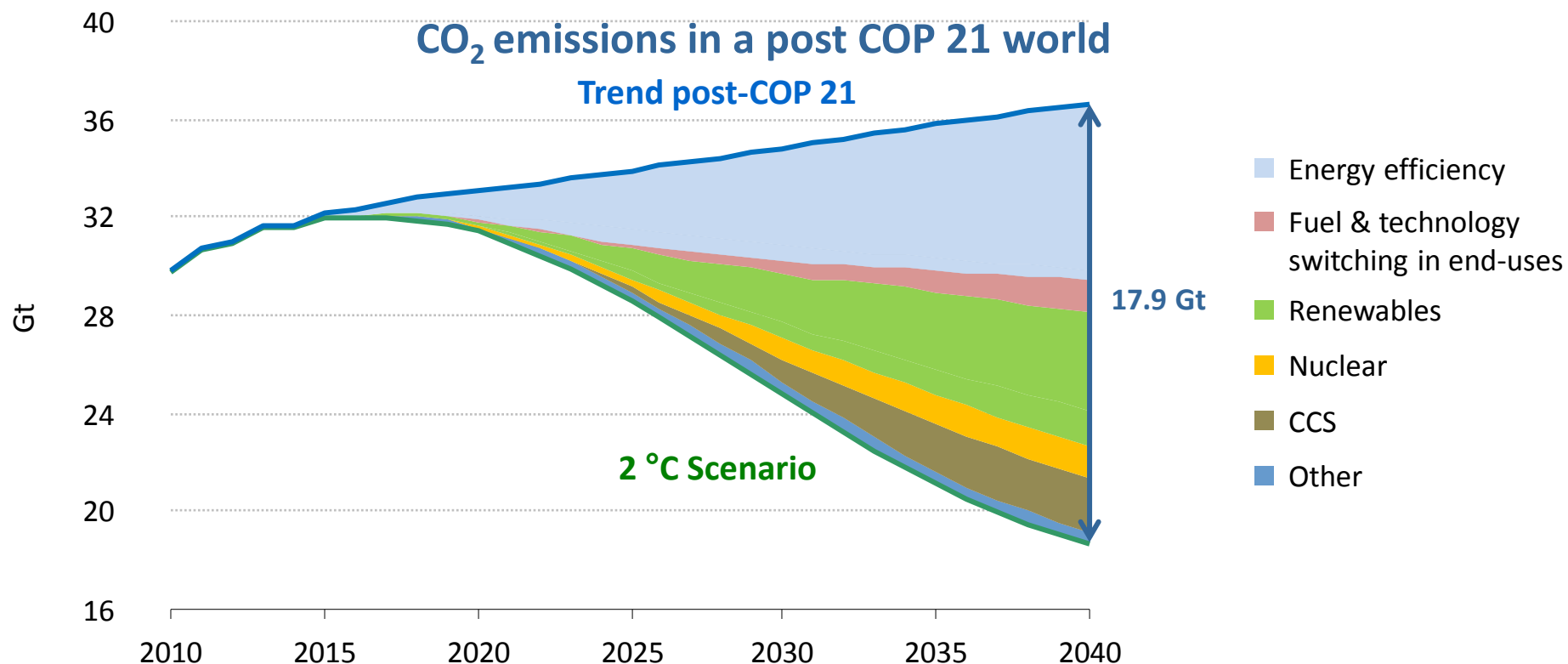


Share of Global Growth, 2012-2035



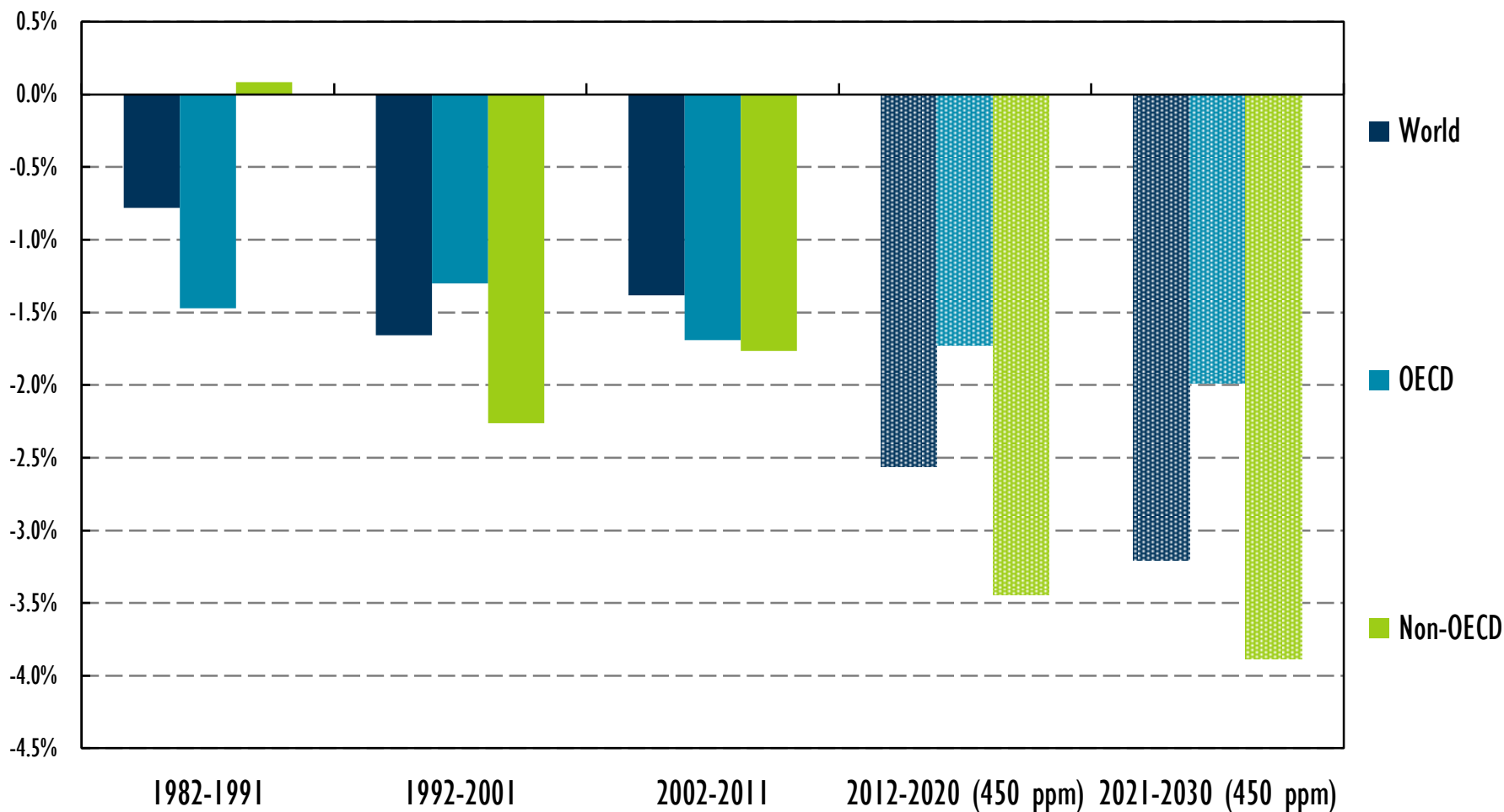
Over 95% of the projected growth in energy demand between now and 2035 happens outside the OECD (NPS)

A 2 °C pathway requires energy efficiency



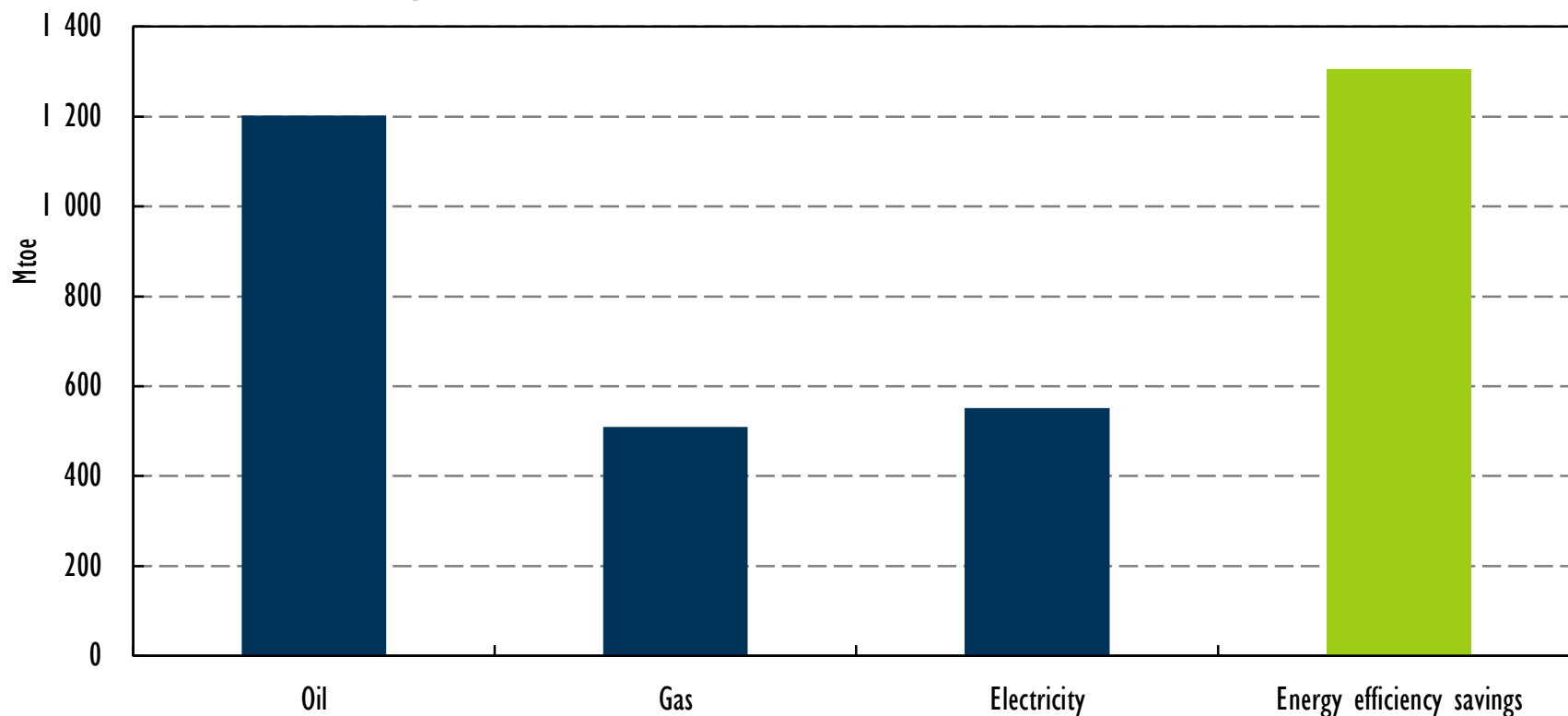
Massive additional investments in efficiency, renewables, nuclear power and other low carbon technologies are required to reach a 2 °C pathway

Energy efficiency key in emerging and developing countries in the climate scenario



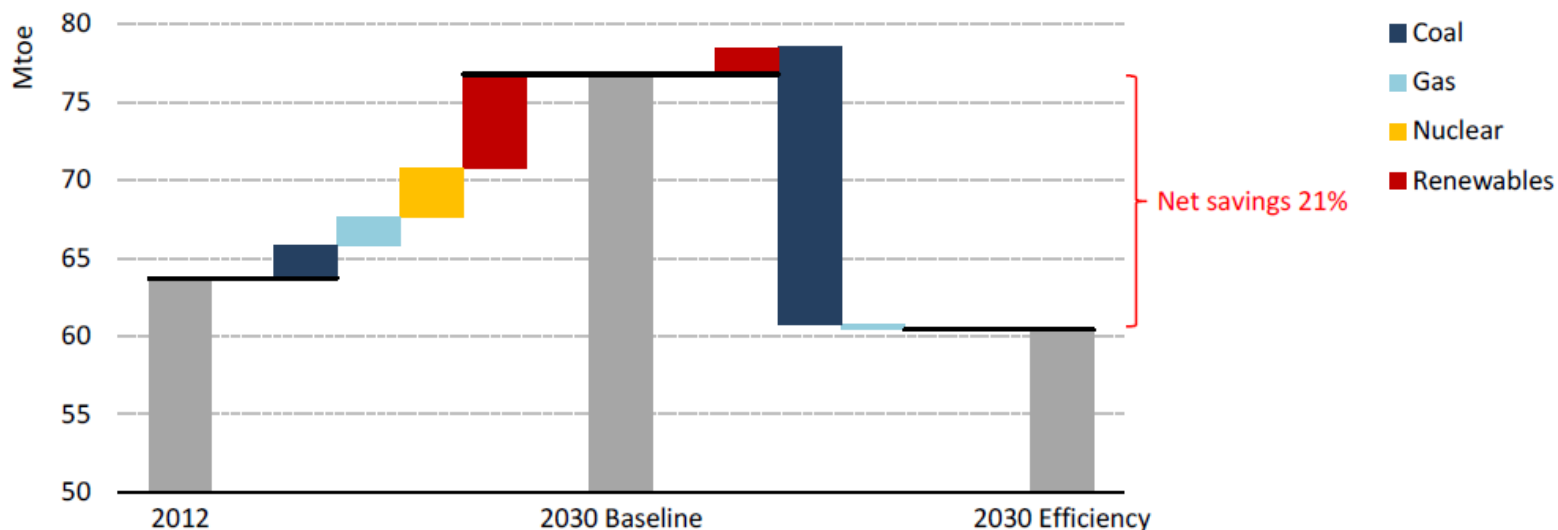
Efficiency is the 'first-fuel'

- Efficiency improvements in IEA countries greater than the TFC of any one fuel



Efficiency is a resource within the energy system

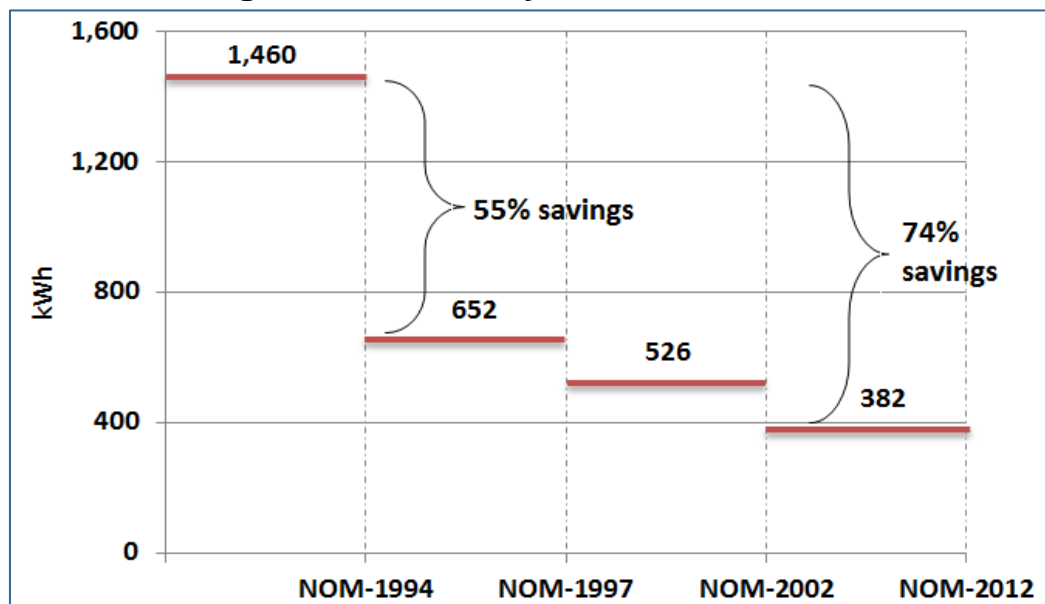
- In *high efficiency* scenario South Africa would need 40 TWh less coal generation than in 2012
- Equivalent to 6 GW of coal capacity and USD 8 billion dollars of avoided capital investment



Unlocking the energy efficiency resource

- **Air con and refrigerator standards in Mexico saved 6-12 TWh**
- **Savings of \$5.5 billion to consumers and \$11 billion in energy subsidies**
- **1.4 GW of peak capacity \$180 million of investment***

Refrigerator efficiency standards in Mexico



*(McNeil et al, 2015).

Energy Efficient Prosperity

Ghana

■ Lighting replacement

- Peak savings 124 MW
- 160 GWh per year saved
- \$40 million in fuel savings
- Two new CFL factories employing 100 workers

■ Refrigerator rebates, standards, labels

- Average energy reduced from 1200 to 385 kWh
- 43 GWh electricity savings
- Refrigerator resale market cut in half

Electricity access increased with no new capacity