

APERC Annual Conference
Tokyo, Japan, 30-31 May 2018

S1.0 – Introduction of the “Business as Usual” (BAU) and “APEC Target” (TGT) Scenarios

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Outlook 7th Edition Includes 3 Scenarios

- Business-as-usual (BAU) scenario:

The BAU scenario reflects current policies and trends within the APEC energy sector. In turn, it largely projects past trends into the future.

- APEC Target (TGT) scenario:

The TGT scenario is driven by APEC's goals of reducing energy intensity while doubling the share of renewables.

- 2 Degree Scenario (2DS) scenario:

The 2DS follows the sector-by-sector carbon emissions reduction pathways included in the ETP by IEA.

- All scenarios

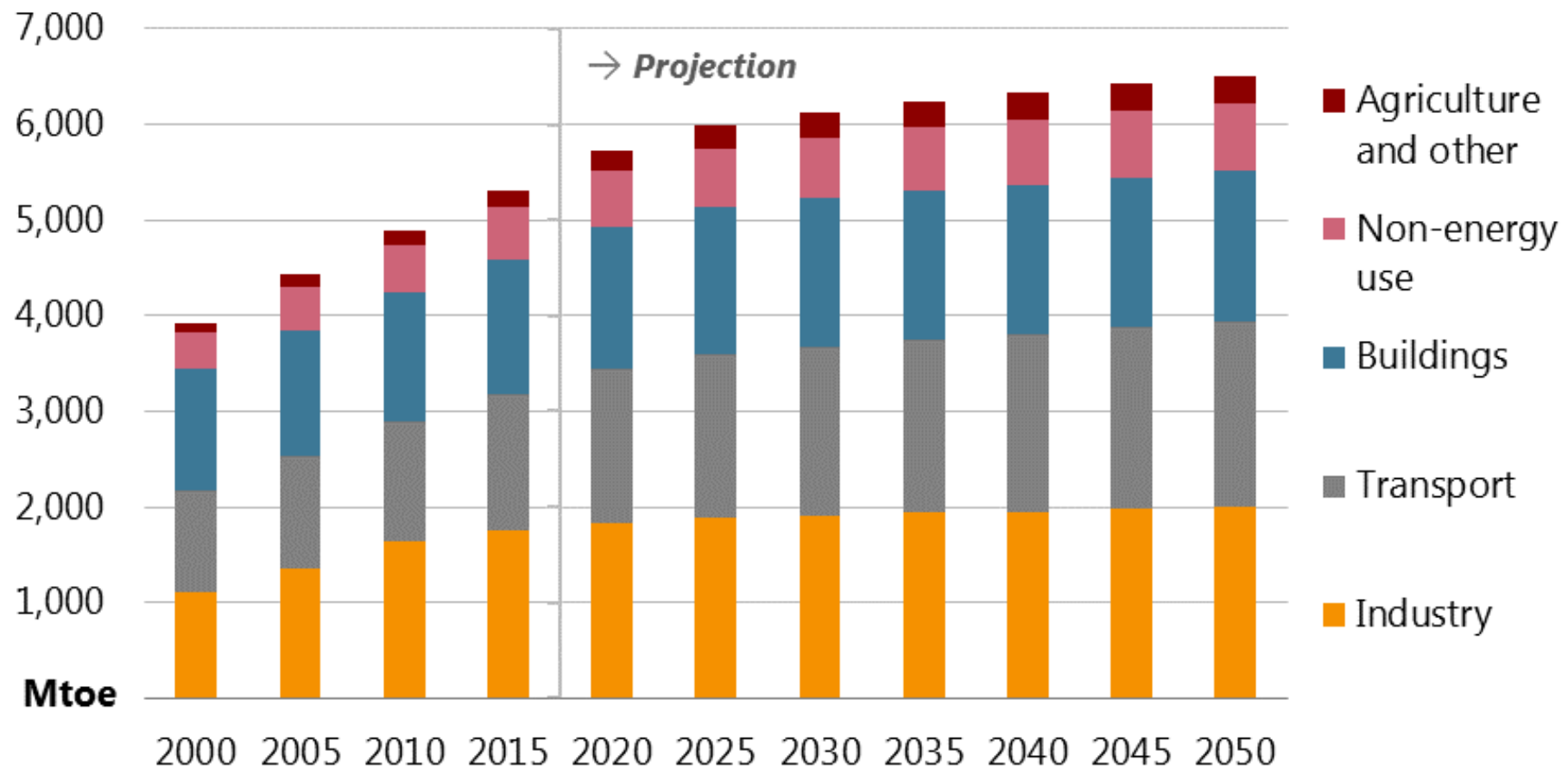
- have a time horizon to **2050**
- use the same population and GDP projections (from the UN, OECD, and APERC calculations)

An aerial photograph of a cityscape. On the left, a large volcano is erupting with bright orange and yellow lava flows. In the center, there are several high-rise apartment buildings. To the right, a complex multi-level highway interchange is visible, with cars on the roads. In the foreground on the right, there is a large field of solar panels. The sky is bright and slightly hazy.

'Business as Usual' Scenario

APEC energy demand growth slows to 2050

Final energy demand by consuming sector, 2000-2050

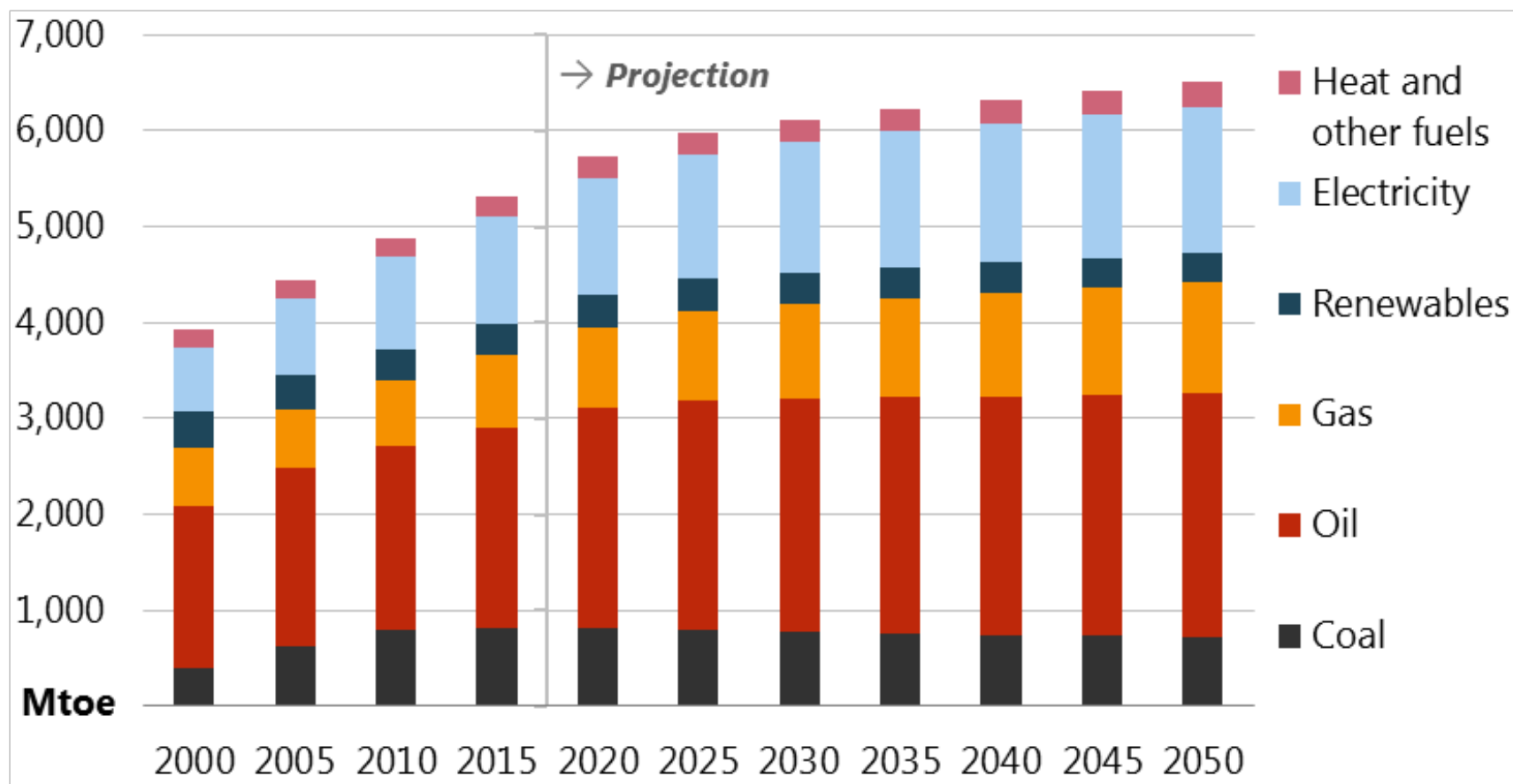


Source: IEA statistics 2017 and APERC analysis.

Final energy demand rises by 23% from 2015 to 2050. Transportation grows rapidly, almost overtaking industry as the largest consuming sector.

Oil remains the dominant end-use fuel in APEC

Final energy demand by fuel, 2000-2050

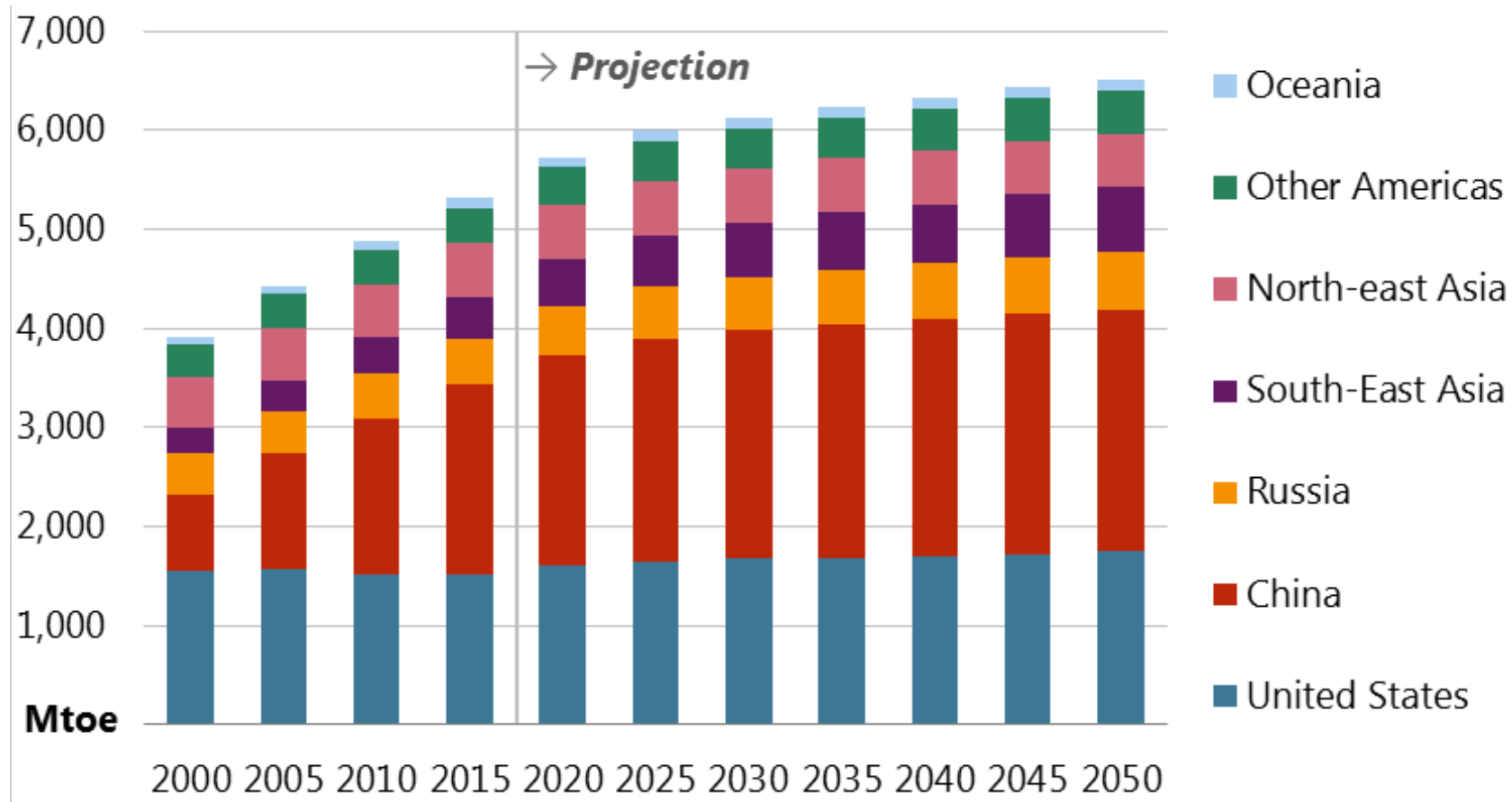


Source: IEA statistics 2017 and APERC analysis.

Demand for natural gas, electricity, and heat are all projected to grow faster than oil. Coal demand declines.

China and the US dominate APEC demand

Final energy demand by region, 2000-2050

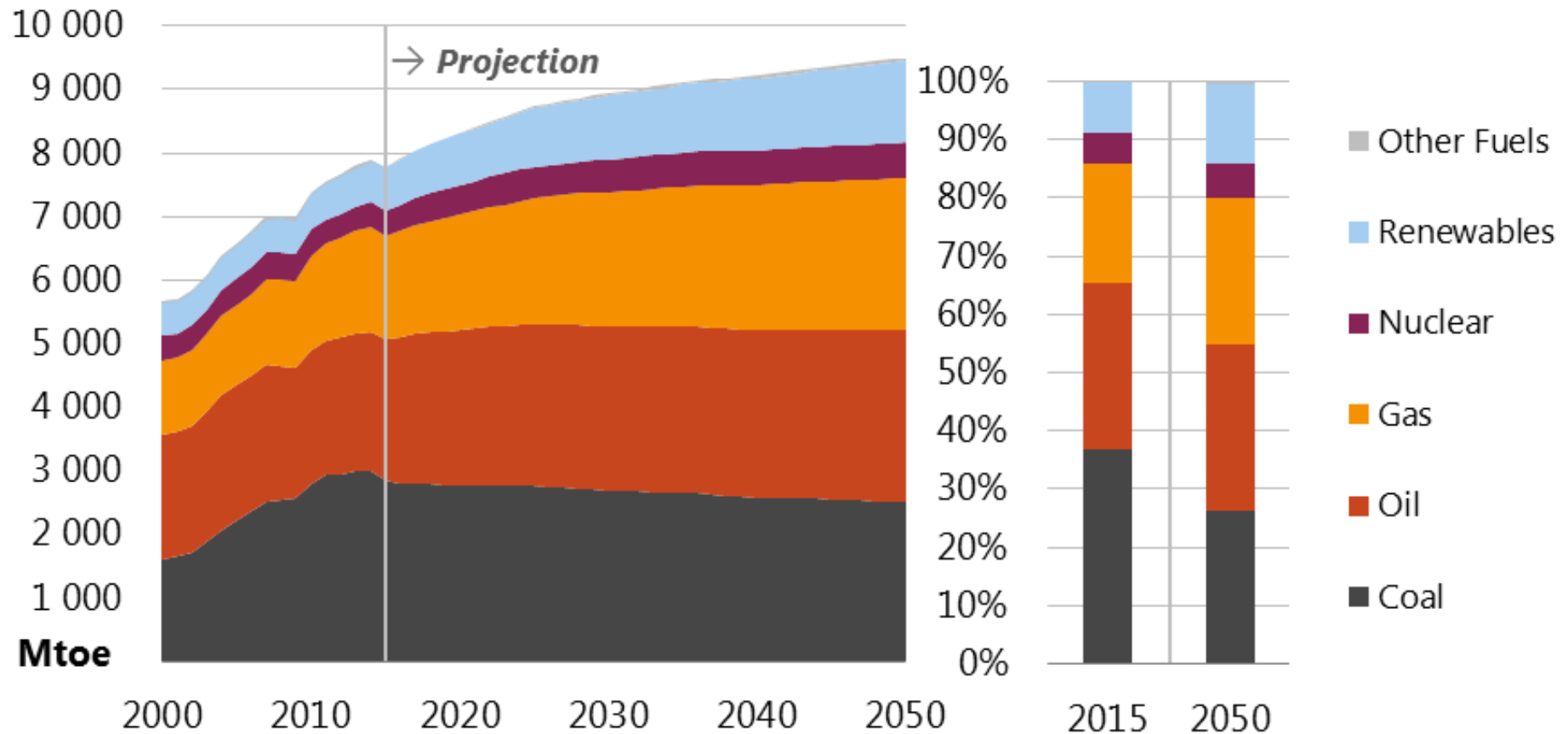


Source: IEA statistics 2017 and APERC analysis.

Energy demand for South East Asia is projected to increase 57%. Demand in China, Russia, and other Americas increases more than 25%.

Fossil fuels continue to dominate APEC energy supply

Total primary energy supply by fuel, 2000-2050



Source: IEA statistics 2017 and APERC analysis.

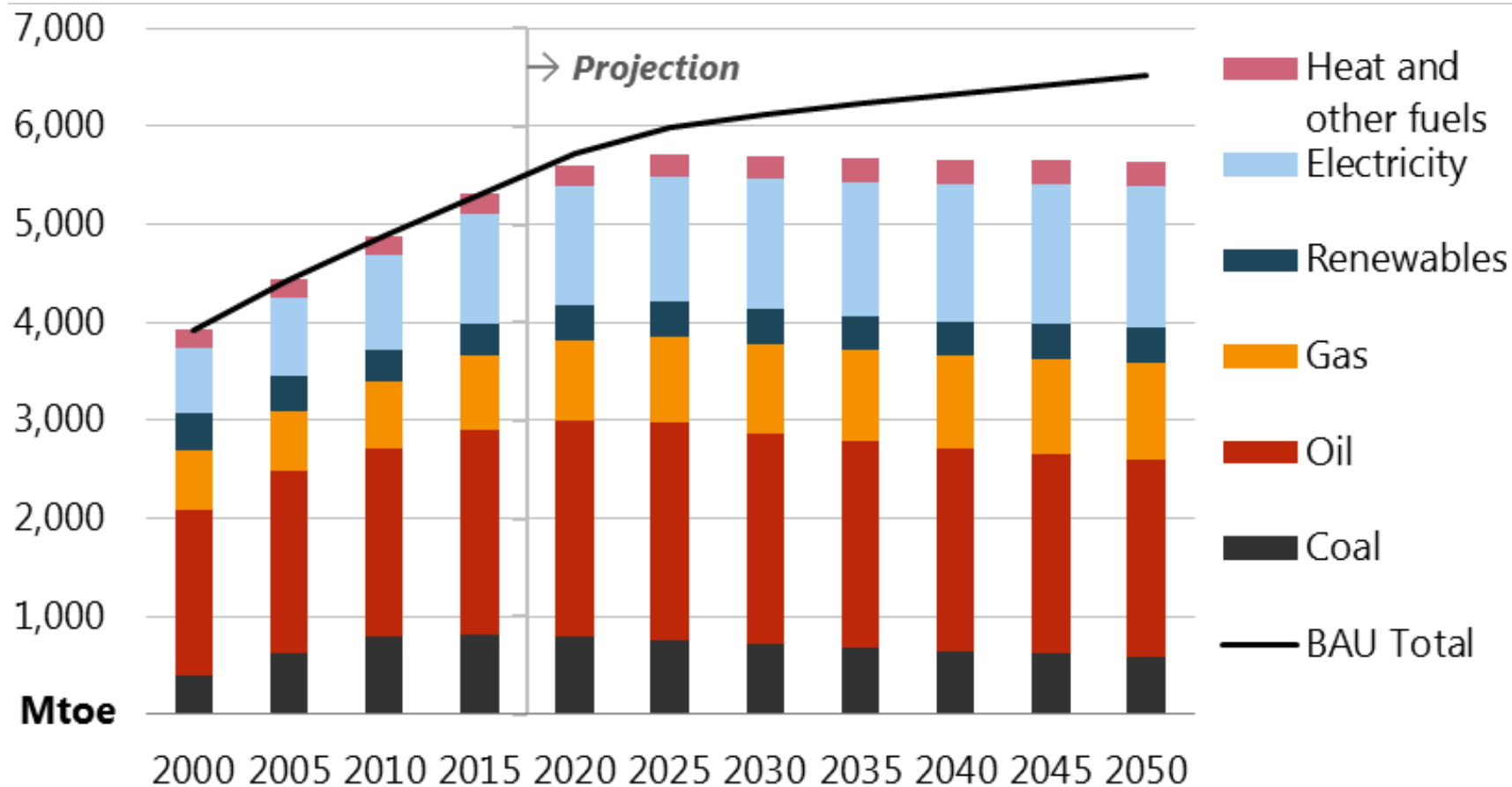
Coal supply declines by 12.4% from 2015 to 2050, while all other fuels grow. Renewables grow faster than any other fuel.

An aerial photograph of a cityscape. On the left, a large volcano is erupting with bright orange and yellow lava flows. In the center, there are several high-rise apartment buildings. To the right, a complex multi-level highway interchange is visible with cars on the roads. In the foreground on the right, there is a large field of solar panels. The sky is bright and slightly hazy.

'APEC Target' Scenario

APEC energy demand growth plateaus and then declines

Final energy demand by fuel type, 2000-2050

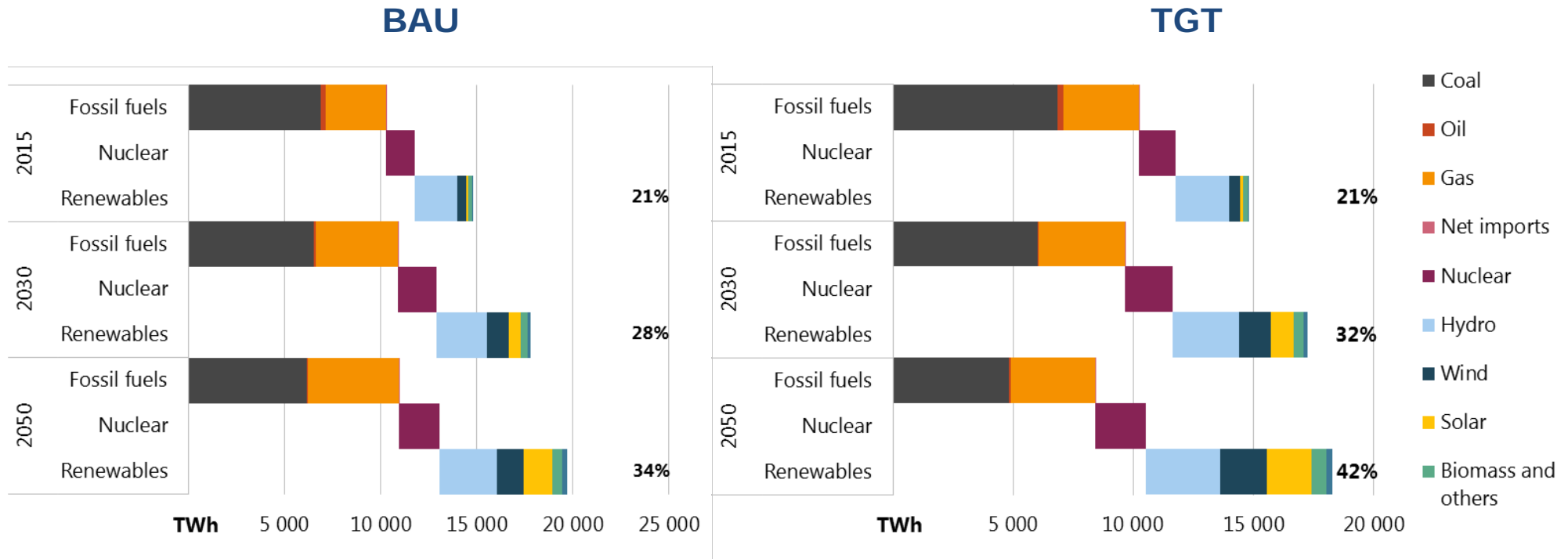


Source: IEA statistics 2017 and APERC analysis.

Coal and oil demand decrease in the TGT Scenario. Other fuels increase, though more slowly than the BAU.

Renewables boom in electricity

Renewables Electricity Share

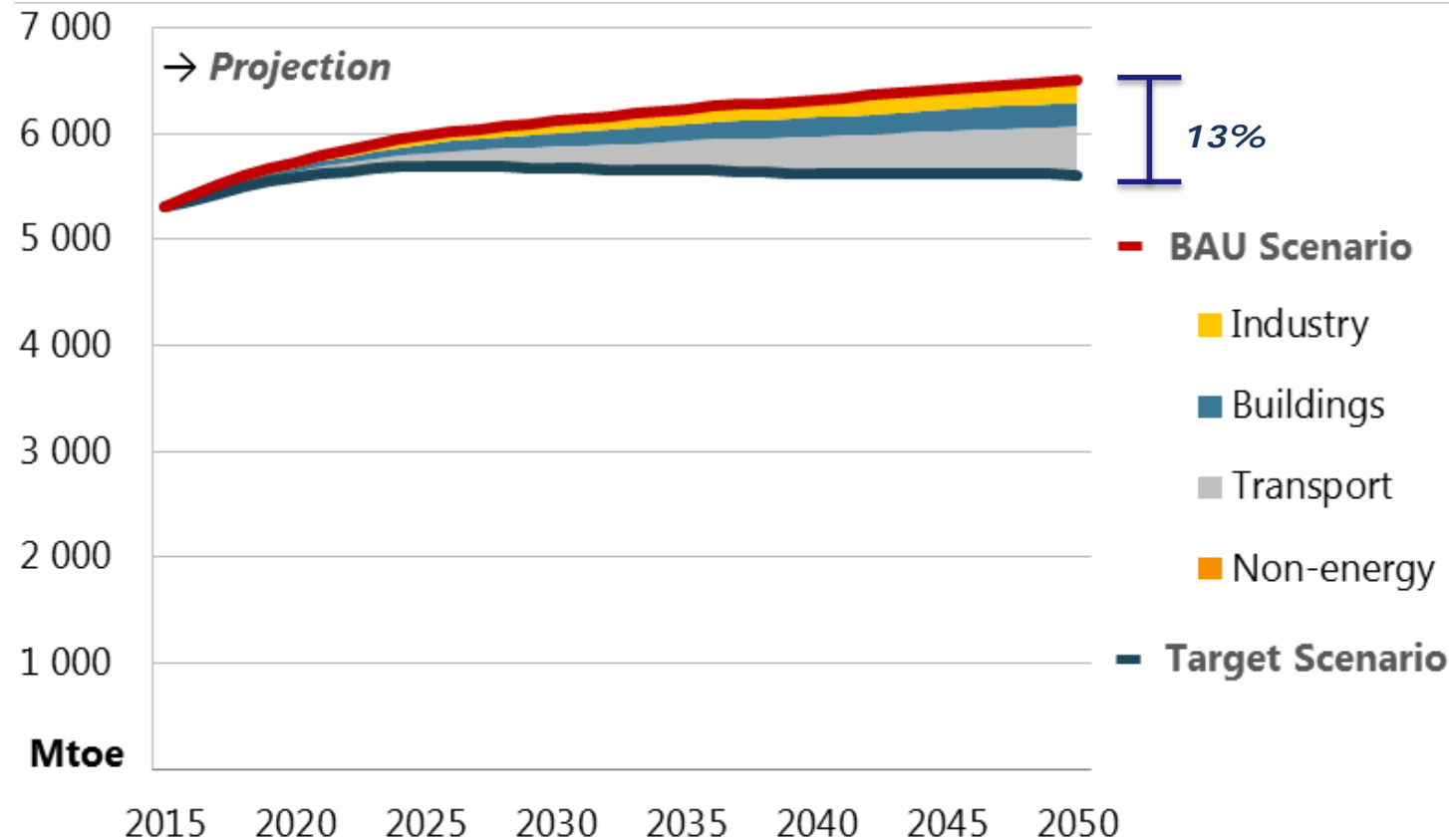


Source: IEA statistics 2017 and APERC analysis.

In the Target Scenario, wind and solar supply more electricity in APEC than hydro power by 2040. Coal generation declines by 30%, three times more than in the BAU.

Transport drives the majority of energy savings

Final energy demand in APEC: Target Scenario vs. BAU, 2000-2050

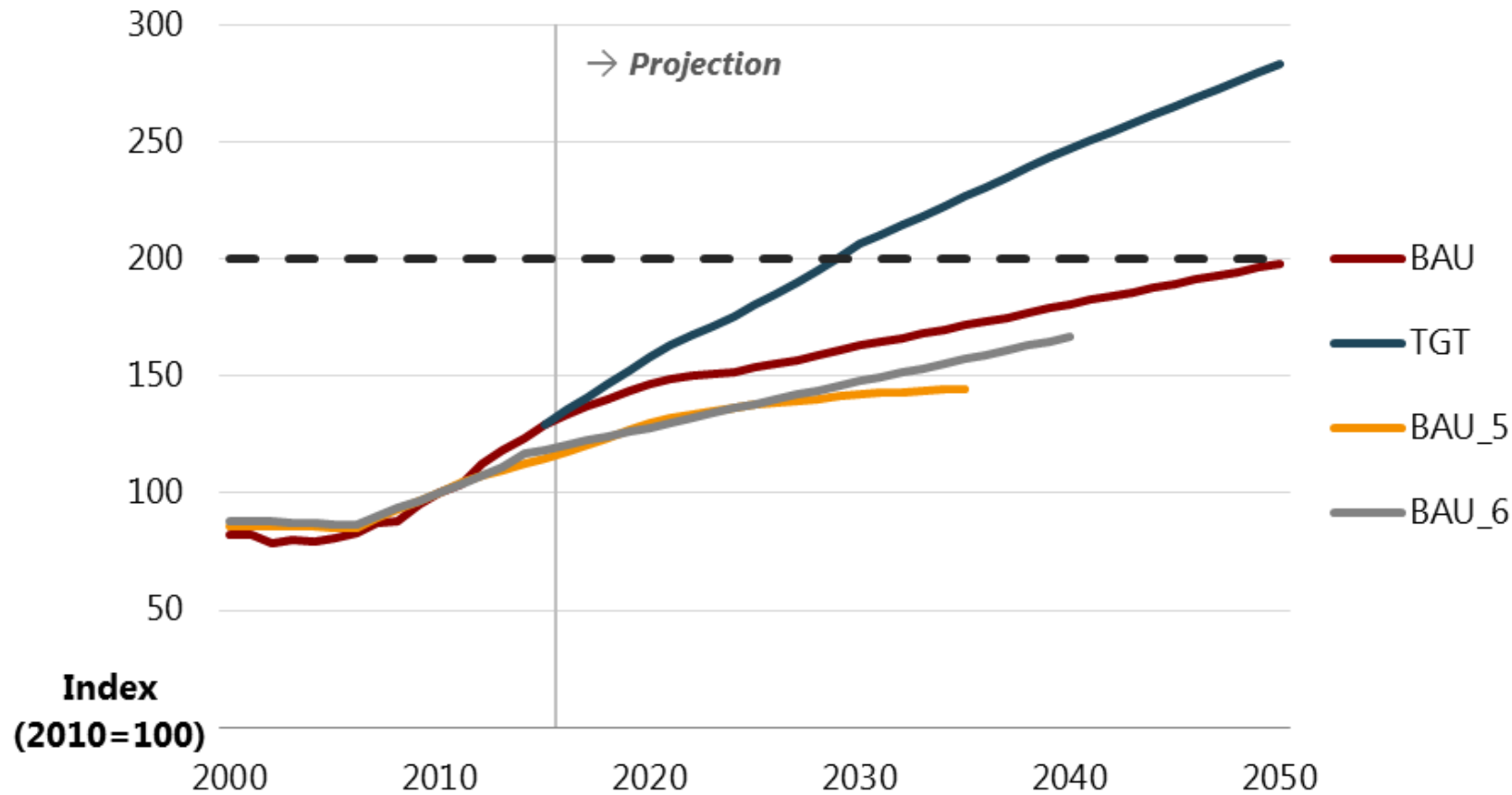


Source: IEA statistics 2017 and APERC analysis.

Energy demand in transport increases by 18% in the TGT compared to 49% in the BAU. Energy demand in buildings decreases by nearly 4%.

Renewables boom in electricity

Renewables Doubling Goal Tracking in APEC: Target Scenario vs. BAU, 2000-2050

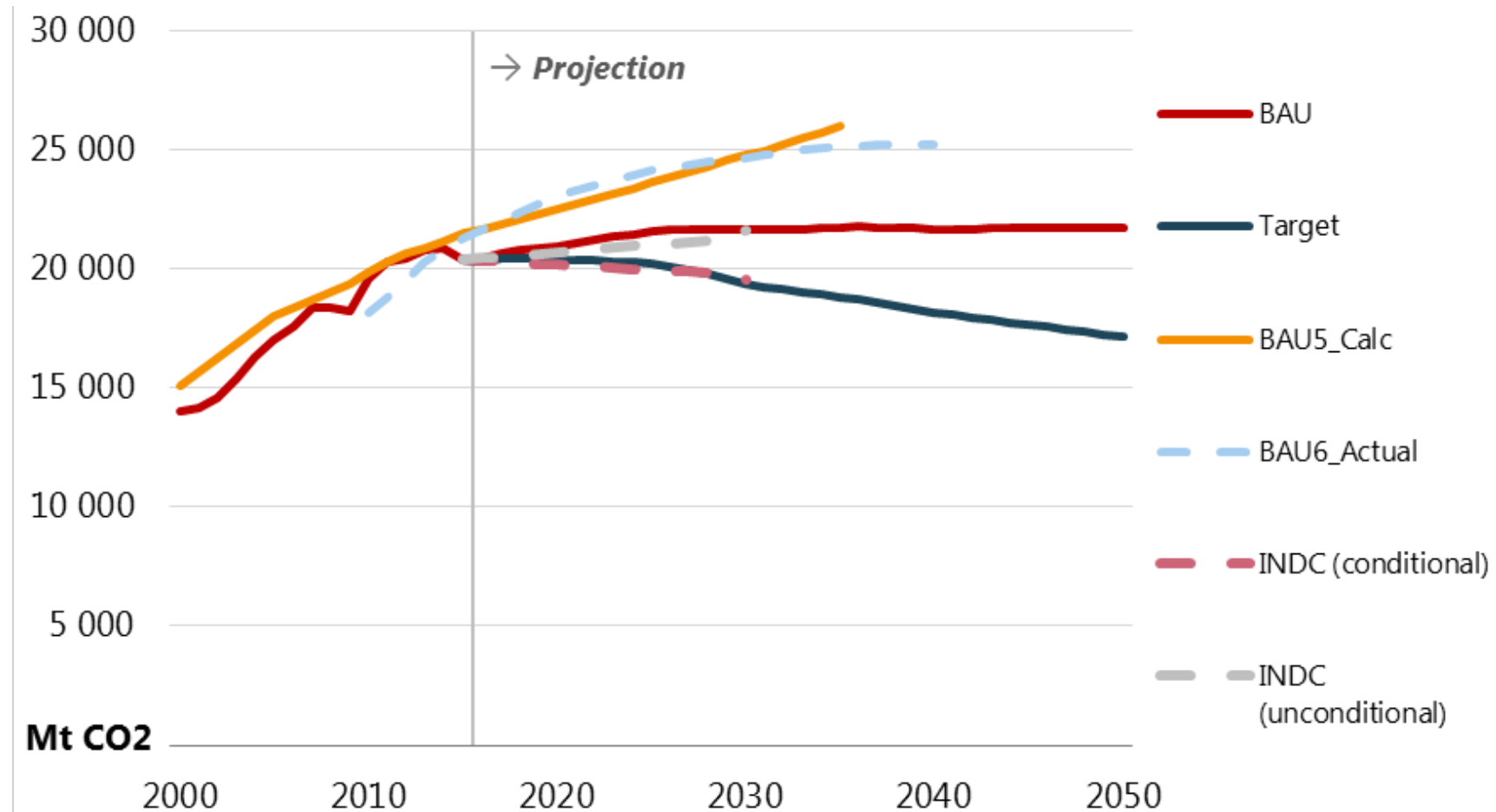


Source: IEA statistics 2017 and APERC analysis.

APEC achieves the (non-traditional) renewables doubling goal in 2029, just before the deadline.

CO₂ emissions largely plateau in APEC in the BAU scenario

Energy sector related CO₂ emissions, 2000-2050



Source: IEA statistics 2017 and APERC analysis.

***In the BAU, CO₂ emissions grow largely flatten after 2030 at ~22 MtCO₂.
In the TGT, CO₂ emissions decline to 17 MtCO₂ by 2050.***



Thank you for your kind attention

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