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

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## Outlook 7<sup>th</sup> 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)

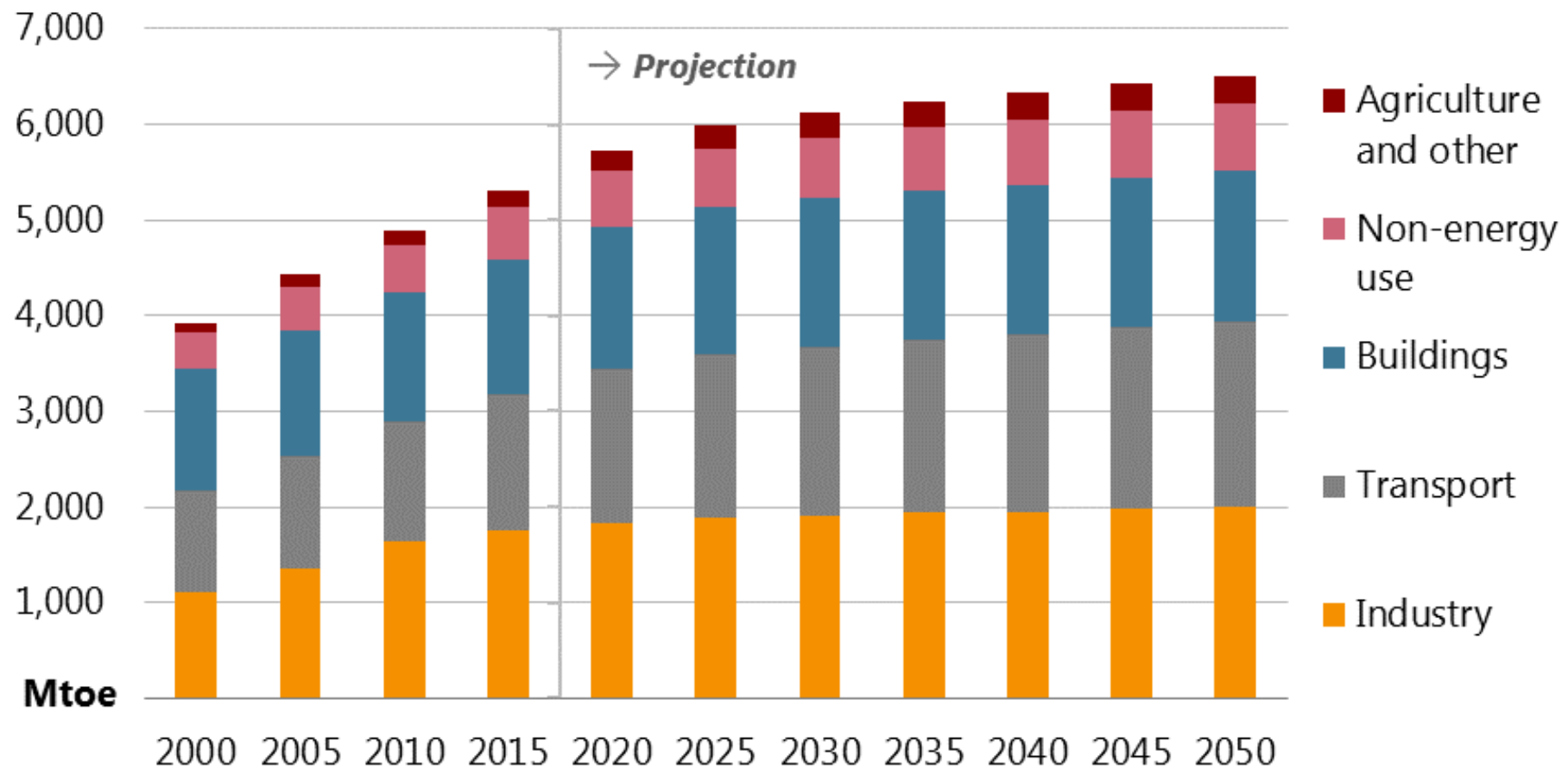


'Business as Usual' Scenario



# APEC energy demand growth slows to 2050

## Final energy demand by consuming sector, 2000-2050

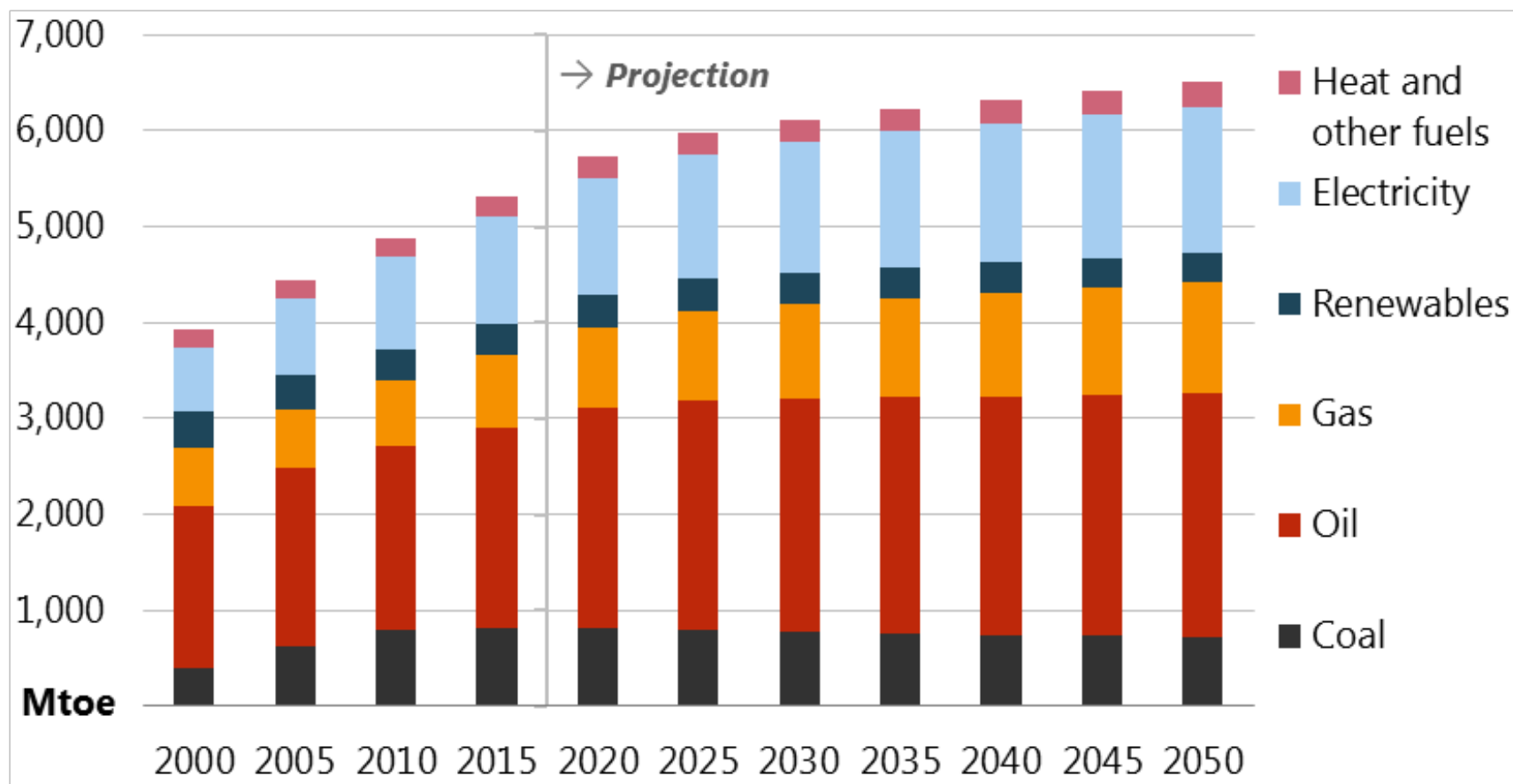


Source: IEA statistics 2017 and APERC analysis.

***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

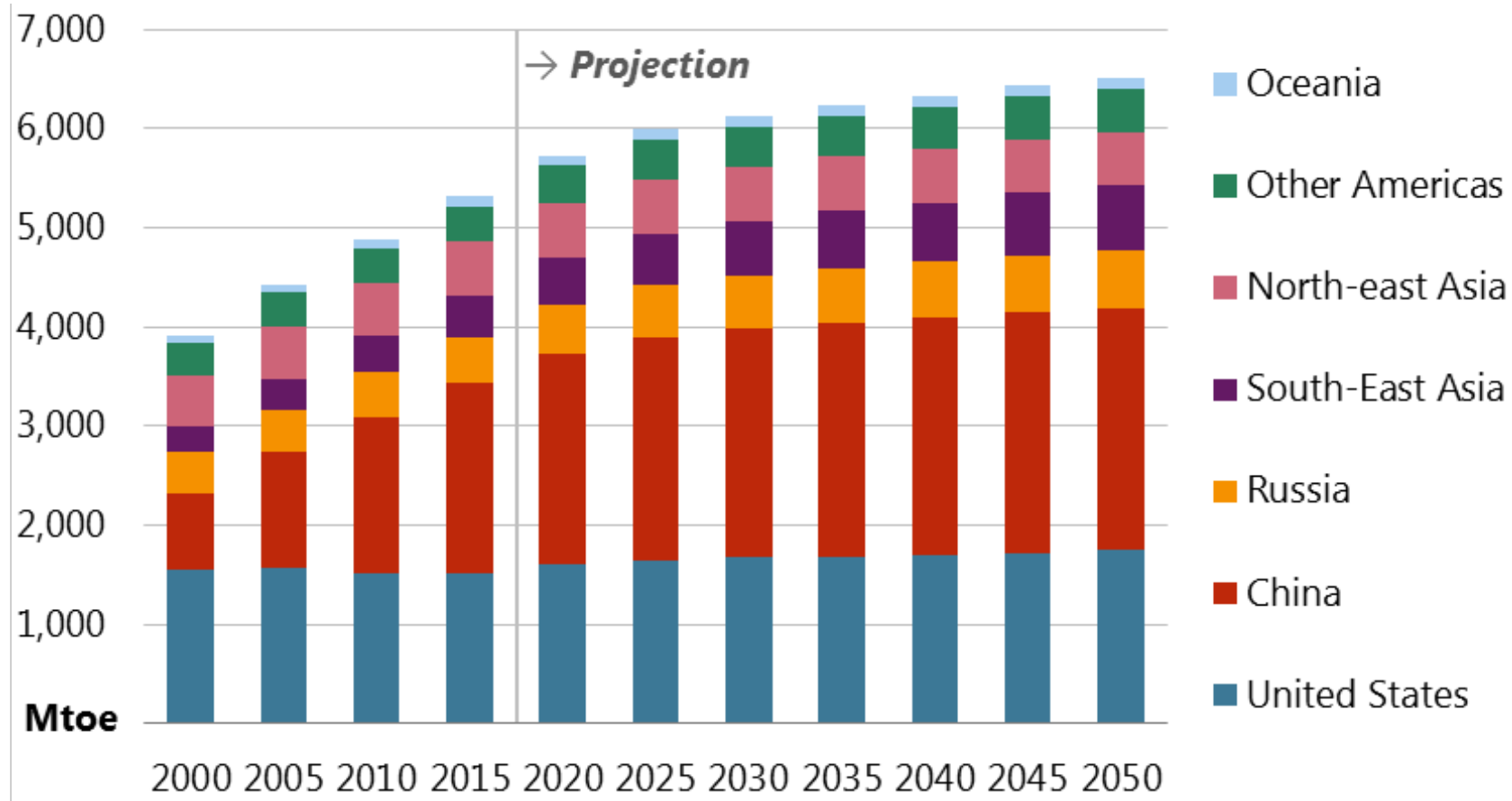


Source: IEA statistics 2017 and APERC analysis.

***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

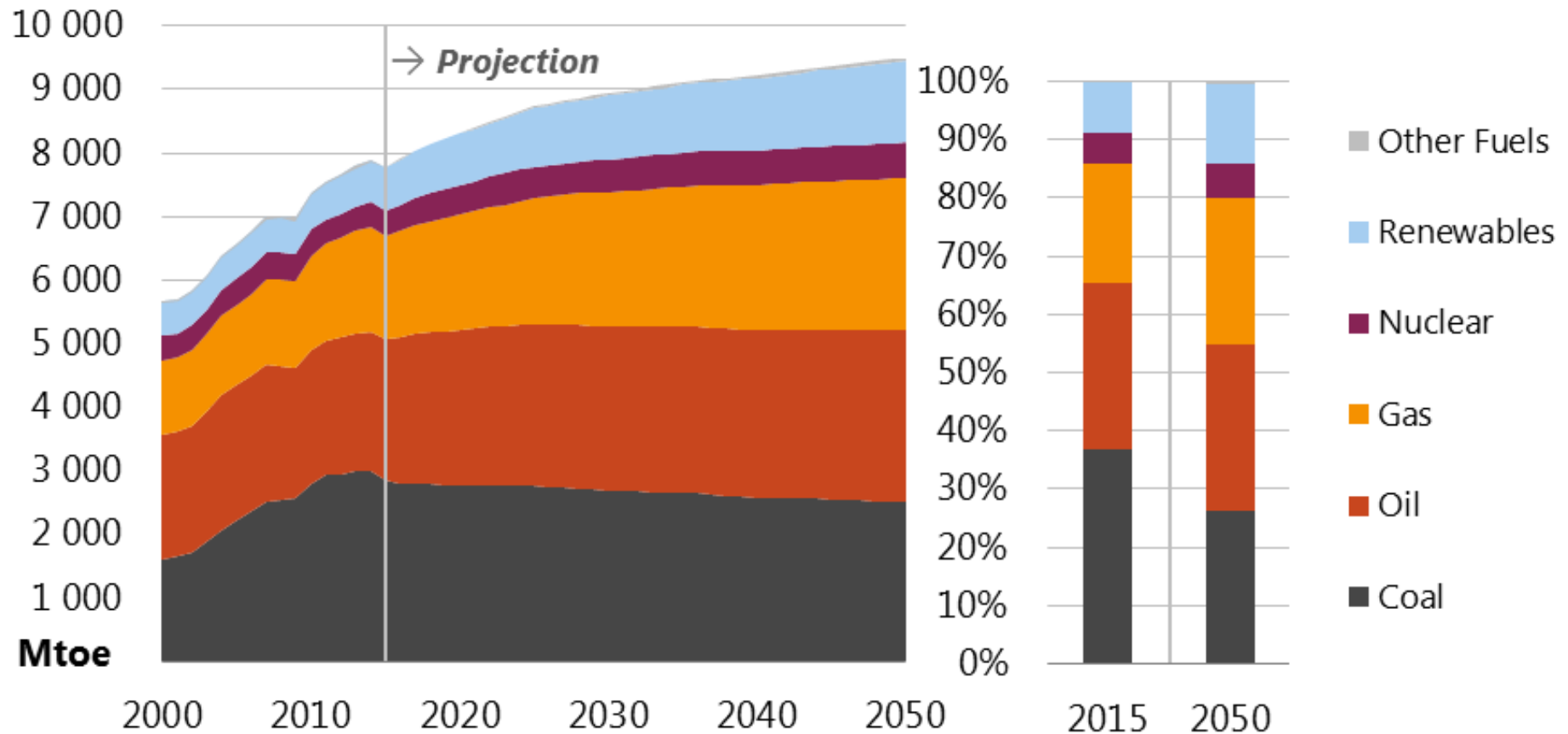


Source: IEA statistics 2017 and APERC analysis.

**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.**

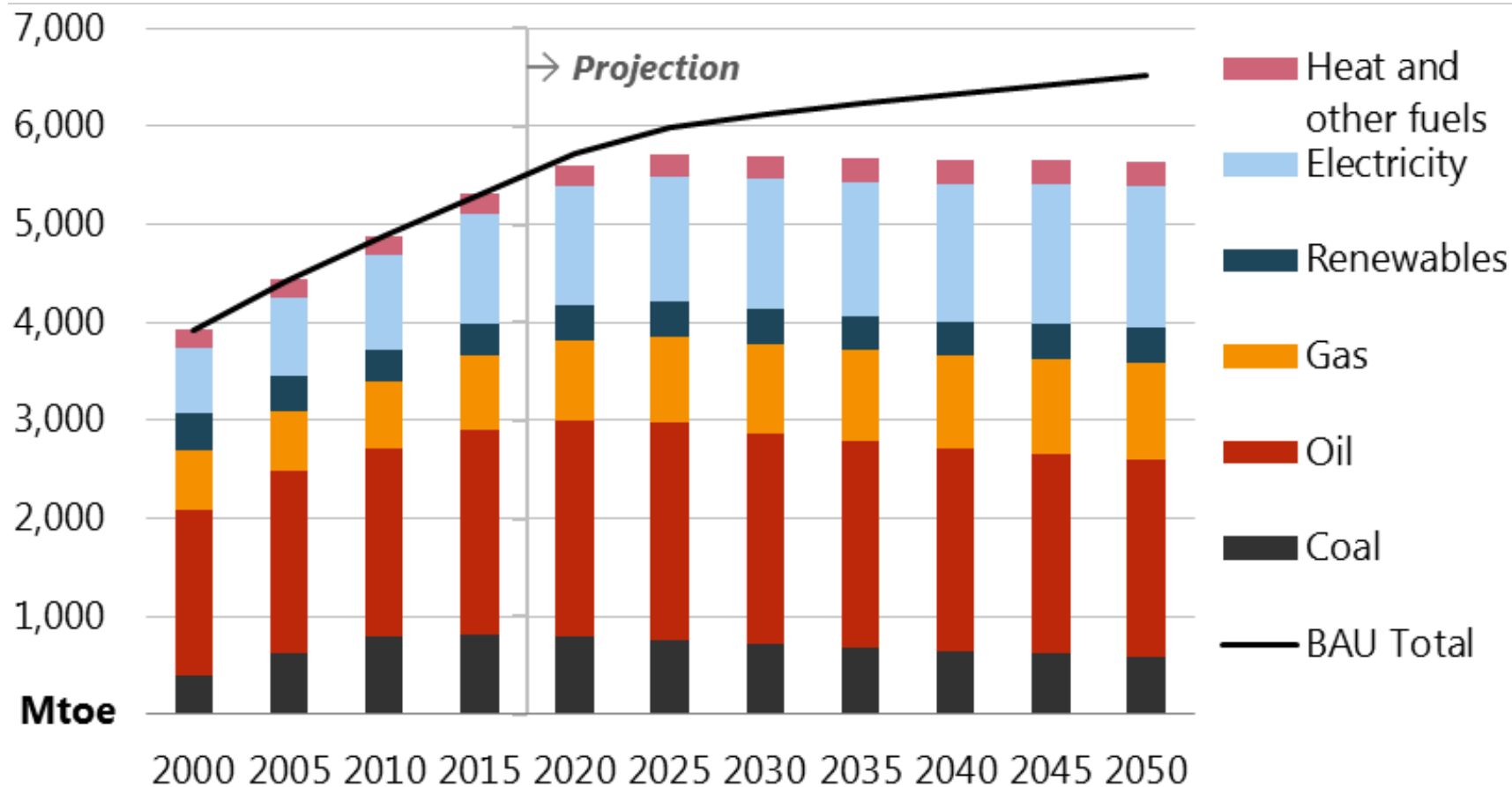
An aerial photograph of a cityscape. On the left, a large volcano is erupting with bright orange and yellow lava flows. In the center, there are several high-rise apartment buildings. To the right, a complex multi-level highway interchange is visible with cars on the roads. In the foreground on the right,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

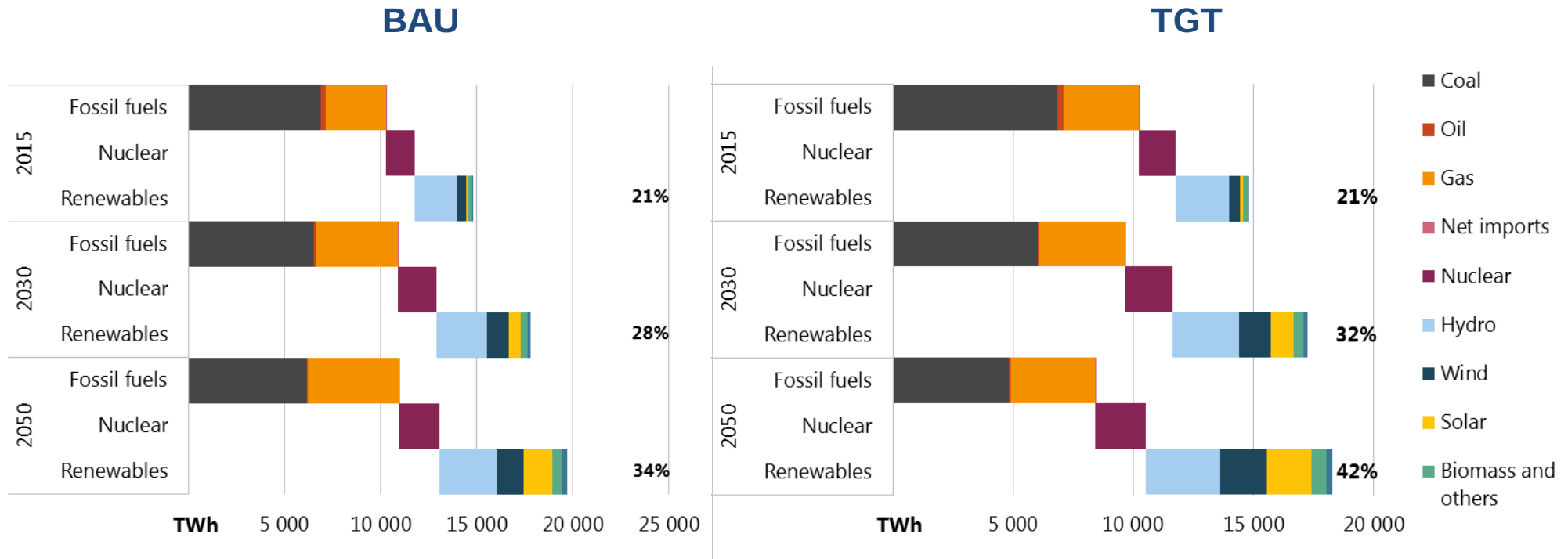


Source: IEA statistics 2017 and APERC analysis.

**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

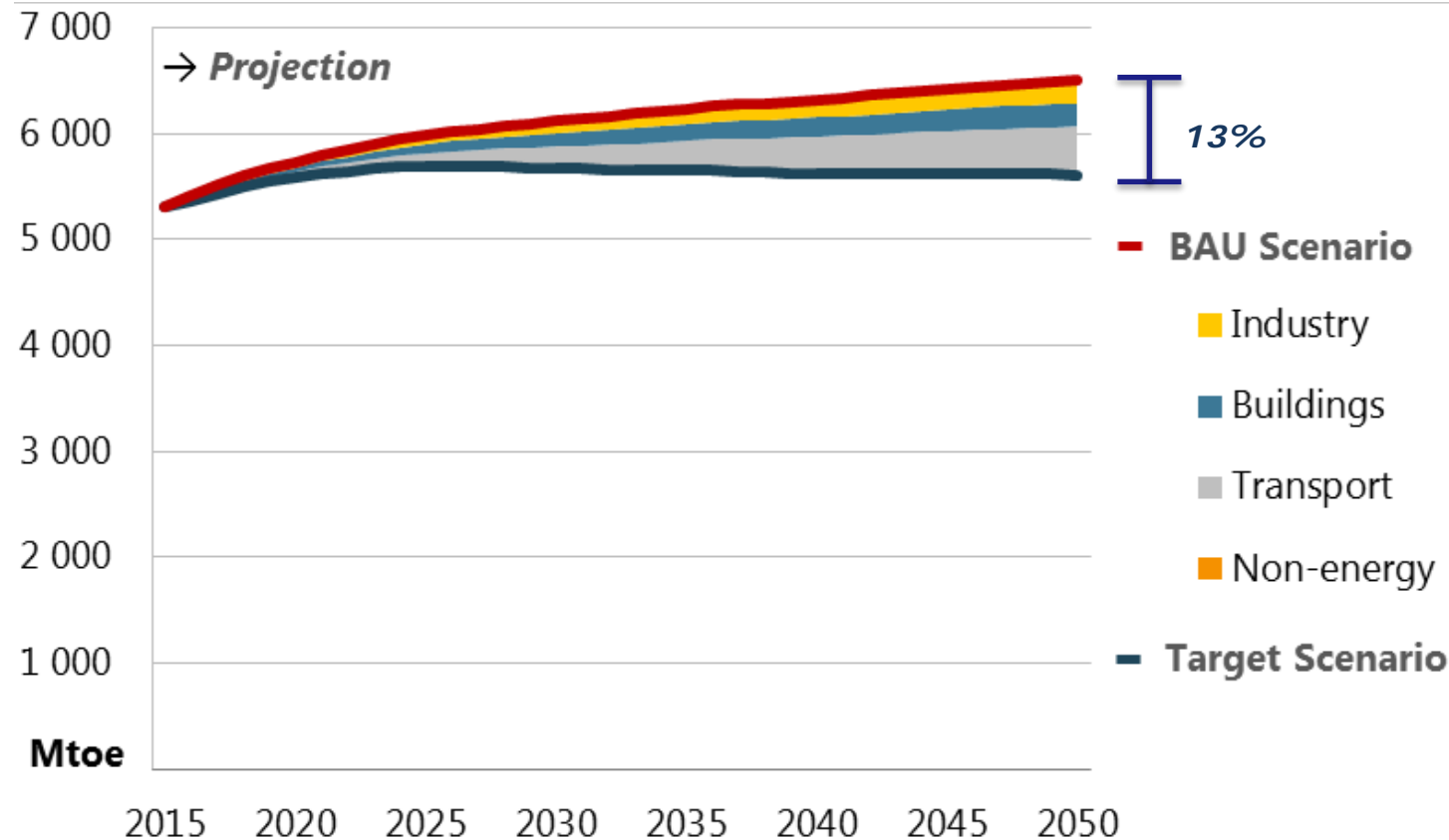


Source: IEA statistics 2017 and APERC analysis.

***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

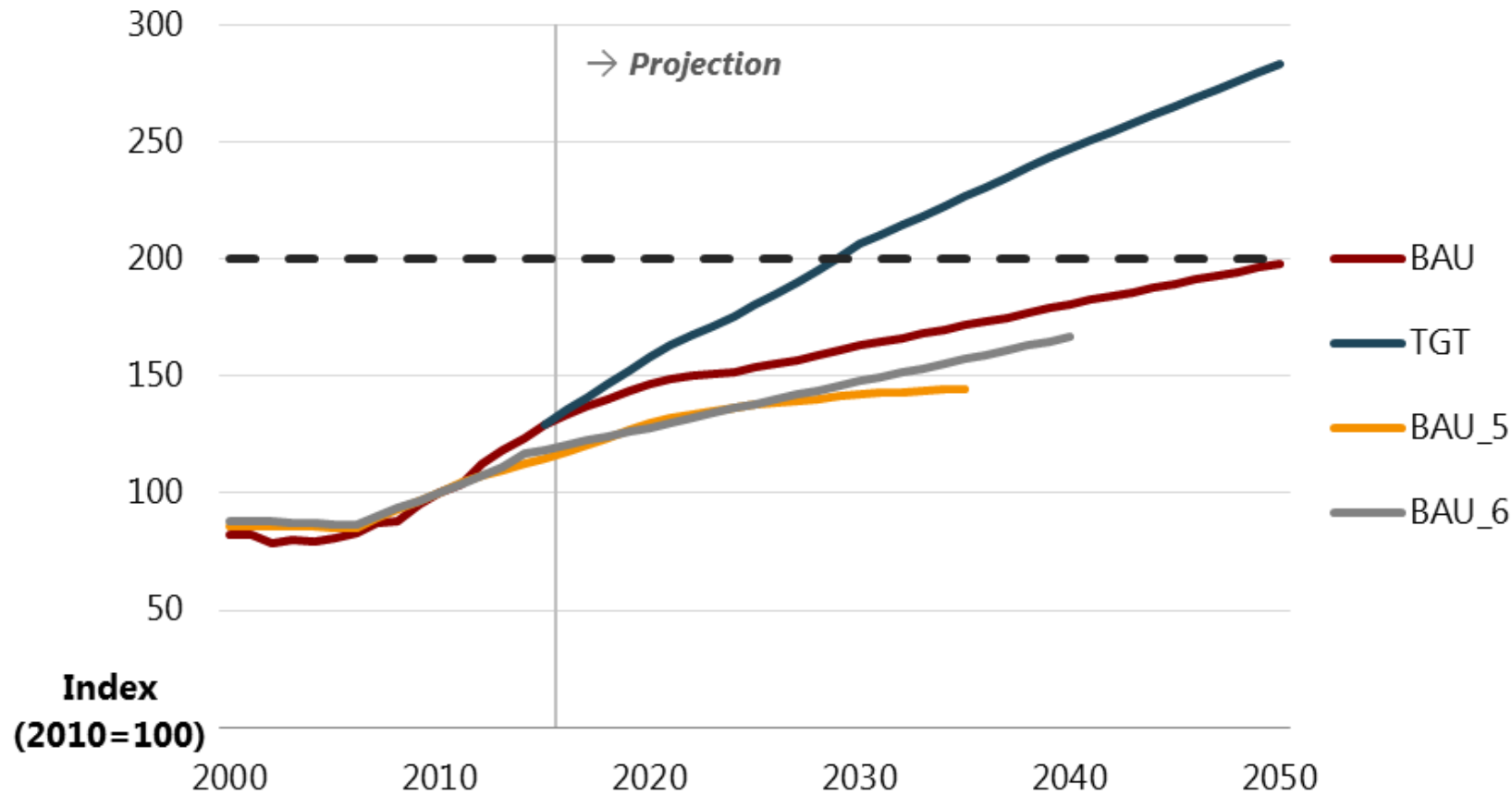


Source: IEA statistics 2017 and APERC analysis.

**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

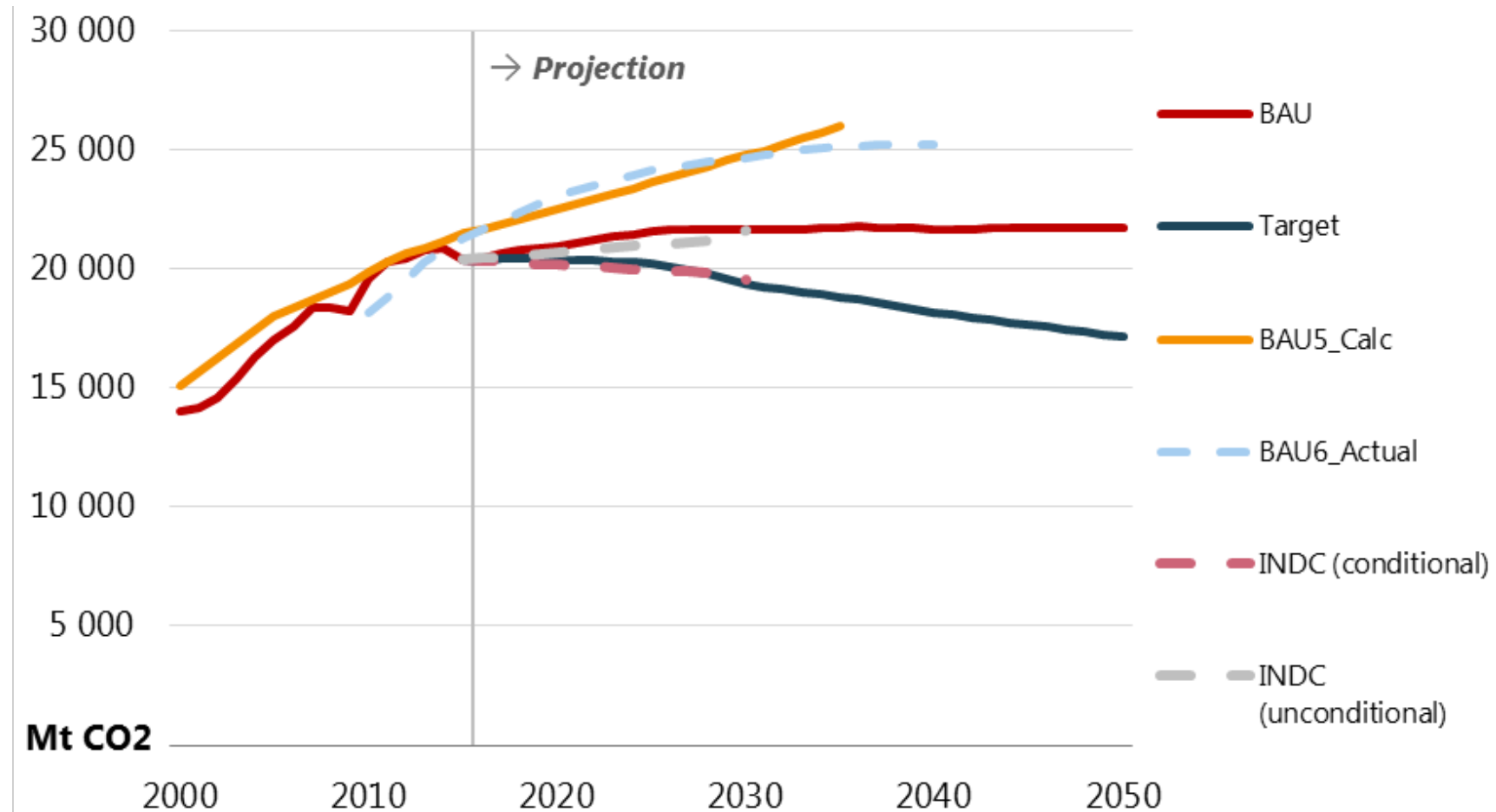


Source: IEA statistics 2017 and APERC analysis.

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

# CO<sub>2</sub> emissions largely plateau in APEC in the BAU scenario

## Energy sector related CO<sub>2</sub> emissions, 2000-2050



Source: IEA statistics 2017 and APERC analysis.

***In the BAU, CO<sub>2</sub> emissions grow largely flatten after 2030 at ~22 MtCO<sub>2</sub>.  
In the TGT, CO<sub>2</sub> emissions decline to 17 MtCO<sub>2</sub> by 2050.***



**Thank you for your kind attention**

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