

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

S2.0 – Introduction of the 2DS

Dr. Melissa C. Lott
Assistant Vice President, APERC



**Asia-Pacific
Economic Cooperation**

Outlook 7th Edition Includes Three 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°C Scenario (2DS) scenario:

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

- All scenarios

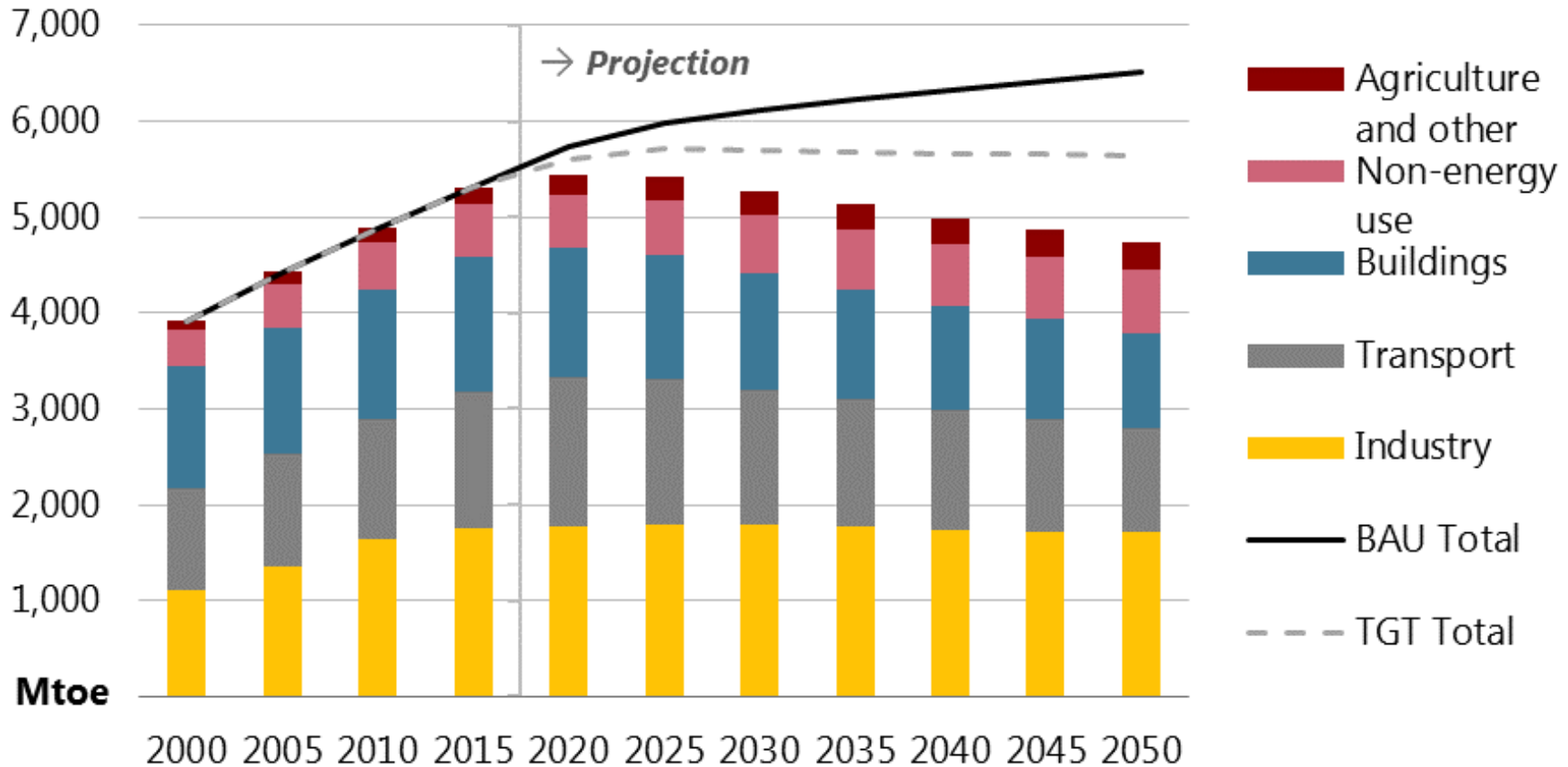
- have a time horizon to **2050**
- use the same population and GDP projections (from the UN, OECD, and APERC calculations)



'2 Degree Scenario'

APEC energy demand decreases by 11% from 2015 to 2050

Final energy demand by consuming sector, 2000-2050

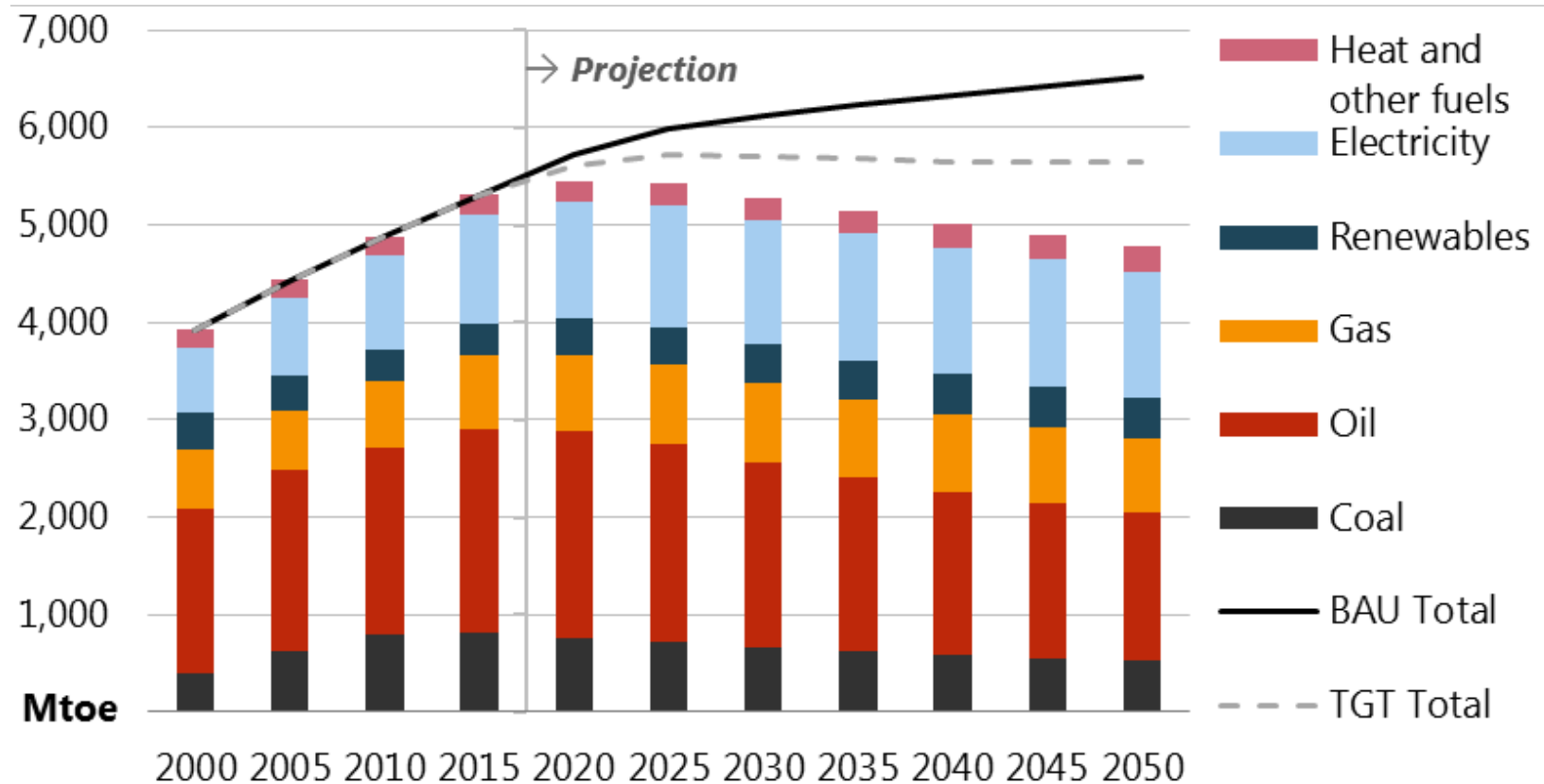


Source: IEA statistics 2017 and APERC analysis.

While industry essentially plateaus, energy demand in the other sectors declines in the 2DS.

Oil remains the dominant end-use fuel in APEC in the 2DS

Final energy demand by fuel, 2000-2050

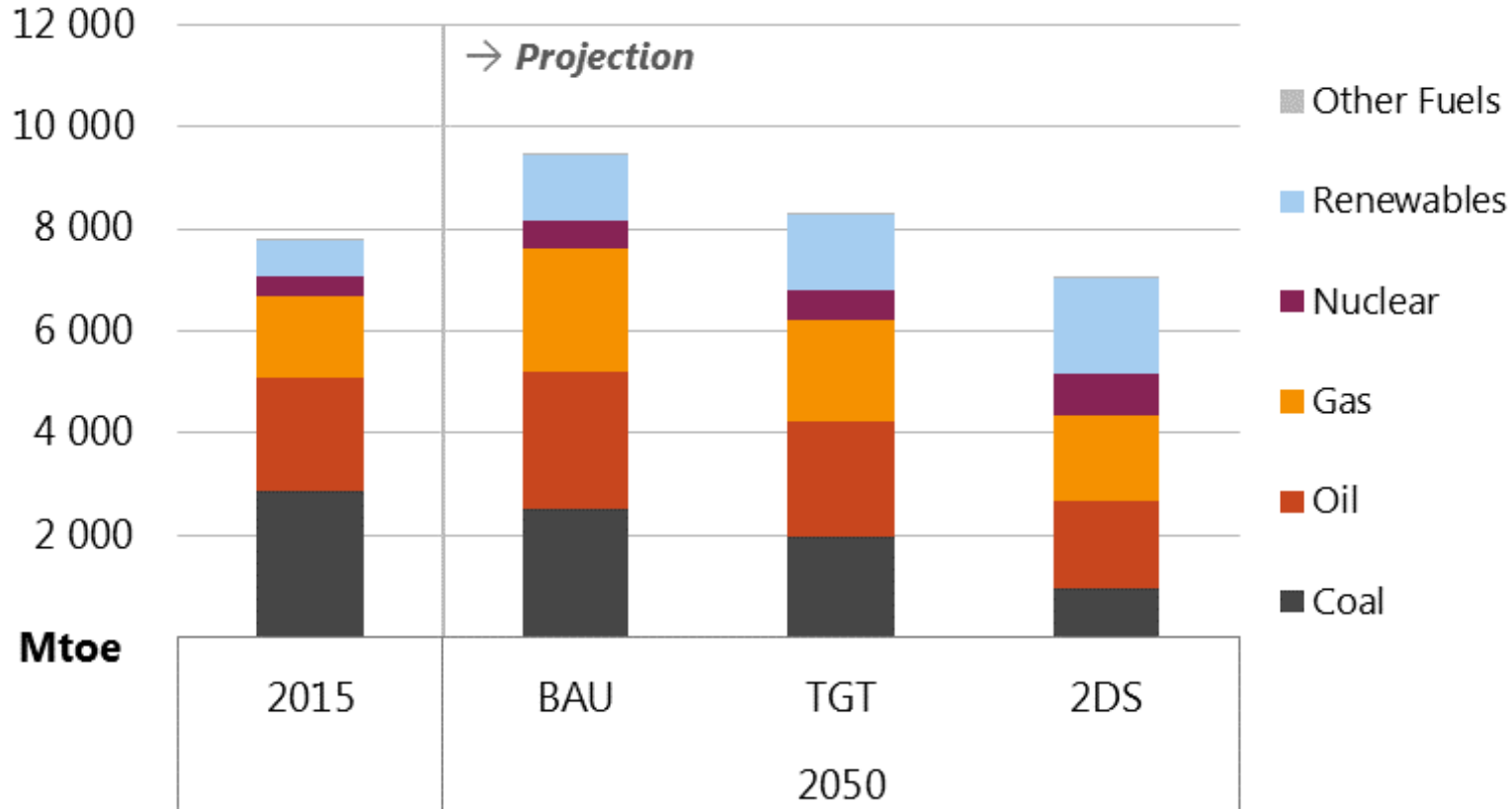


Source: IEA statistics 2017 and APERC analysis.

Demand for coal and oil declines in the 2DS. Natural gas remains steady, while renewables and electricity grow.

Fossil fuels continue to dominate APEC energy supply

Total primary energy supply by fuel for the BAU, TGT and 2DS, 2015 and 2050

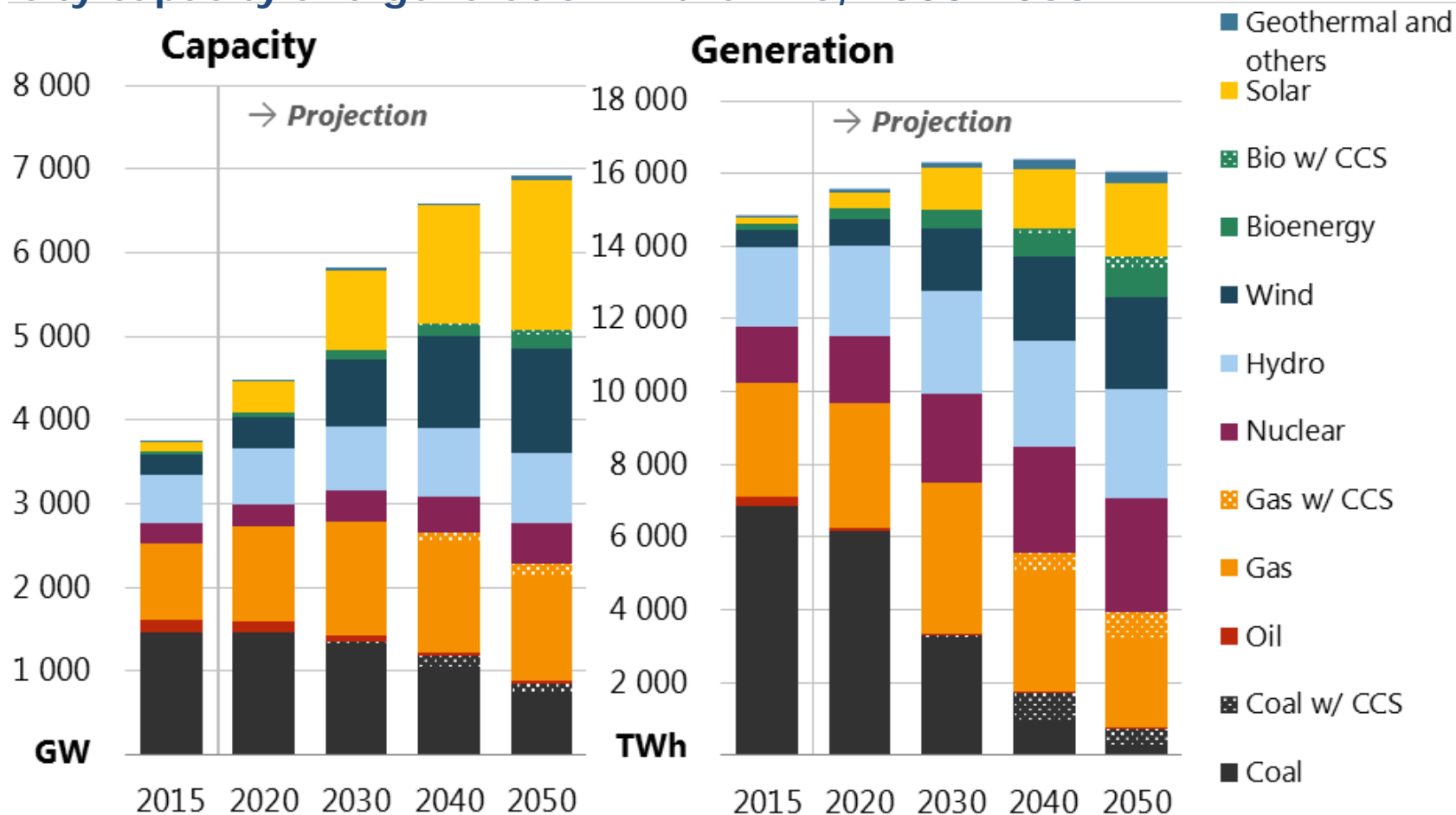


Source: IEA statistics 2017 and APERC analysis.

HEADLINE

Nuclear and renewables grow quickly and CCS comes online

Electricity capacity and generation in the 2DS, 2000-2050



Source: IEA statistics 2017 and APERC analysis.

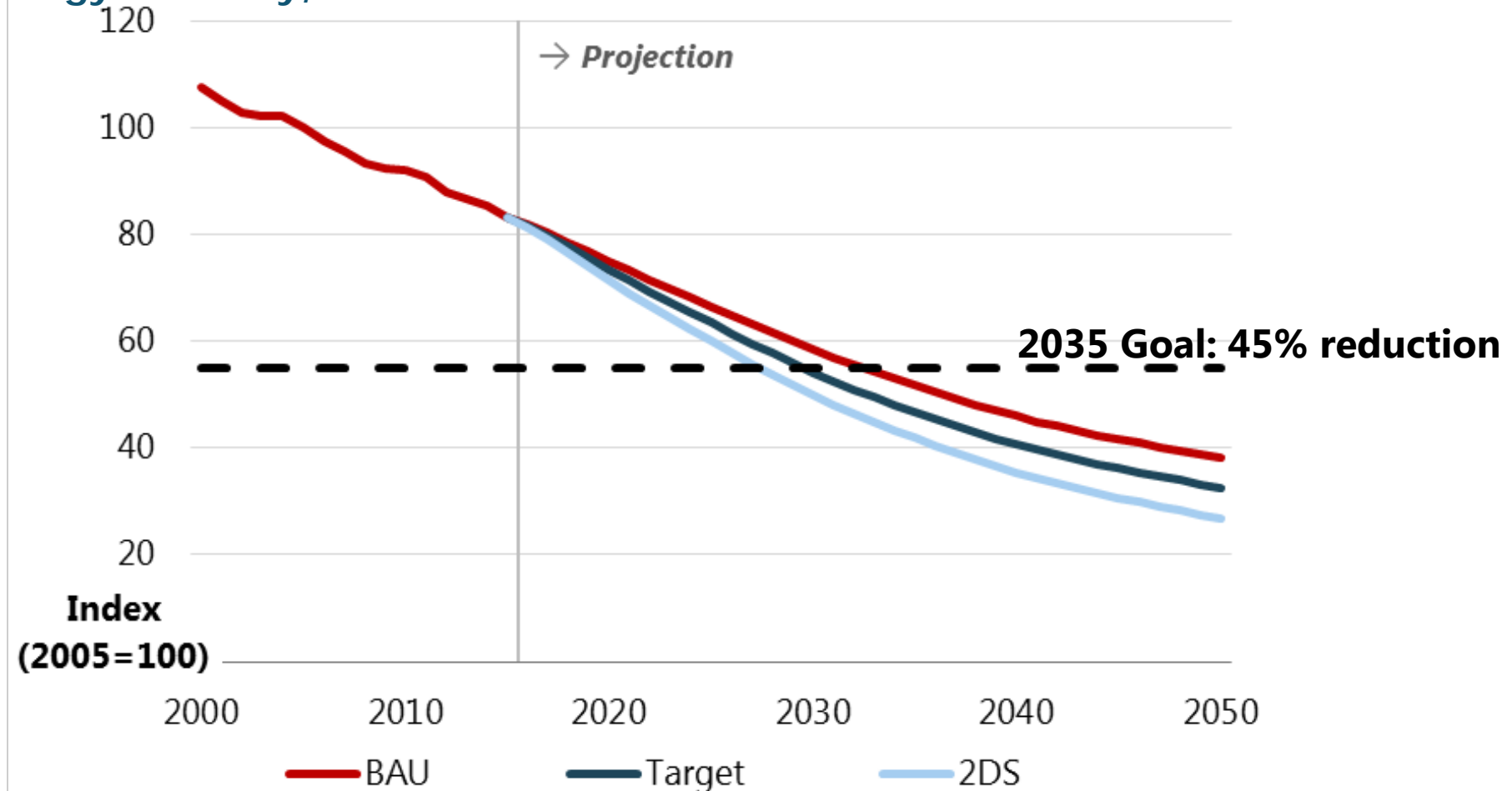
Generation from nuclear more than doubles in the 2DS from 2015-2050. Renewables represent the majority of capacity and generation after 2040.



Implications

Energy intensity in the three scenarios

APEC energy intensity, 2000-2050

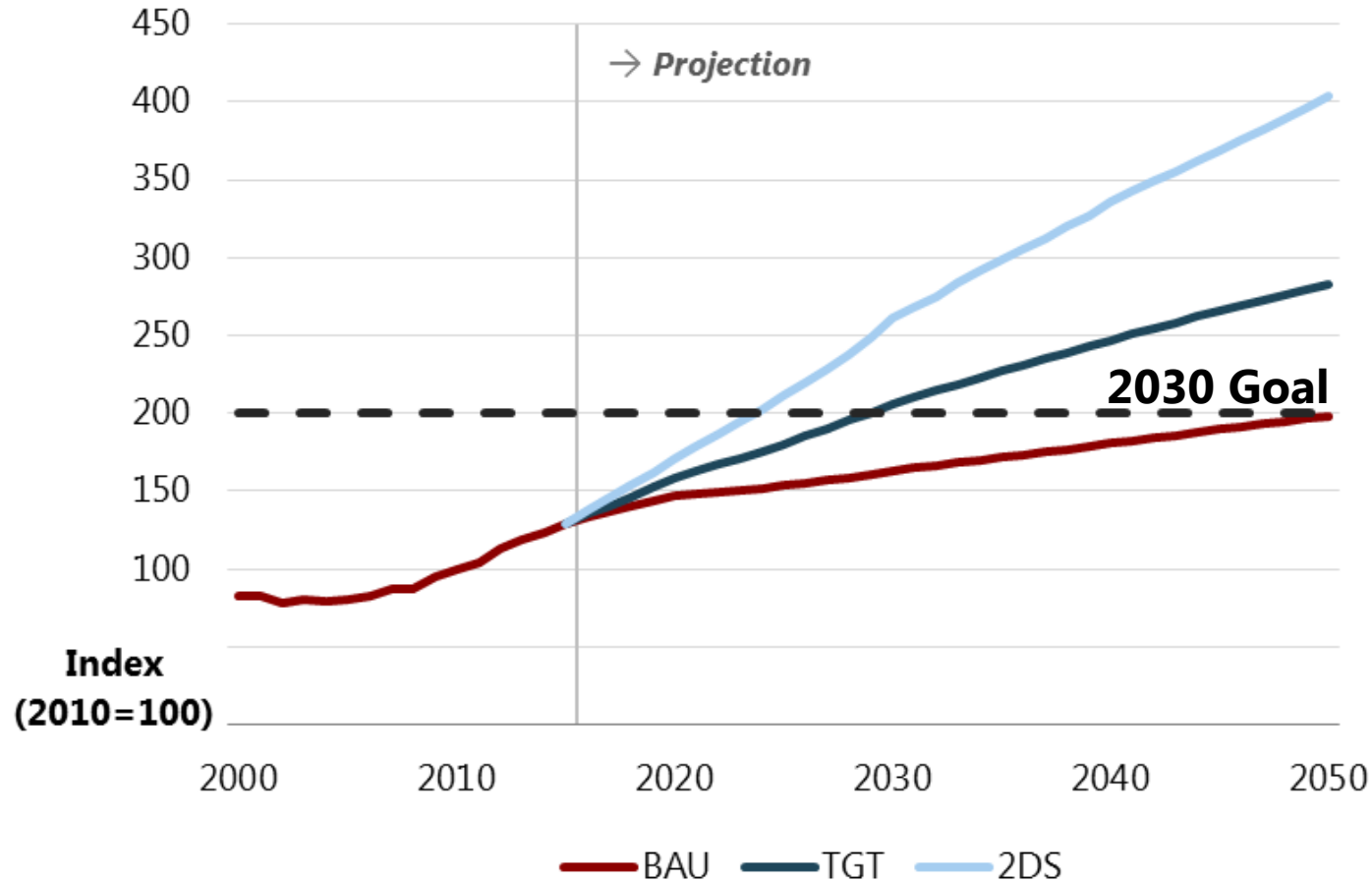


Source: IEA statistics 2017 and APERC analysis.

**APEC achieves its aspirational energy intensity goal by 2028 in the 2DS.
By 2050, energy intensity in APEC has declined by 73% (vs. 2005).**

Renewables doubling in the three scenarios

APEC renewables share of total final energy demand, 2000-2050

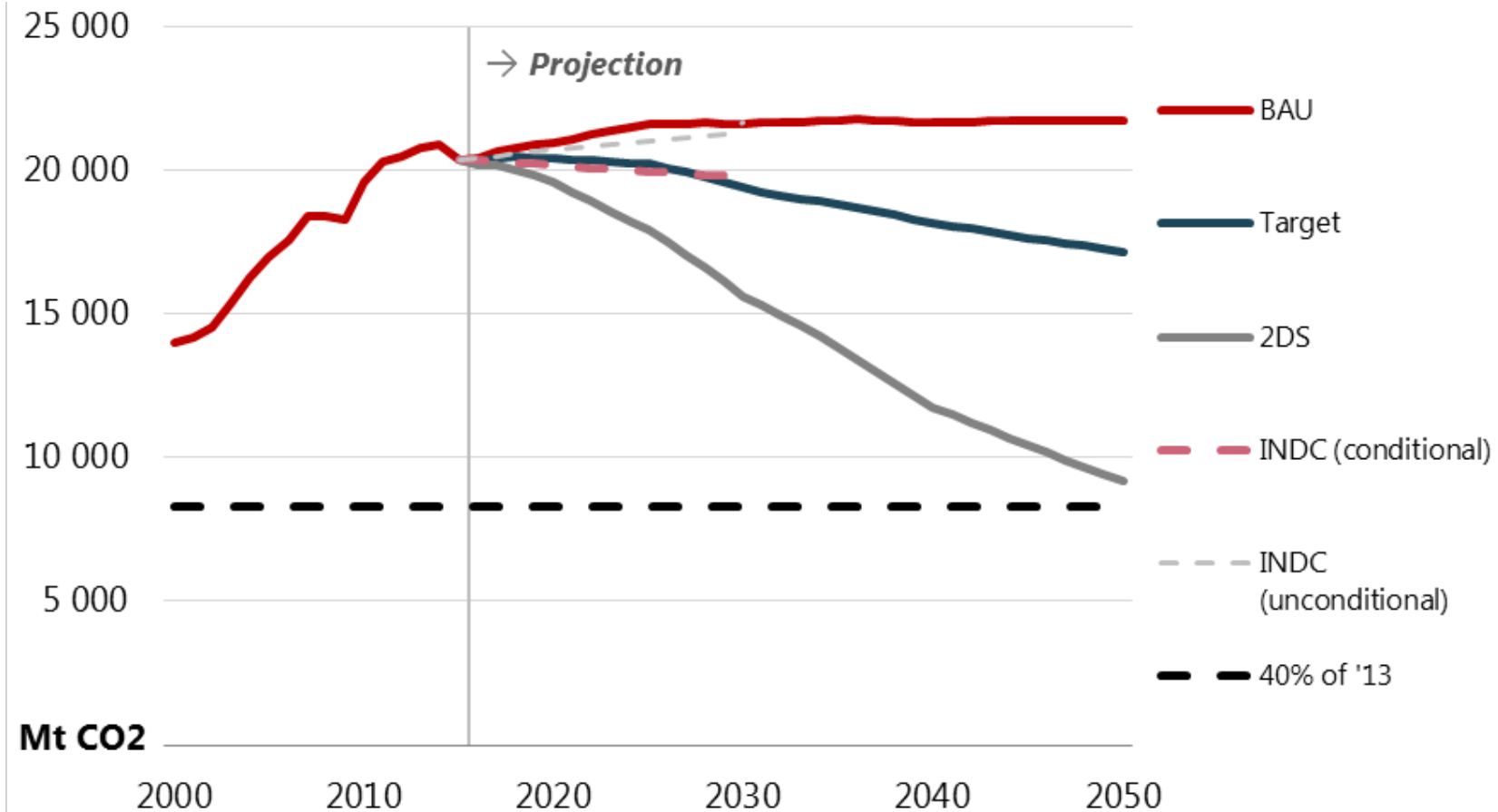


Source: IEA statistics 2017 and APERC analysis.

In the 2DS, APEC achieves its renewables doubling goal in 2024. By 2040, it has quadrupled (4x) its renewables share.

APEC beats its INDCs in both the TGT and 2DS scenario

Energy sector related CO₂ emissions, 2000-2050



Source: IEA statistics 2017 and APERC analysis.

***In the TGT scenario, INDCs are met on an APEC-wide basis.
In the 2DS, APEC exceeds its INDCs by 20%.***



Thank you for your kind attention

<http://aperc.ieej.or.jp/>