

CAREC Energy Investment Outlook

Presentation for CAREC
Energy Sector Coordinating
Committee Meeting



Outlook aims to stimulate investments in energy infrastructure by providing comprehensive set of market data and trends

Background and objectives

Roland Berger in cooperation with ILF



Selected challenges faced by potential investors

Incomplete and scattered data

Even if investors are willing to analyze multiple sources, only limited information is available on recent energy trends and investments needs in CAREC

Extensive regulatory changes

Many CAREC members have shown strong ambition in reforming and liberalizing regulatory frameworks, which adds to short-term uncertainty but sets the basis for suitable investment conditions in the future

Technological disruptions

New technologies with strong potential to compete against incumbent technologies continue to emerge in the global and regional landscape

Environmental awareness

CAREC, whose members are vulnerable to the effects of climate change, is becoming increasingly aware of the environmental challenges – Energy sector can be subject to pressure from various stakeholders

> The Outlook will provide a first **comprehensive and reliable set of energy market data**, including:



Supply and Demand



Carbon emissions



Investments needs

> By providing critical insights and enhancing transparency, the Outlook will facilitate decision making and **stimulate much needed energy infrastructure investment**

> It will also provide information and recommendations to **policy decision-makers** to support their efforts in attracting private investments

Role of the Outlook



The Outlook will consist of four key elements, all assessed on two levels – aggregated for CAREC and country-specific

Key elements of the Outlook

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The Outlook will include:

- ✓ Supply and demand Outlook
- ✓ Technology Outlook
- ✓ Carbon emissions Outlook
- ✓ Investment Outlook



**Part I.
CAREC level**

Aggregated view on the entire CAREC region



**Part II.
Country level (x11)**

Deep-dive for each CAREC member country

Status quo of energy in CAREC is diverse and complex – Investor community requires thorough analysis from various perspectives

Overview of selected energy statistics for CAREC member countries, 2018

Country	Net energy trade balance	Carbon intensity, [t of CO ₂ / toe]	Fuel type with the largest share in energy supply
Afghanistan	Importer	2.6	Oil products 49%
Azerbaijan	Exporter	2.2	Natural gas 46%
China	Importer	2.9	Coal 62%
Georgia	Importer	1.6	Natural gas 43%
Kazakhstan	Exporter	3.2	Coal 49%
Kyrgyzstan	Importer	1.6	Oil products 45%
Mongolia	Exporter	3.4	Coal 70%
Pakistan	Importer	2.3	Biofuels 36%
Tajikistan	Importer	1.1	Hydro 39%
Turkmenistan	Exporter	2.2	Natural gas 76%
Uzbekistan	Exporter	2.2	Natural gas 88%

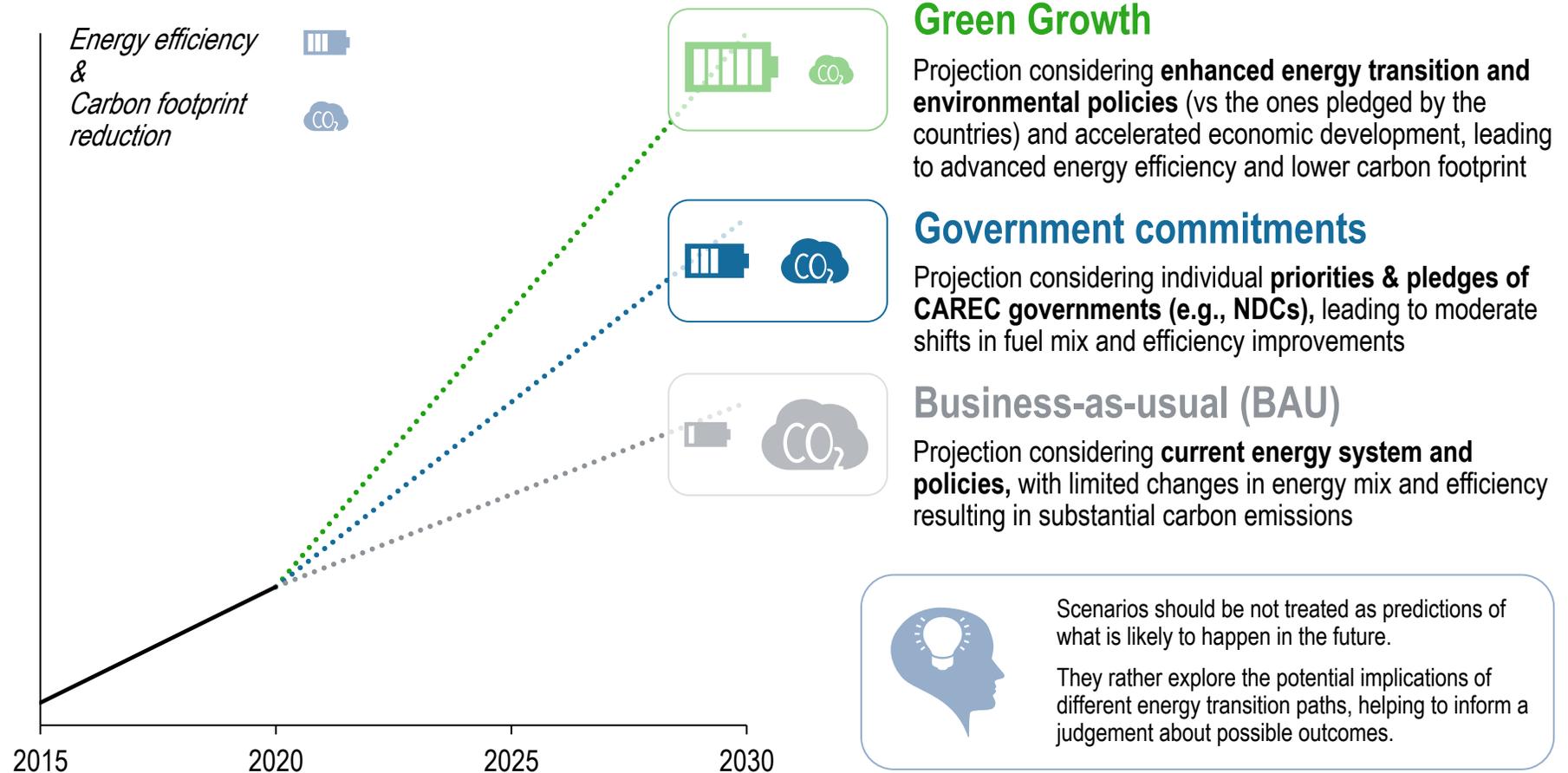
Prominent investors require comprehensive insights to successfully navigate through the regional market

Net energy importer
 Net energy exporter
 ▲ Global average
 Main energy source's share in total energy mix: Low High

Three scenarios are defined to assess development under various policy measures and subsequent energy mixes and efficiency levels

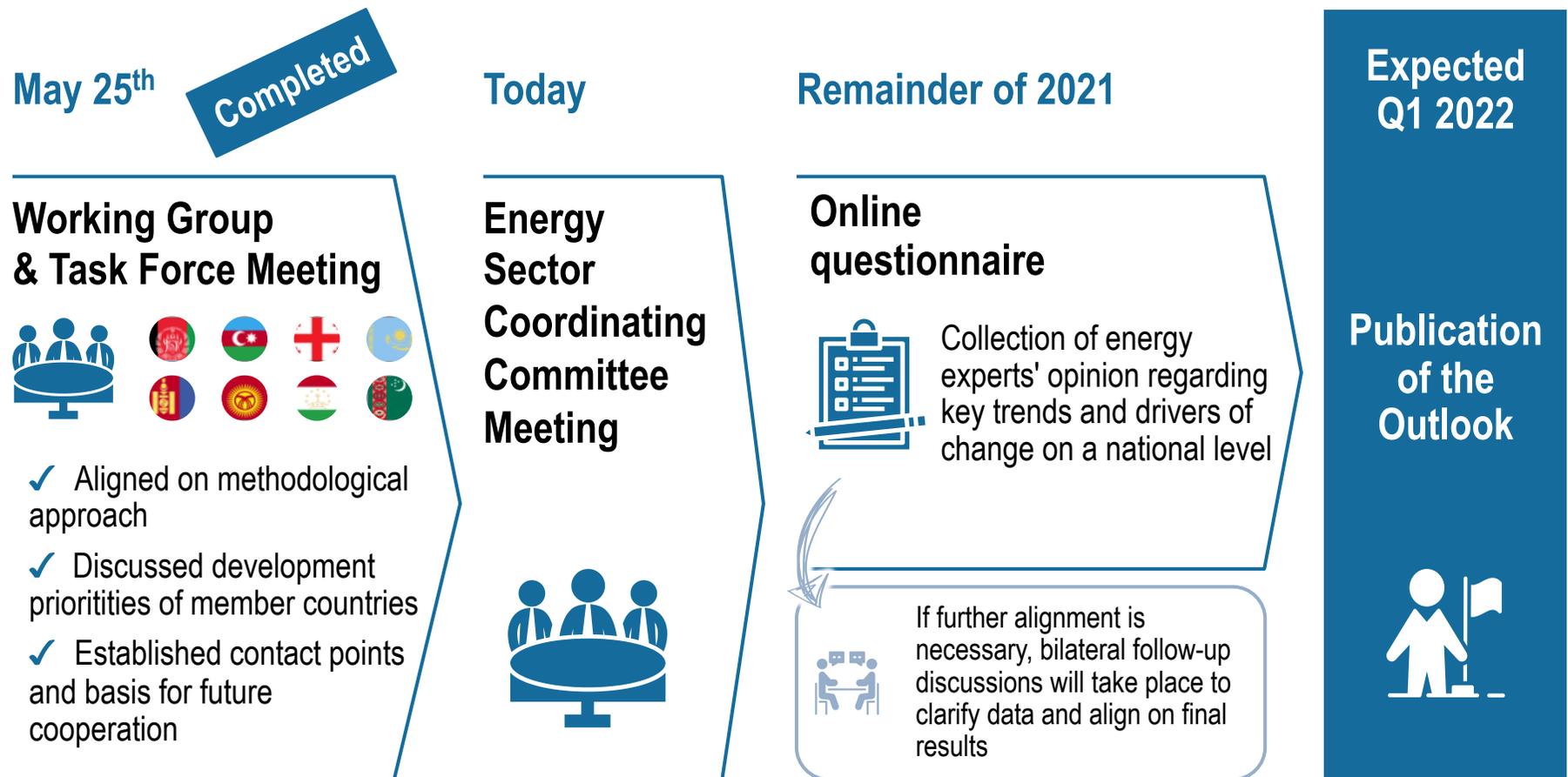
Illustrative overview of the Outlook scenarios

Illustrative



Following the key CAREC meetings, we will focus on obtaining expert opinion via online questionnaire and bilateral discussions

Overview of the Outlook preparation process and next steps



Roland
Berger

THINK:ACT

