Beyond the Headlines: The Future of Energy

Corporate Strategic Planning
Must go beyond headlines to forecast the future

Countries around the world are racing to phase out gasoline and diesel cars
Must go beyond headlines to forecast the future
Consumer preferences impact trends

Global light-duty vehicles sales by type

Million

Larger Vehicles 70% of Sales
Smaller Vehicles 30% of Sales

Source: JATO Automotive Intelligence 2019 and S&P Platts
Energy system is large
Scale and capital stock must be considered

Cumulative $17 trillion of energy investment since 2010

$60 trillion of energy investment required between 2018 and 2040

Today’s capital stock of energy consuming equipment will last decades

Cars 10-20 years
Trucks and buses 10-30 years
Airplanes 30-40 years

Industrial equipment 10-70 years
Power plants 30-70 years
Buildings 40-80 years

Source: IEA New Policies Scenario, World Energy Outlook 2018
Energy is growing across all consuming sectors
Driven by rising populations and incomes

Global energy demand by sector
Quadrillion BTU

- power generation
- industrial
- transportation
- buildings & other

Source: IEA New Policies Scenario, World Energy Outlook 2018
Technology, policy, consumer trends inform demand view

Oil and gas investment required in any scenario

Global energy demand

- **Liquids**
  - Approximately 54% of demand
- **Natural gas**
  - Approximately 53% of demand
- **Coal**
- **Nuclear**
- **Renewables & hydro**

Global liquids demand

- **Supply gap**
  - 88 MMBD
- **Existing Supply**
  - Decline with no investment
- **~$10 trillion**

Source: IEA New Policies Scenario, World Energy Outlook 2018

© 2019 Chevron Corporation
A world of ample low cost supply
Implies a lower for longer price environment

Range of break-evens for produced volume

Overall
lower cost
to produce

More competition

Illustrative example
Robust growth expected in LNG
Lowest cost projects well positioned to fill future supply gap

- LNG fastest growing fossil fuel globally (3.2% CAGR 2017-2040)
- Emerging markets led by Asia will drive growth

Source: WoodMackenzie LNG Market Outlook

© 2019 Chevron Corporation
Takeaway thoughts

- Global energy demand will grow
- Energy markets are always in transition
- Oil and gas will remain key energy sources
- Abundance will intensify competition