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Quantifying Barriers to More Effective Private Sector Involvement in the Transition to Low Carbon Energy Systems

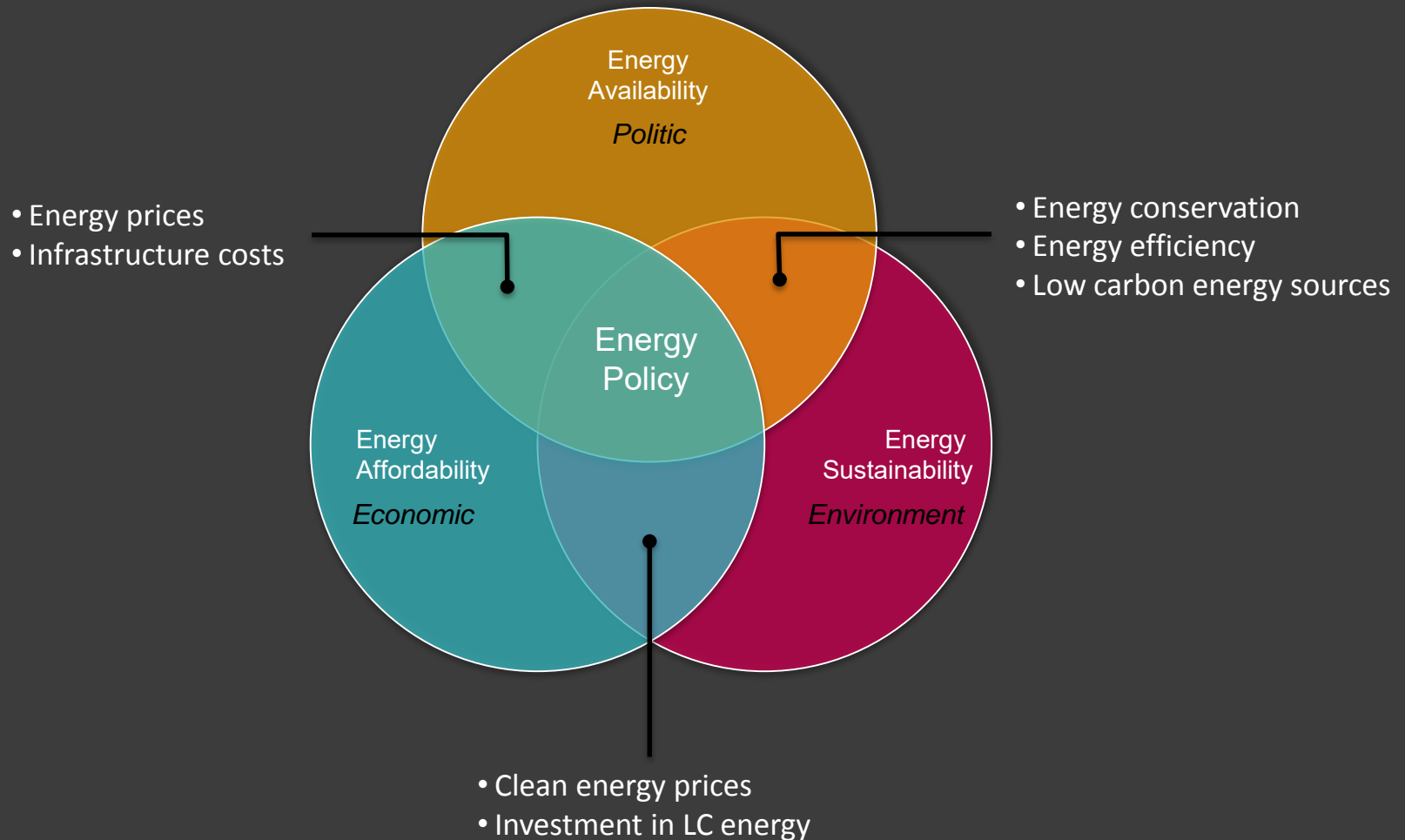
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Introduction

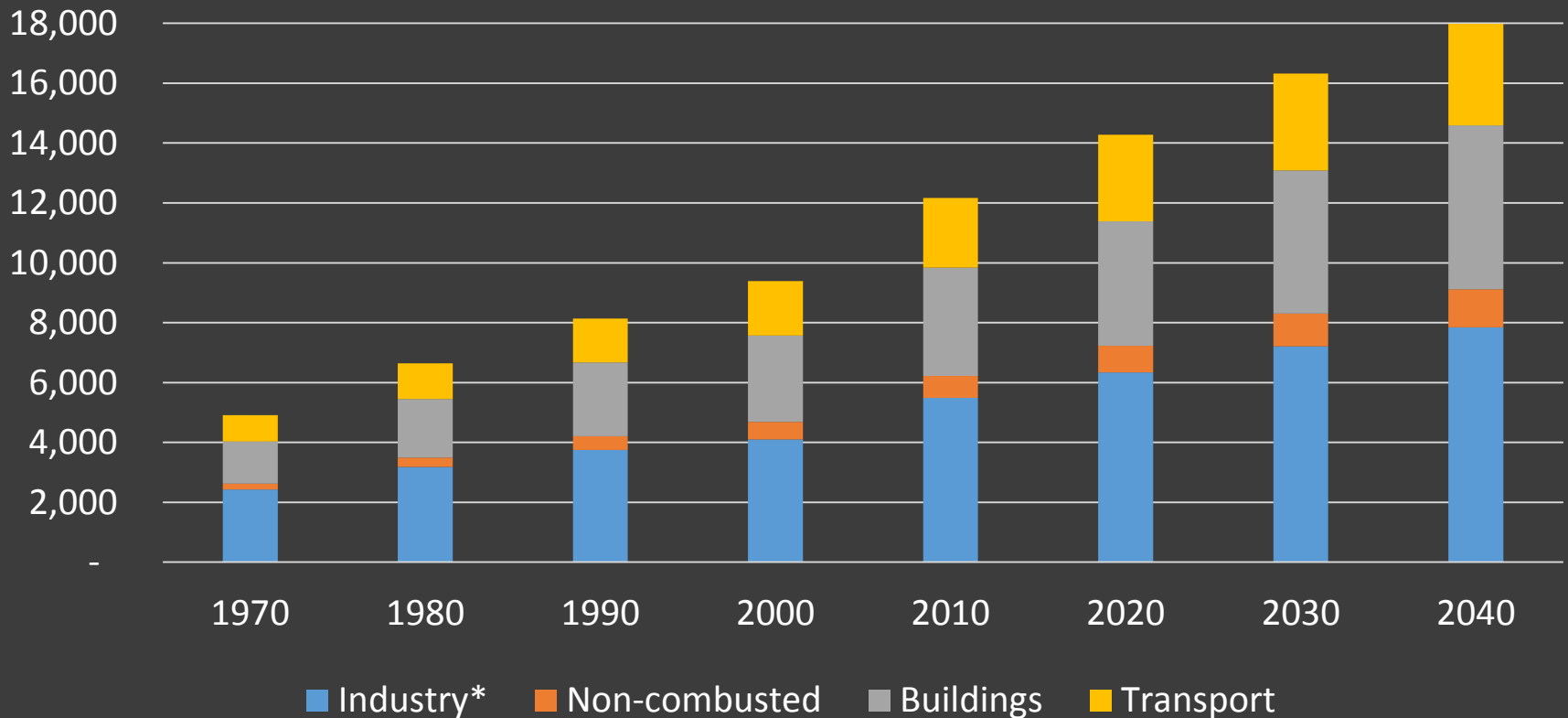
The Energy Trilemma



Introduction

Primary energy demand by end use sector

Billion toe

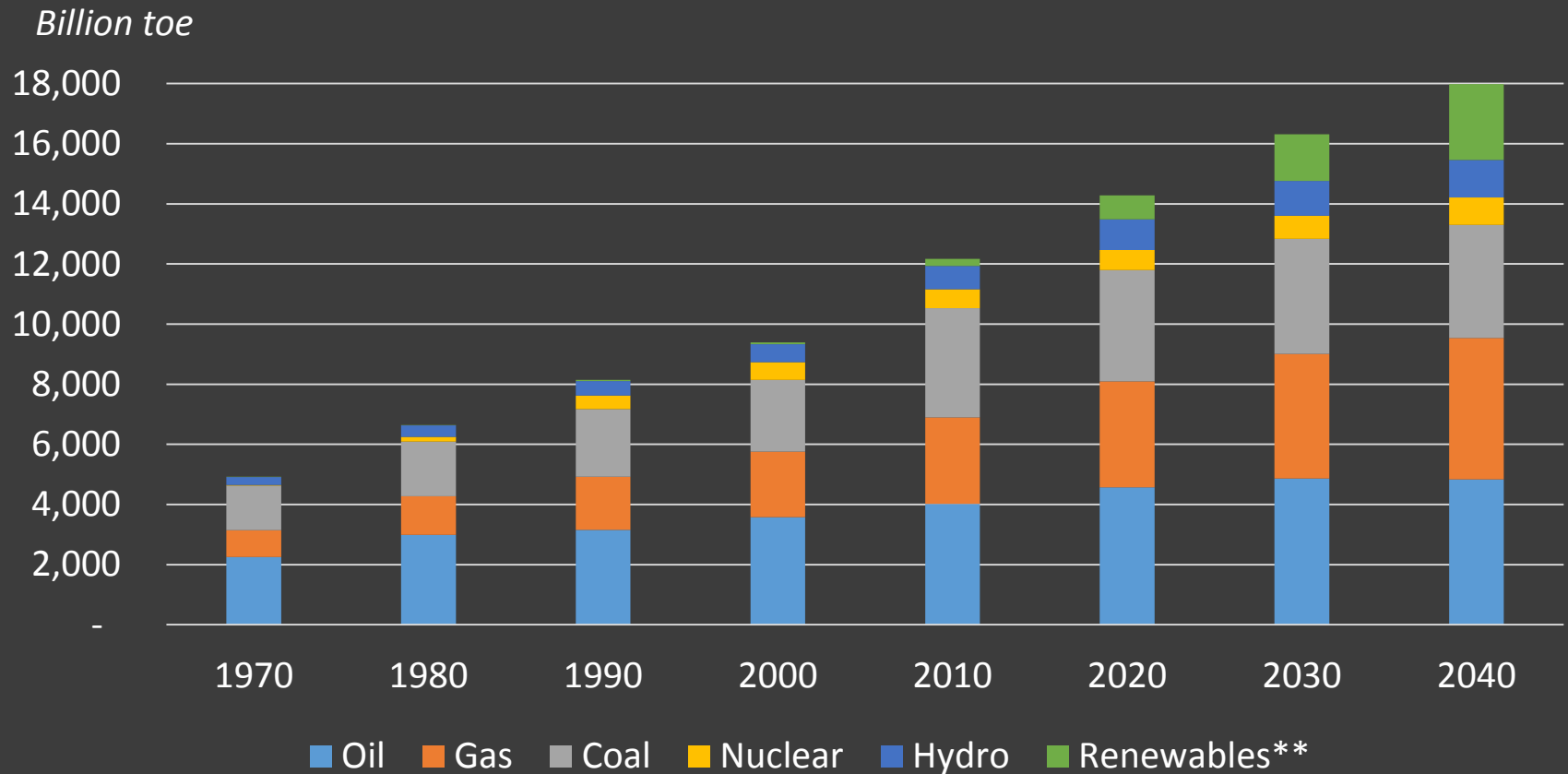


*exclude non-combusted use of fuels

British Petroleum, 2018

Introduction

Primary energy demand by fuel type



***Renewables includes wind, solar, geothermal, biomass, and biofuels*

British Petroleum, 2018

Energy Efficiency

Using less energy to provide the same service

Decarbonization and Electricity

Reduce carbon content of all transformed energy, particularly in the power sector supplied by RE

Pillars of decarbonisation

End Use Fuel Switching

Reduce emissions from transport, industry and buildings

Non Energy Emissions

Reduce emissions from forestry, livestock grazing, agriculture, etc

Introduction

Transition to low carbon energy system



Huge investment needed



Governments are cash strapped



Private finance mobilization

Research objectives

Examines barriers to more effective private sector involvement in the transition to low carbon energy sector

- **Measure the direct effect and interaction of variables that influence low carbon investment**
 - **Policy**
 - **Market**
 - **Barriers from the private sector side**

Research objectives



● Policy

- Energy policies and targets
- Energy market structure
- Investment facilitation

● Market

- Demand for financing and low carbon energy
- Pricing mechanism
- Investment risks
- Market regulations

● Barriers

- Commitments to low carbon investment
- Access to finance
- Risk perceptions
- Capacity to assess risks

Research objectives



1

To understand key political, market and private sector barriers that restrict the ability of the private sector to invest in low carbon energy

- **Estimating the statistical model to measure the magnitude of effects of variables that influence low carbon investment**
- **To understand how the structure of low carbon investment evolves under the presence of identified barriers**



2

Hypothesis

Hypothetically policy, market and barriers from the private sector's side could reduce investment potential in low carbon energy system. Reducing policy and market barriers *per se* would not generate any significant investment improvement unless it is accompanied by reducing other investment enhancing determinants, such as reduction in investment barriers from the private sector

Understand what firms perceived or required to invest in LC energy sector given that the transition to LC energy system will be largely driven by private investment

Significance

Highlights policy alternatives to encourage changes in investment patterns to the extent it is required to help addressing the energy trilemma

Thank you



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