



# 2018 Singapore International Energy Week

## Opening Keynote Address

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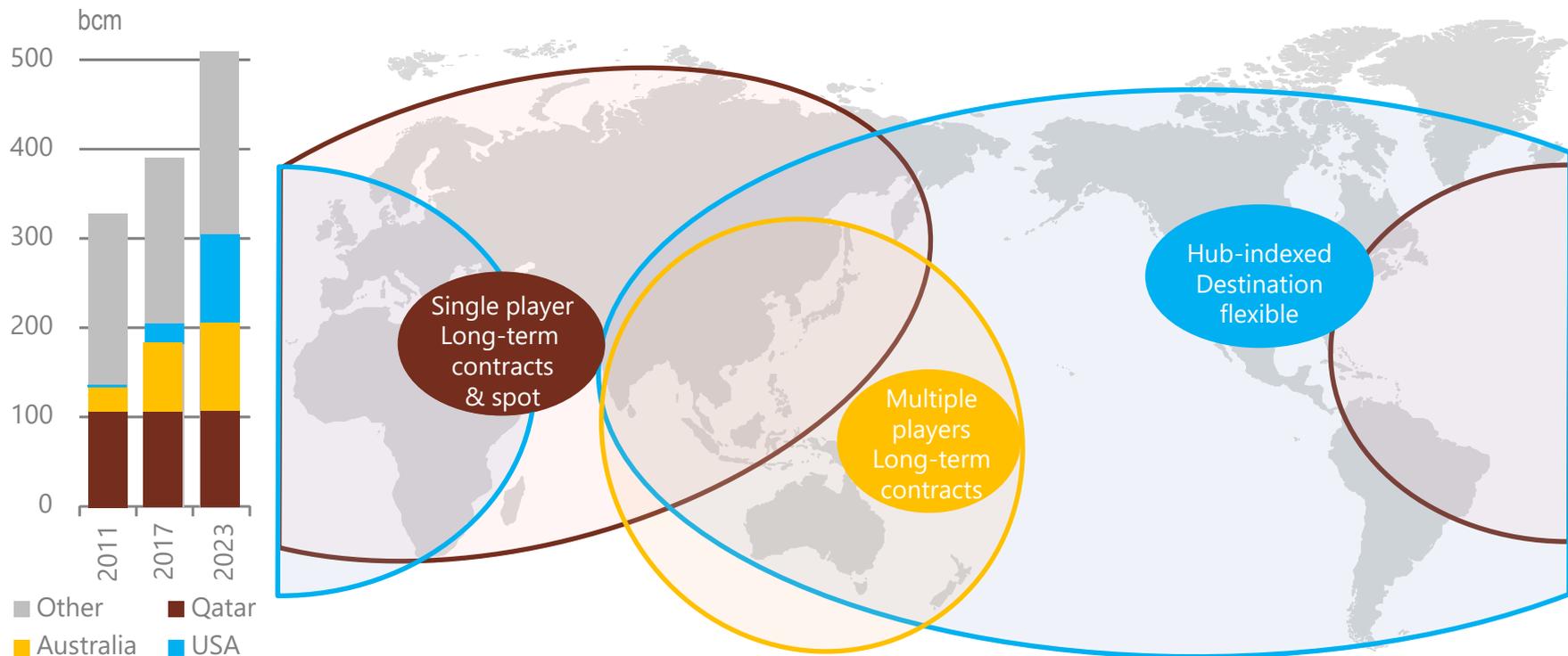
Dr. Fatih Birol, Executive Director, IEA

Singapore, 30 October 2018



- The rise in energy prices has not been good news during a difficult period for the global economy
- Three large-scale transformations in global energy set the scene:
  - *The **United States** is turning into the undisputed global leader for oil & gas*
  - ***Solar PV** is on track to be the cheapest source of new electricity in many countries*
  - *The future is **electrifying**, spurred by economic growth, digitalization & electric mobility*
- The future of global energy markets will be shaped by Southeast Asia along with China & India

# Qatar, Australia and the United States reshape global LNG markets

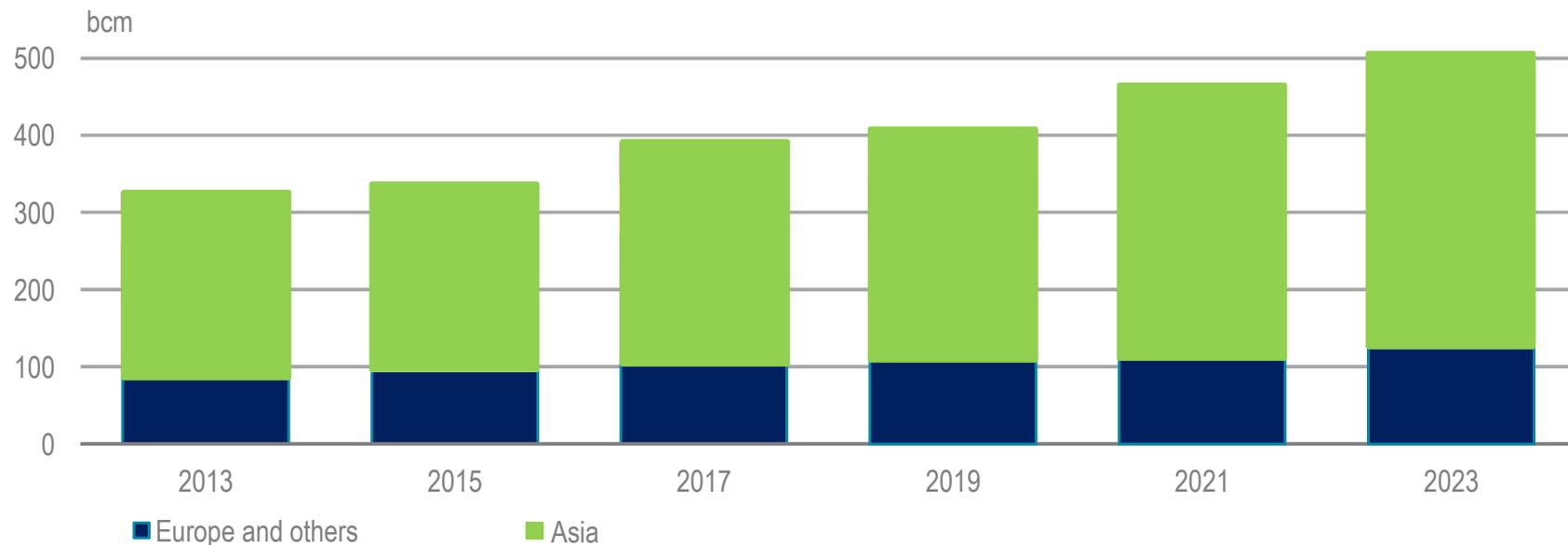


*This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.*

**LNG trade passes 500 bcm by 2023, growing by a third in five years**  
**Qatar, Australia and the US will supply 60% of the world's LNG by 2023**

# Strong growth in LNG imports is driven by Asia

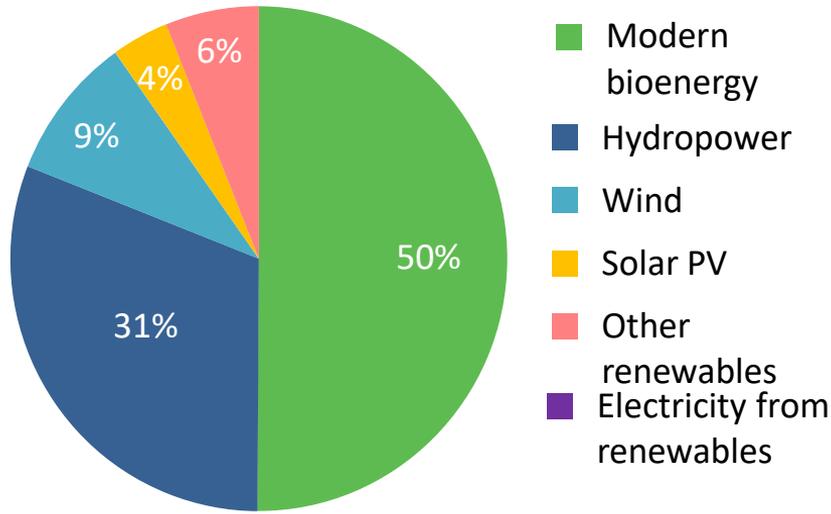
## LNG imports by region, 2013-23



**LNG trade grows at almost three times the rate of global gas demand;  
China is the main contributor to growth, driven by policy targets to reduce local air pollution**

# Modern bioenergy: the overlooked giant of renewables

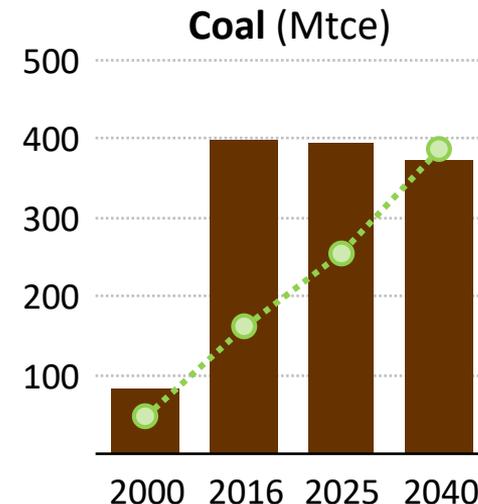
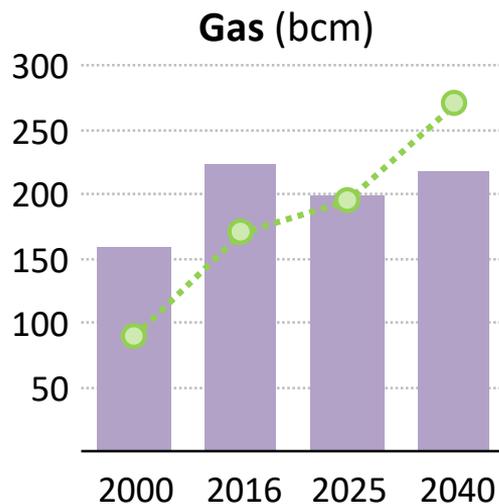
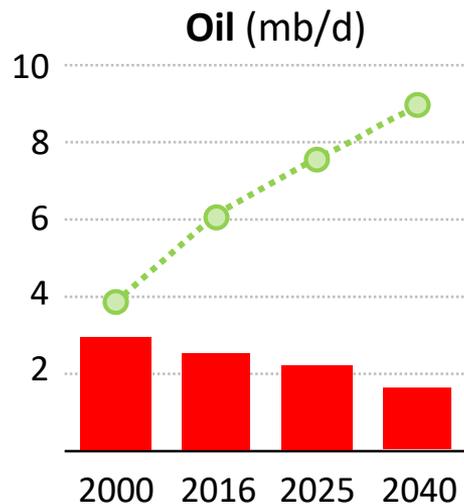
Total final energy consumption from renewables, 2017



**Modern bioenergy is the only renewable source that can provide electricity, heat & transport fuels; Two thirds of modern bioenergy heat is used in industry**

# Growing risks to ASEAN energy security

Fossil fuel production and demand to 2040

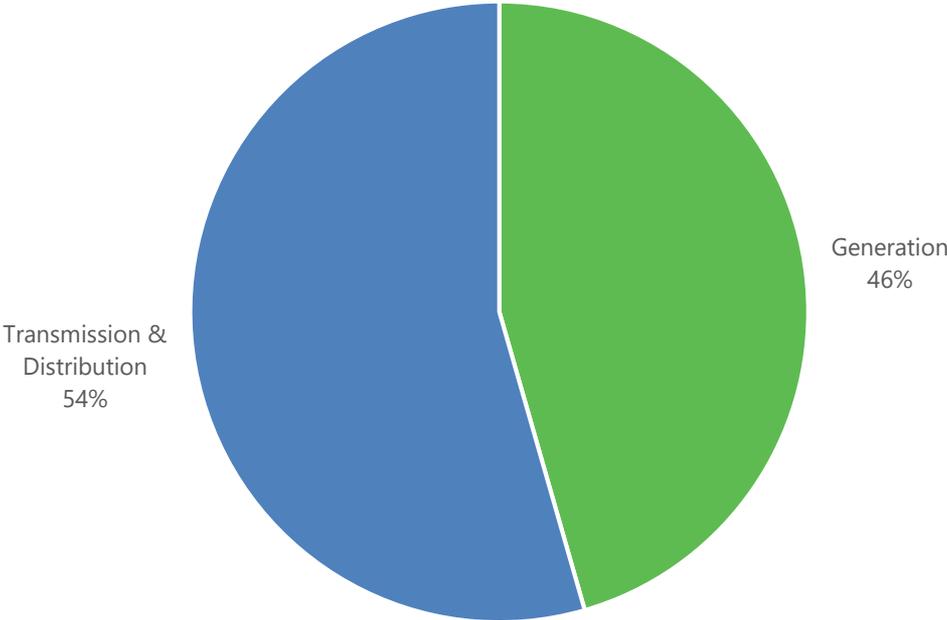


■ Production      ● Demand

**Southeast Asia is set to become a net importer of oil, gas and coal, increasing vulnerability to price volatility and raising energy security concerns**

# The ASEAN challenge: Mobilizing power sector investment

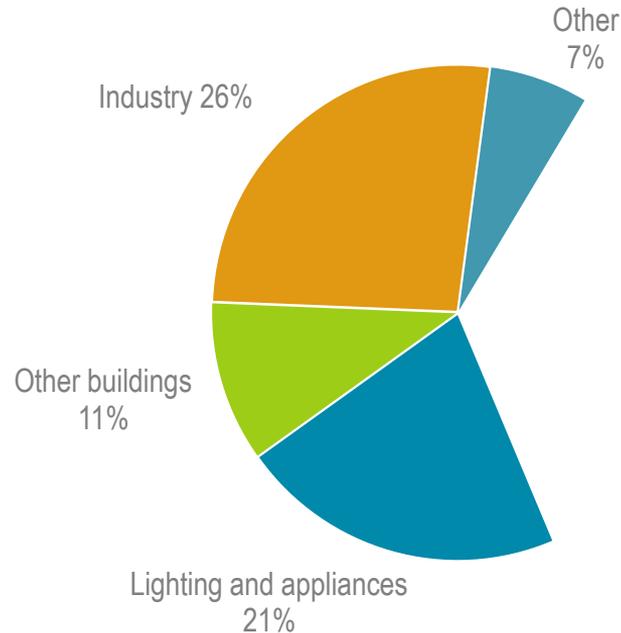
Total cumulative power sector investment in Southeast Asia to 2040



**Southeast Asia needs power sector investment of \$1.25 trillion to 2040 – this is equivalent to around \$50 billion per year on average, twice the current level**

# Energy efficiency: The case of air conditioning in ASEAN

Share of final electricity demand growth to 2040 in ASEAN countries



**Air conditioners represent the largest source of electricity demand growth in ASEAN; Today, 15% of ASEAN households have air conditioners compared to 90% in Japan and the US, signaling significant scope for growth**

- **High oil prices are hurting consumers** and could have adverse implications for producers
- The emergence of a **competitive, global gas market** with the rise of LNG provides opportunities for both importers and exporters in Southeast Asia
- **Energy investment is a critical issue in Southeast Asia** – particularly in power due to demand growth, sustainability challenges and need for regional power integration
- **Renewables & energy efficiency** can help reduce air pollution, CO2 emissions and energy imports, but need best-practice policies for cost reductions and to accelerate deployment
- **The IEA is assisting ASEAN members tackle energy challenges**, drawing on the world's best energy data, an "All-Fuels-and-All-Technologies" approach and real-world policy solutions



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