



# Future of Energy

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Imagination at work.





# GLOBAL ENVIRONMENT



# GLOBAL TRENDS TRANSFORMING THE POWER INDUSTRY



**Slower GDP growth**



**Resource constraints**



**Financing constraints**

## CHALLENGES



**Shift to emerging regions**



**Global clean energy**



**Internet of Things**

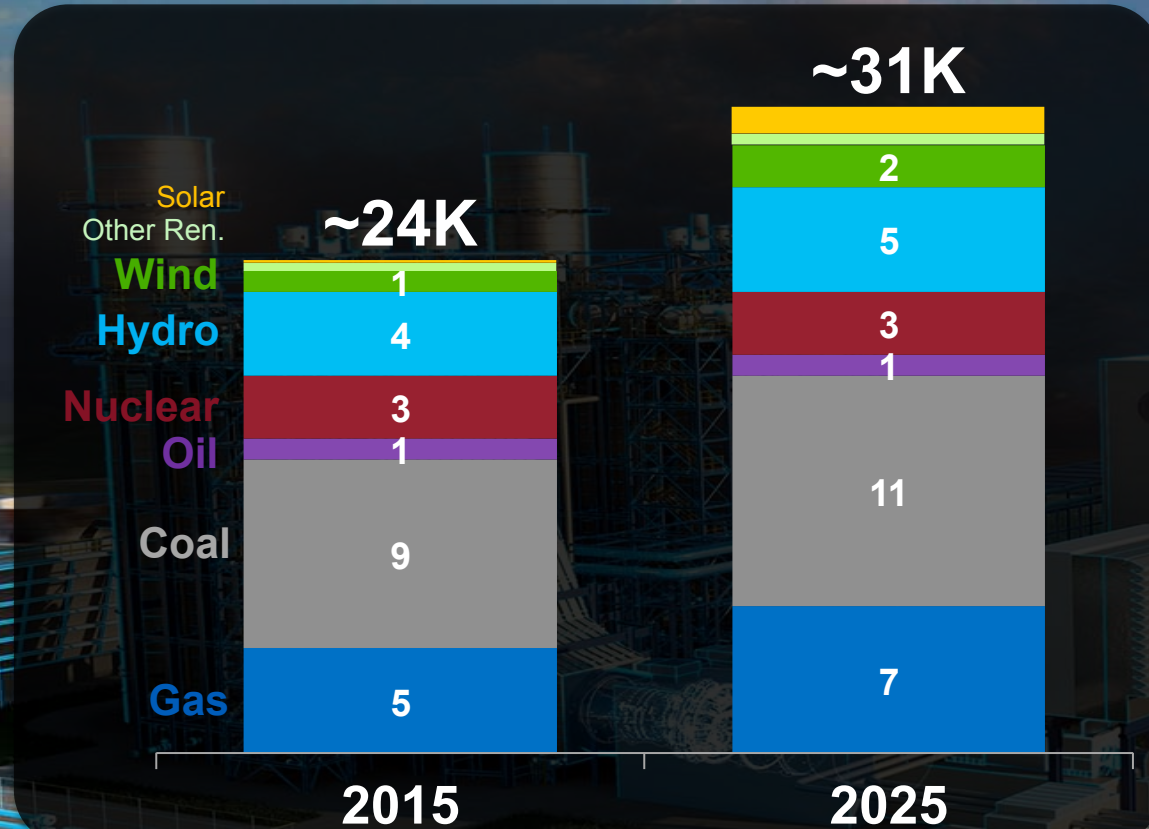
## OPPORTUNITIES



# GLOBAL POWER OUTLOOK

World electrical generation by fuel

(TWh in '000s)



## Industry dynamics

### Fossil Fuels

*Remains 60%+ of industry*

### Renewables

*Fastest growing segment*

### Emerging Markets

*85% of electricity growth*

Diverse solutions required ... technology, geography, scale



# ENERGY TRANSFORMATION

**Fossil fuels**

**Renewables**

**Consumers**

1

2

3

4

5

6

Continuing  
age of gas

Supply-side  
efficiency

Mainstream  
renewables

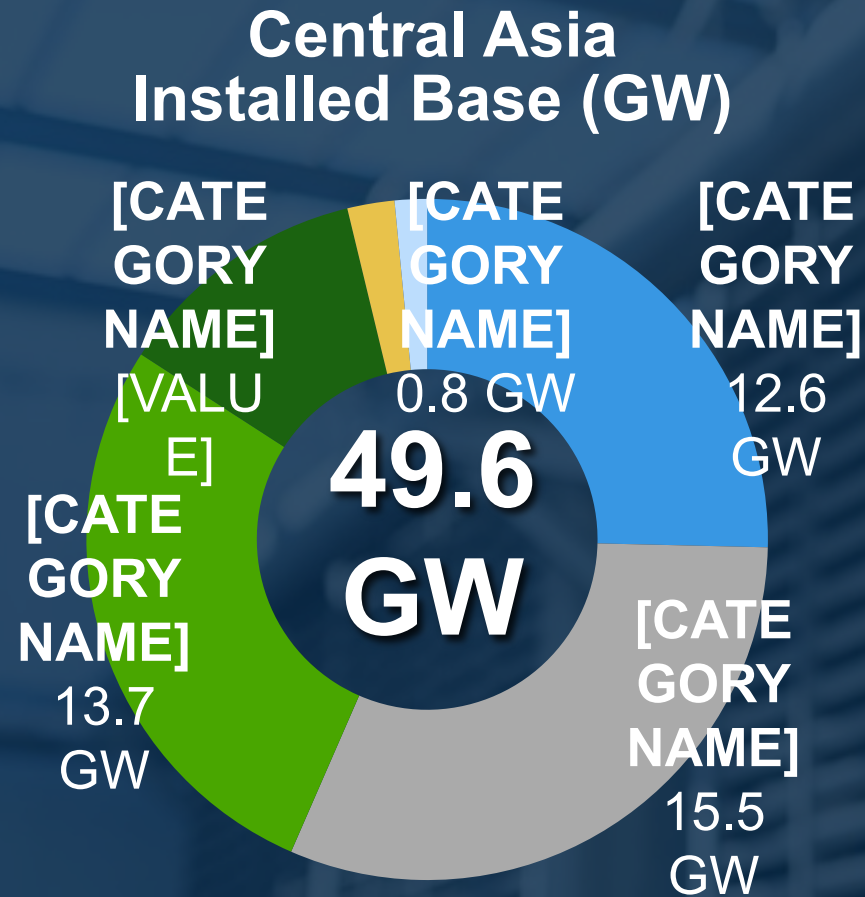
Decarboniza  
tion

Electrificatio  
n of things

Consumers'  
generation

**Digital transformation of energy**

# POWERING CENTRAL ASIA



- Increase efficiency by modernizing the aged capacities
- Ambitious renewable generation targets (i.e. 50% KZ by 2050 )
- Bridge local and seasonal electricity deficits
- Policy & market reforms are key to enable transformation



# GE STORE

## *Our competitive advantage*

- The GE Store is the global exchange of technology, talent, and expertise across GE's diverse businesses and markets.
- Every GE business can give and take from the Store.
- Enables to deliver Customer projects with customized solutions
- A GE Unique advantage



# WINNING IN GROWTH MARKETS

## GE ONSHORE

### WIND

#### Critical to success

- 1 Competitive product cost  
... backward integration
- 2 Localized content
- 3 Turnkey offerings
- 4 Financing
- 5 Digital... 30K digital units

#### Presence in key markets



#### Footprint in 30+ countries



#### GE Store differentiators

- ✓ Dedicated local resources
- ✓ Technology fit
- ✓ Government engagement
- ✓ GE EFS financing capabilities





# GE ENERGY FINANCIAL SERVICES

*More than money*

## Key vertical



## Industrial heritage



## Mission

- Sales finance advisor to the GE industrial businesses and point of access to GE Capital and third party funding sources
- Shared objectives with the GE businesses
- \$9B of enabled orders in '16; ~50 FTEs in 10+ countries

## Expertise

- Deep domain knowledge in Energy and Oil & Gas sectors
- Structuring & advisory expertise and investment track-record in debt and equity products; global market intelligence
- Advisory at all stages of the project development and finance life-cycle

## Funding

- Relationships and credibility with local and global debt and equity sources
- Influence and direct access with key Export Credit Agencies (ECA)
- Access to GE Capital balance sheet for direct investments

## Capital & expertise



## Mid-market finance







# *the* INDUSTRIAL INTERNET *platform*

1  
**Turbine Trip**

2  
**Gearbox Vibrations**

3  
**Low Wind**

4  
**Intermittent Grid**

5  
**Underperforming Sector**

6  
**Cyber Threat**

**PREDIX**



**Asset Manager**  
• Fix lost production  
• Increase farm AEP



**Trader**  
• Adjust trade in minutes  
• Higher revenue



**Remote Operations**  
• Auto-reset in seconds  
• Higher availability



**Diagnostic Engineer**  
• Verify anomaly same day  
• Reduce unplanned costs



**Site Crew**  
• Inspection at next outage  
• Reduce planned costs

**DIGITAL** *means*  
*lower COSTS and*  
**RAISING REVENUE**

**20%↑**  
Annual  
Energy  
Production

**5%↑**  
Greater  
Efficiency

**10%↓**  
Maintenance  
Costs



# KEY TAKEAWAYS

**Energy sources diversification**

**+**

**Digitalization**

**+**

**Financing**

**=**

**Achieving our Customer's power generation mix  
and electrification rate targets**



