

GE  
Energy

## Growth in the Middle East



Steve Bolze  
President – Power Generation

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Region Executive, ME



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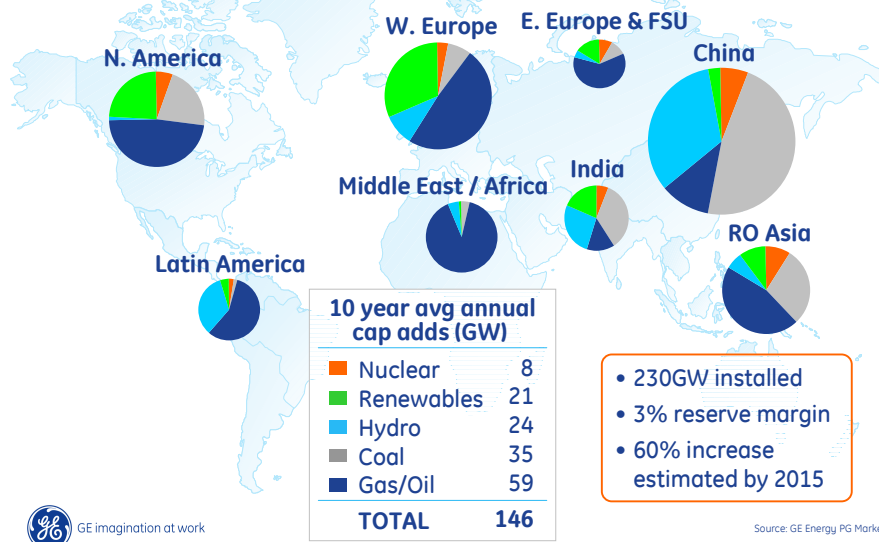
## Energy overview



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## Middle East/Africa ... 140 GW addition to 2015

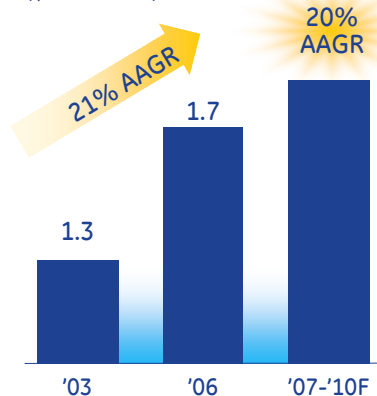
Total capacity additions – GW (2006 – 2015)



## GE Energy in the Middle East

### Orders

(\$billions US)



### Regional Initiatives

- Infrastructure development driving power and co-generation needs
- Industrial development at accelerated pace ... the world hub for LNG, aluminum, petrochemical, GTL and refining
- Clustered Infrastructure approach ... King Abdullah Economic City, KPIZ Abu Dhabi

## Technology excellence across the portfolio



Gas



Cleaner Coal



Nuclear



Wind



Hydro



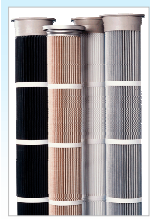
Biomass



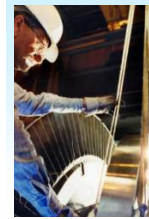
Solar



Network  
Reliability



Environmental  
Services



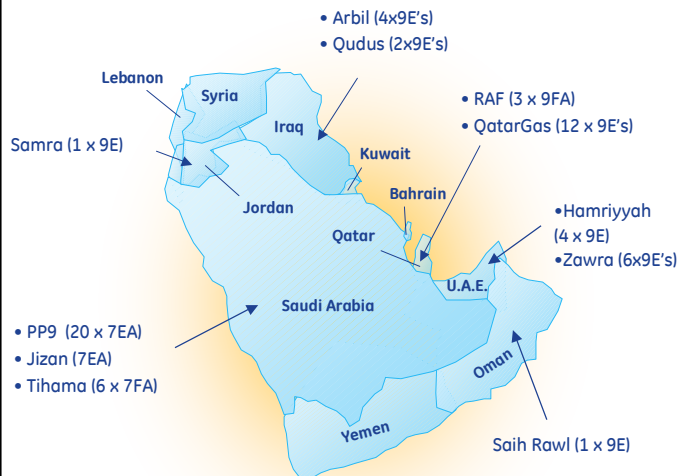
Asset  
Optimization



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## Recent Middle East Gas Turbine Activity



### Opportunities:

- Qurayyah (15 x 7FA)
- Marafiq (12 x 7FA)
- Messaied (6 x 9FA)
- PP8 ext. (4 x 7FA)
- PP9 (12x7EA)
- Rabigh (16x7E's)

**\$3B+**



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**12+ GW / Year ..... Well Positioned**

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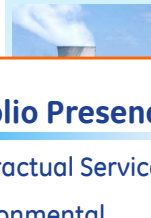
## Technology excellence across the portfolio



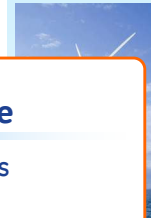
Gas



CL



CL



CL



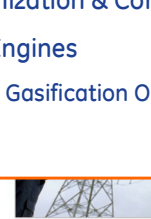
Hydro



Biomass



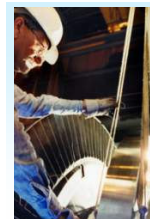
Solar



Network  
Reliability



Environmental  
Services



Asset  
Optimization

### Portfolio Presence

- Contractual Services
- Environmental
- Optimization & Control
- Gas Engines
- Crude Gasification Opportunity



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## Energy Middle East growth strategy



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# Technology

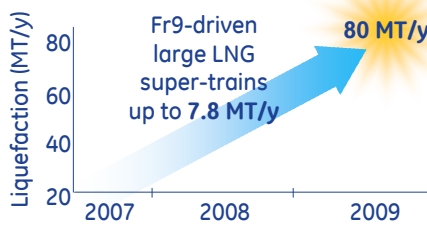
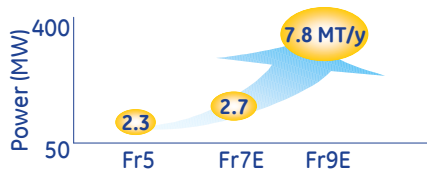


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## Qatar LNG industry

~80% of world's LNG production done with GE compression technology

A solution for any scale



GE installed base technology

### GT Fleet

Fr5	12
Fr7	10
Fr9	18



- #1 for gas reserves/ sq mile
- ~250 years UK demand
- \$400MM orders generated

## Technology differentiation ...

### Fujairah

- First and largest Hybrid IWPP in ME
- 656 MW / 100 Million Gallon Per Day
- Commissioned in 2003
- GE extension underway



### PP9

- Biggest Single GT site in the ME
- 2500 MW / 36 7EA's
- Commissioned 1998
- Tri-Fuel Capabilities



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Technology Differentiates GE

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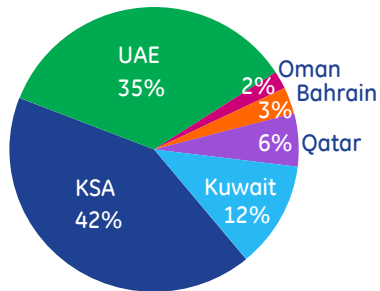
## Customer solutions



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## Desalination opportunity

### Gulf cooperation countries



60% of the world's desalination opportunities are in the Middle East

### GE value added solutions

- Play various roles from equipment supply to EPC contractor to equity investors
- Promote and develop hybrid technology for more efficient systems
- Develop fuel flexibility solutions

**\$30B water and power opportunities to 2015**



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## King Abdullah Economic City

### Introduction

US\$26.7 billion project

### Key players

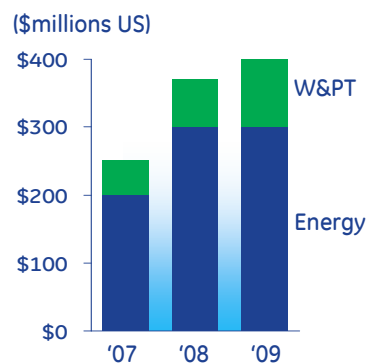
The shareholders structure of "EMAAR Economic City" the \$2.4 billion joint venture company:



### Dynamics by 2020

- 6,000 MW demand projected
- 1.3m cubic meter/day of water
- 500 thousand jobs
- 2MM population

### Identified business opportunity



- Assigned a leader with a team across the infrastructure
- Infrastructure proposal submitted



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# Fulfillment



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## Middle East installed base

### Fleet

- 391 - 5&6 B technology
- 162 - 7EA's technology
- 78 - 9E's technology
- 12 - F technology
- 45 F's in coming two years

### Fulfillment teams

- 30+ contractual services team
- 30+ field engineers pool
- 10 commercial operation team
- 5 product service team

### Services coverage

Orders  
(\$millions US)



- From \$9MM in '02 to \$55MM CSA orders
- \$500MM YTD CSA backlog
- \$1 B potential CSA backlog in coming two years



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# Localization



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## GE Energy Middle East presence



### Local resources

- Operating since late 1930's
- Over 600 employees
- Locals vs expats

### Local capabilities

- 3 regional service shops  
MEELSA, MEPCO, GTS
- Technical training center – Qatar
- Optimization and control customer application center – Bahrain
- Rotating laboratory at Petroleum Institute, Abu Dhabi
- Regional offices: UAE, Saudi Arabia, Qatar, Oman, Kuwait

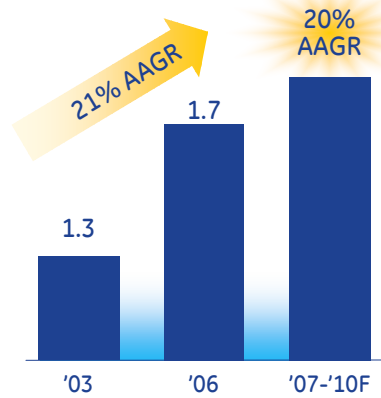


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## GE Energy in the Middle East

### Orders

(\$billions US)



### Big opportunities

- \$30B spend in power and water to 2015
- Multi infrastructure clusters
- Diversified industrial growth

### Well established

- More than 600 employees in the region
- Growing installed base
- Local fulfillment capabilities

### Well positioned for growth

- Growth strategy
- Strategic alliance
- Localized solutions



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