Energy Service - Preventive Maintenance on power plants to ensure electricity generation for the long term

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Development of Electricity Generation in Africa

Sources of growth

1. Installation of new plants

2. Servicing existing fleet for reliable operation + Modernization & Upgrades
Energy Service – Basis for long-term operation

Operation & Inspection Schedule:
33k EOH Interval for SGT5-2000E

~ 1 year (base-load operation)

# EOH: Equivalent Operation Hours

HGPI

Outage Target
→ Recovery
→ Repairs
→ Upgrades

Power degradation factor

100%
Service Product Portfolio – Benefits

Transactional  
Expanded Scope / Risk  
Performance Driven

Single Transaction  
Service Contracts  
Long Term Maintenance Program  
Full Scope Maintenance  
Operation & Maintenance

- Increase of Availability
- Increase of Reliability
- Transfer of Risk to OEM
- Using OEM Expertise

→ Securing Return on Invest
Service Contract Types
Limits of Scope

Siemens EPC Supply
- Main Transformer
- Generator Circuit Breaker
- Power Control Center
- Generator
- Air Intake
- Noise Suppression Building
- Gas Turbine Auxiliaries
- Gas Turbine
- Diffusor
- Lube Oil Cooler
- Exhaust Stack
- Generator Cooler

O&M Scope

LTMP Scope
Siemens Energy Service global setup

**North America**
- **HQ:** Orlando
- Siemens fleet: 56
- Gas: 56
- Fossil Steam: 183
- Nuclear: 52

**Latin America**
- **HQ:** Bogotá
- Siemens fleet: 18
- Gas: 18
- Fossil Steam: 6
- Nuclear: 2

**Europe & Africa**
- **HQ:** Erlangen
- Siemens fleet: 33
- Gas: 33
- Fossil Steam: 78
- Nuclear: 30

**Middle East**
- **HQ:** Dubai
- Siemens fleet: 23
- Gas: 23
- Fossil Steam: 40
- Nuclear: 0

**Asia**
- **HQ:** Shanghai
- Siemens fleet: 24
- Gas: 24
- Fossil Steam: 44
- Nuclear: 10

**Significant ramp up of local resources drives responsiveness**
Thank you for your attention

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Service Product Portfolio
Long Term Maintenance Program - LTMP

- Fixed scope for all Scheduled Outage Services
- OEM Parts, Repairs and turnkey Outage Services
- Typically covers OEM Equipment (e.g. GT, ST, Geno)
- Risk sharing through extended warranties & performance guarantees
- Consolidated program management
- Remote Diagnostics (Monitoring System)

Includes all planned Maintenance on the OEM Equipment
Service Product Portfolio
Full Scope Maintenance - FSM

- Fixed scope for all Scheduled Outage Services
- OEM Parts, Repairs and turnkey Outage Services
- Routine Maintenance
- Typically covers EPC Equipment (GT, ST, Geno, HRSG, BoP)
- High Level of warranties & performance guarantees
- Consolidated program management, Remote Diagnostics

Includes all total Maintenance on the Power Island
Service Product Portfolio
Operation & Maintenance - O&M

✓ Plant operations
✓ All Scheduled Outage Services and Routine Maintenance
✓ Focusing on the total plant
✓ Highest level of Warranties & performance guarantees
✓ Highly predictable maintenance costs
✓ Consolidated program management
✓ Remote monitoring, Plant Management System

Total operation and total maintenance on the complete plant