Press event Houston

Siemens focus on growth in the Oil & Gas business

Lisa Davis, Member of the Managing Board | Houston, September 15, 2015
More than attractive – Long-term stable investment in the energy market

### Global energy market outlook

**Invest cumulated 2014-2035, in tn US$**

<table>
<thead>
<tr>
<th>Area</th>
<th>Distribution</th>
<th>Transmission</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Transmission and Distribution</td>
<td>4.4</td>
<td>1.5</td>
<td>5.9</td>
</tr>
<tr>
<td>Power Generation</td>
<td></td>
<td></td>
<td>8.4</td>
</tr>
<tr>
<td>O&amp;G Transport and Processing</td>
<td></td>
<td></td>
<td>4.7</td>
</tr>
<tr>
<td>O&amp;G Exploration and Production</td>
<td>15.8</td>
<td></td>
<td>15.8</td>
</tr>
</tbody>
</table>

**Market change**

1. **Power Transmission and Distribution**: +27%
2. **Power Generation**: +9%
3. **O&G Transport and Processing**: +10%
4. **O&G Exploration and Production**: +20%


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Investment in O&G – Mid-term recovery expected for new units when oil price/supply and demand rebalance

Source: Own analysis based on IHS, Rystad, Visiongain, HPI, OPEC

Trends

- Oil price expected to recover mid-term as global Oil and Gas supply/demand to rebalance
- Capital spending decreasing since 2014, bottom projected for 2016
- Capital spending expected to pick up from 2017
- Spending in O&G Upstream dominating by far (>80%) and showing highest growth
- Spending in O&G Mid-/Downstream flat

Entire CAPEX Market New Units

<table>
<thead>
<tr>
<th>2014</th>
<th>2016</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>897</td>
<td>1015</td>
<td></td>
</tr>
</tbody>
</table>

- Onshore
- Offshore
- LNG
- Pipelines
- Refinery

+2% CAGR

Source: Own analysis based on IHS, Rystad, Visiongain, HPI, OPEC
Investment in O&G – No big dip in Services, constantly growing market

**Entire global Service Market for Maintenance, Repair, Operations**

<table>
<thead>
<tr>
<th>Year</th>
<th>Petroleum Refining</th>
<th>Production (Oil &amp; Gas)</th>
<th>Chemical Processing</th>
<th>Transmission</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>~190</td>
<td>~130</td>
<td>~150</td>
<td>~10</td>
<td>~190</td>
</tr>
<tr>
<td>2016</td>
<td>~200</td>
<td>~150</td>
<td>~150</td>
<td>~15</td>
<td>~210</td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>~210</td>
</tr>
</tbody>
</table>

Source: IIR (Industrial Info Resources), May 2015

**Trends**

- Services business less impacted by oil price
- **Consistent single digit growth year** over year for MRO spending in served O&G industries
- **Increased Oil & Gas production** along with drastically reduced CAPEX generates additional service opportunities, e.g. upgrades, revamps and replacements
- **Highest growth in Chemical Processing** due to cheap feedstock
- MRO spending in O&G Upstream **moderately growing**
- Refining **stable** as demand is flat
- Spending in Midstream flat
Siemens Vision 2020 – Value creation and cultural change

- Accelerated growth and outperformance
- Drive performance
- Strengthen core
- Scale up

Foster ownership culture and leadership based on common values

Strategic direction → Operational consolidation → Optimization → Accelerated growth and outperformance
Siemens focus on Oil & Gas – Five steps to business leadership

Our ambition

“Become the leading electrical, rotating equipment and process automation provider in the Oil & Gas industry with reliable best-in-class products, solutions and services”
Siemens – Proven supplier for power generation and the Oil & Gas industry

Gas turbines
- Range: <5 MW to 400 MW
- Highlight: SGT-8000H
  - Low investment costs per kW
  - Low lifecycle cost
  - >150,000 equivalent operating hours over the entire fleet

Aeroderivatives
- Range: 4 MW to 66 MW
- Most advanced aeroderivative gas turbines today
- Up to 42% efficiency
- New benchmark for fuel economy and cost savings

Steam turbines
- Range: 45 kW to 1,900 MW
- Highlight: Enhanced platform
  - Higher steam parameter
  - High reliability
  - Reduced start-up time
  - Faster load changes
  - Improved efficiency

Compressors
- Range: Reciprocating, Centrifugal, Axial, Integrally Geared
- Applications: Oil & Gas (Up-, Mid-, Downstream) and industrial applications
- More choices and more solutions
Siemens acquisitions close the portfolio gap for major oil and gas applications

Onshore

Offshore

O&G Production | Pipeline | LNG | Energy Production | Energy Selling
---|---|---|---|---
Automation | Services | Automation | Services | Automation | Services

End customer

Gas/Electricity/Hydrocarbons

Siemens
Former Rolls-Royce
Dresser-Rand

Only hardware shown

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Industry’s largest installed base secures profitable service growth opportunities

Combined serviceable fleet (small turbines, engines and compressors)

<table>
<thead>
<tr>
<th></th>
<th>Compressors</th>
<th>Small/medium gas turbines</th>
<th>Aero-derivative gas turbines</th>
<th>Steam turbines</th>
<th>Engines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Former RR</td>
<td>1,600</td>
<td></td>
<td>2,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRESSER-RAND</td>
<td>32,500¹</td>
<td>1,500</td>
<td>62,000</td>
<td>3,900</td>
<td></td>
</tr>
<tr>
<td>SIEMENS</td>
<td>10,000</td>
<td>2,500</td>
<td></td>
<td>10,000</td>
<td></td>
</tr>
</tbody>
</table>

Four-fold increase of combined Siemens fleet (incl. former Rolls-Royce) to >120,000

Source: Siemens D-R Operational Integration Team ¹ Of which ~22,500 recip
More than 80 facilities around the globe to meet clients' requirements

Manufacturing and Service facilities of new O&G business

Client intimacy and faster response through local presence

Global presence – we are where our clients need us

Source: Siemens D-R Operational Integration Team
Un-paralleled access to the world’s most important energy companies
Cross-Selling to unfold the true potential of the acquisitions and the other Siemens Divisions

Example: Split of growth synergies with Dresser-Rand portfolio

Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>Legacy Siemens compressors</th>
<th>Legacy Dresser-Rand</th>
<th>Growth synergies</th>
<th>Cross-selling</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2020</td>
<td>~30%</td>
<td>~70%</td>
<td>~30%</td>
<td>~70%</td>
</tr>
</tbody>
</table>

Siemens foresees the potential for more “cross-selling” between the two companies

Source: Siemens D-R Operational Integration Team
The New Dresser-Rand Business:
Delivering technology choices and service excellence
Combining two premium brands

- The strengths of the Siemens and Dresser-Rand brands are complementary
- Combining the two brands together will leverage the positive market perception of both
- Siemens, Power and Gas Division, offers a broad spectrum of products and solutions for the environmentally compatible and resource-saving generation of electricity from fossil and for the reliable transport of oil and natural gas
- Dresser-Rand is a leading supplier of high-speed rotating equipment solutions with the largest installed base in the industry
- No other competitor can offer our global and financial strengths combined with close client relationships and rotating equipment technology expertise in oil and gas and environmental solutions
The new Dresser-Rand business –
At a glance

Revenue

3.5 billion €

Locations around the globe

80

Employees

12,000

1 €3.5bn revenues are based on pro-forma FY 2014 financials
A market driven organization supporting our clients’ businesses

An expanded capability within the Siemens World with a broad band of knowledge for future success
The leader in innovation and responsiveness

Technology
- Broader set of capabilities across a wider range of applications
- End-to-end product integration and responsibility from a single supplier

Operational Excellence
- Enhanced global manufacturing and supplier network
- Focused on faster execution of all project phases
- Reduced project cycle times lower project risk and bring clients’ processes on-line faster

Service Excellence
- Equipment is mission critical to our clients
- Largest installed fleet in the industry with the most extensive global service network
- Clients predisposed to work with the Dresser-Rand as a single source service provider

Earning client loyalty for life
Bringing more choices to our clients – Products, services and integrated solutions
Choice and performance –
the industry’s most extensive portfolio of drivers

**Industrial Gas Turbines**
- Up to 60 MW
  - Efficiency
  - Reliability
  - Flexibility
  - Environmental compatibility
  - Low life cycle costs and return on investment
  - Access to heavy duty gas turbines >100 MW

**Aero derivative Gas Turbines**
- Up to 66 MW
  - Most reliable and easily maintained
  - Benchmark for fuel economy and cost savings
  - Highest efficiency and fast-start capabilities

**Steam Turbines**
- Up to 250 MW
  - Highest efficiency
  - Excellent flexibility for complex processes
  - Economical installation and operation
  - Modular design
  - Customized steam path

**Electric Drives**
- Up to 100 MW
  - Compact
  - Low weight
  - High efficient asynchronous/synchronous and variable speed drives
  - Fit for purpose auxiliaries

**High-Speed Engines**
- Up to 2 MW
  - High efficiency, low-emission gas and diesel engines
  - Long service intervals
  - Easy maintenance
  - Low fuel consumption
## The best compressor portfolio to fit clients’ needs

<table>
<thead>
<tr>
<th>Reciprocating</th>
<th>Turbo</th>
<th>Standardized design</th>
<th>Centrifugal</th>
<th>Pipeline</th>
<th>Single-stage</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Reciprocating" /></td>
<td><img src="image2.png" alt="Turbo" /></td>
<td><img src="image3.png" alt="Standardized design" /></td>
<td><img src="image4.png" alt="Centrifugal" /></td>
<td><img src="image5.png" alt="Pipeline" /></td>
<td><img src="image6.png" alt="Single-stage" /></td>
</tr>
<tr>
<td><strong>Gas Field and Process</strong></td>
<td><strong>Air Separation, Chemicals</strong></td>
<td><strong>Air Separation</strong></td>
<td><strong>Oil and Gas Upstream, LNG, Refining and Petrochemicals</strong></td>
<td><strong>Gas Transport</strong></td>
<td><strong>Industry, Metallurgy, Utilities</strong></td>
</tr>
<tr>
<td>- Performance</td>
<td>- Outstanding efficiencies according to your requirements</td>
<td>- Cost-efficient</td>
<td>- Vertical and horizontal split compressors incl. high-pressure applications</td>
<td>- Cost-effective and technologically advanced solution</td>
<td>- Lowest capital expenditure</td>
</tr>
<tr>
<td>- Efficiency</td>
<td>- Versatile</td>
<td>- Efficient</td>
<td>- Fit for purpose with reliable field proven design</td>
<td>- For highest efficiencies</td>
<td>- Long time uninterrupted operation</td>
</tr>
<tr>
<td>- Reliability</td>
<td>- Reliable</td>
<td>- Sustainable</td>
<td>- Flexible design to accommodate all expected conditions</td>
<td>- Highest aerodynamic efficiency</td>
<td>- Highest aerodynamic efficiency</td>
</tr>
<tr>
<td>- Low maintenance</td>
<td>- Customized and proven</td>
<td>- Field proven compression for low life cycle costs</td>
<td>- Best efficiencies for highest plant availability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compressor product platforms combine the best-of-the-best for different applications.
Integrated equipment and service solutions –
More choices, greater flexibility to meet clients’ needs

Working with a single supplier provides clients with significant added value by minimizing risk

– Fewer interfaces
– Smooth system integration
– Modularization
Midyan Gas Processing Plant –
Sales and propane gas service in Saudi Arabia

Achieve unmanned operation, increase reliability and reduce environmental impact at the remote Midyan gas field

– Oil-free Dresser-Rand compressors and air-cooled Siemens high-speed motors and VFDs
– First project of its kind with Siemens HS electric motor + Dresser-Rand compressor train supported on D-R Synchrony active magnetic bearings

Improved reliability due to advanced, fault-tolerant magnetic bearing design
Environmentally friendly because of oil- and water-free package design
World-leading service portfolio for every step in the equipment life cycle

Local presence improves responsiveness and our ability to keep clients’ mission-critical equipment running 24/7

<table>
<thead>
<tr>
<th>Installation</th>
<th>Operation</th>
<th>Risk Management</th>
<th>Engineered Solutions</th>
<th>Environmental Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reliable, high-quality work on foundations, installation, start-up, and commissioning&lt;br&gt;- OEM experience&lt;br&gt;- Technical know-how</td>
<td>- Availability&lt;br&gt;- Fast service for new parts or repair&lt;br&gt;- Widespread network of service centers&lt;br&gt;- Highly trained field services team</td>
<td>- Site audits and training &amp; consulting; O&amp;M, controls and automation, full-flange EPC services&lt;br&gt;- Long-term service contracts&lt;br&gt;- Life cycle cost optimization</td>
<td>- Efficiency&lt;br&gt;- Engineered to specific equipment and clients’ needs&lt;br&gt;- From straight overhauls to revamps and re-rates&lt;br&gt;- Applied Technology</td>
<td>- Effective response to new regulations&lt;br&gt;- Exhaust or fugitive emissions&lt;br&gt;- Energy efficiency&lt;br&gt;- One-stop resource</td>
</tr>
</tbody>
</table>

Reliable operation
- Starts with proper installation and start-up<br>- Predict/prevent potential problems<br>- Responsiveness when a problem arises

Improved performance
- Long operating life cycle (>30 years)<br>- Need to adapt to process and/or regulation changes<br>- Apply to other OEM equipment
Applied Technology – Applying D-R technology to other OEM equipment

Increase ethylene production by 40% with lowest CAPEX solution

- Revamped 5 existing competitor compressors by applying Dresser-Rand DATUM® internal compressor technology
  - Superior efficiency with proven DATUM impeller families
  - Single-piece impellers, anti-foul coatings, abradable seals, new oil seals, and new couplings
- Operating speed rotor balance before installation to ensure quality and performance
- Leveraged knowledge and experience of our engineered solutions design teams

Lower cost alternative to new equipment – reused casings and avoided need to change ancillary equipment and piping
Gas engine emissions solution –
Reduced emissions to meet new, more stringent regulations

Bring 50 engines, spanning 18 compressor stations in three states, into compliance within a short time frame

- Provided a turnkey technical solution: Planned, developed, tested, and installed the components and provided a one-year service guarantee
- Installed and commissioned engine speed controls, high-energy ignition system and air-fuel ratio control
- Treated emissions as they exited the engines to further reduce emissions (post-combustion emissions treatment)
- Managed all subcontractors throughout the project

Reduced emissions to below EPA-mandated levels within the required time frame
Total solution including service contract – Offshore gas turbine power generation

Optimize and engineer a total solution for a client’s main power generation systems

- Maintenance friendly, integrated package design and lean module that included D-R’s compact, efficient VECTRA® 40G power turbine
- 5-year comprehensive O&M service contract
  - 4 gas turbine power generation units
  - Offshore maintenance and operation
  - Spares and consumables
  - Onshore condition monitoring and technical team
  - Planning, storage, logistics, and management
  - Up to +/- 4% monthly bonus/penalty for availability, reliability and power output

Innovative design offered a lower total cost and shorter cycle time for the project
<table>
<thead>
<tr>
<th>Large Power Generation</th>
<th>Instrumentation, Automation and Controls</th>
<th>Digitalization</th>
<th>Power Transmission</th>
<th>Power Distribution</th>
<th>Process Solutions</th>
<th>Subsea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fossil-fueled power plants</td>
<td>Automation systems</td>
<td>Enterprise technology for Oil &amp; Gas</td>
<td>Efficient, reliable and flexible power transmission</td>
<td>Reliable power distribution</td>
<td>Solutions for Oil &amp; Gas and marine</td>
<td>Subsea power grid</td>
</tr>
</tbody>
</table>

Gas-fired power plant solutions and products make energy reliable and affordable for the global society, and at the same time profitable for operators.

Process and factory automation systems from field instrumentation to enterprise software. With the broadest portfolio and market coverage and with its leading technology, setting industry standards.

Product life cycle management provides owner and operators in the oil and gas industry with advanced technology for managing risk and controlling costs on capital projects.

High-voltage transmission solutions, switching products and systems as well as power and distribution transformers, as well as protection and power control systems.

Medium- and low-voltage products, systems, solutions, and services; assuring safe, reliable and economic distribution of electrical power in industrial grids.

Reliable, safe and environmentally friendly answers for electrification, drive systems, process automation, modularization, and water management for oil & gas and marine clients.

Subsea power, control, sensing and distribution systems, products and services to support electrical power, control, data, hydraulic, optical, monitoring and surveillance applications.
A partner clients can trust to help them be more competitive in their businesses

| Safe and reliable supplier | – Dependable partner – product reliability and delivery reputation  
| – Comprehensive experience that reduces business risks  
| – Technology that meets safety and environmental policies |
| Technology expert leading in innovation | – Proven record of technology leadership and innovation  
| – Advance the boundaries of gas turbine and compression technology  
| – Integrated solutions open up additional applications |
| Responsive with speed and flexibility | – Simplifies complex projects and enables us to configure solutions in clients’ offices  
| – Tailored solutions – best-in-class value proposition through early project involvement  
| – Faster project execution – shorter cycle times |
| Local network, global scale | – Faster response through localized resources (services and expertise)  
| – Close relationship to understand technical, service, commercial, and cultural needs  
| – Access to larger product and service portfolio – more choices |
| Best total cost of ownership | – “Best-of-the-best” combines the best of our technology, business processes, cycle time, and service capabilities that drive down life cycle costs  
| – Provides a broader set of capabilities across a wider range of applications  
| – End-to-end product integration and responsibility |
The new Dresser-Rand business – Clients’ one-stop-shop to an expanded portfolio for the entire value chain

Questions?