Power Systems
Profitable and sustainable growth
ABB Power Systems
Product, system, software solutions across value chain

Optimizing power generation
Energizing/controlling plants - energy efficiency

Enabling power transmission
Grid integration; reliability; efficiency

Managing power distribution
Network control/automation; asset optimization

ABB technologies enable the efficient and reliable generation, transmission and distribution of electricity while minimizing environmental impact

- Risk and complexity
- Technology
- Domain competence
- Project execution skills
- ABB pull through
- Sub-contractors
Power Systems
Where we come from and where we are going

2012 Reality check
- Top line growth not balanced with risk/return
- Entry into too many new businesses at the same time
- Some venture markets did not develop as expected
- Project execution challenges
  - Increasing volume and complexity
  - Growth too fast in some markets/businesses

Strategic re-focus
- Focus on higher margin, lower risk, more value added and ABB pull through projects
- Portfolio realignment
  - Exit non-profitable businesses/sectors in select markets
  - Steer away from low margin/high risk EPC projects
- Journey of eXcellence initiative
  - Sales; Project management; Supply Chain Mgt.; People

- Charges and reset costs of $350m
- EBITDA margin corridor 2011-15 raised from 7-11% to 9-12% (aim to enter new range by 2013 Q4)
- Revenue growth target revised from 10-14% to 7-11%
Electricity remains a preferred energy source
Growth opportunities across markets

Emerging markets
- Capacity expansion and need for generation, transmission, distribution infrastructure
  - GDP growth
  - Industrialization
  - Urbanization
  - Transportation
  - Access to electricity / per capita consumption
  - Transmission across vast distances

Mature markets
- Reliability, efficiency, environmental focus
  - Grid upgrades
  - Interconnections
  - Renewables
  - Energy efficiency
  - Smarter power networks

$37.4 trillion investment forecast in energy supply infrastructure 2012-35;
Electricity to account for 45% ($16.9 trillion)


Challenge: meet growing demand for electricity while minimizing environmental impact
Power Generation – Powercorp acquisition
Micro-grids and remote island integration

Value proposition
- Stable, safe, reliable, environmentally friendly power to remote off-grid locations
- Integration and peak penetration of renewables into micro-grids operated on fossil fuel
- Grid stabilization, intelligent power management and efficient hybrid power plant operation
- Modular and scalable solution

Faial island
Clean, grid-quality power supply to remote island network in tourist friendly Azores archipelago, off the coast of Portugal
**Power distribution – Tropos acquisition**

**Wireless broadband networks**

**Value proposition**
Wireless technologies and products for distribution area communication networks
- Wireless IP broadband mesh routers
- Directional radio products
- Centralized network management
- Key sectors served:
  - Industry (Oil & Gas, Mining)
  - Ports; Utilities; Smart grids / cities

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**Venice**
- Mesh network along Grand Canal - Wireless internet access

**Guam**
- Island-wide fiber / wireless mesh network

**Oklahoma City**
- 1660 sq. km fixed mesh network: >180 applications, incl. 1500 police officers
Software opportunity – asset management solutions

ABB’s unique position with Ventyx

- Advanced Distribution Management System - improving power reliability in Texas
- Remote monitoring: 29 substations - 579 automated field switching and monitoring devices on 226 distribution circuits
- Mobile workforce management software
- Enhancing restoration capabilities
- Smart grid functionality

- Combining Ventyx/Mincom software with ABB power products know-how
- Asset Health Center - fleet management and condition assessment
  - Transformers, Circuit Breakers, other equipment
- Key benefits
  - Reduce unplanned outages - early warning
  - Plan outage contingencies
  - Quantitatively drive repair vs. replace decisions
Conclusion
Power Systems – profitable and sustainable growth

- Global market leader across power value chain
- Realigning focus on balanced risk-reward profile
- Growth opportunities across emerging and mature markets
- Recent acquisitions - additional opportunities and evolving trends
- Technology and innovation legacy - latest breakthrough: Hybrid HVDC breaker
- Other differentiators - portfolio, domain expertise, installed base, leading market positions

Well positioned to achieve new strategic return targets
Power and productivity for a better world™