Smart grids



Smart electricity

Efficient power for a sustainable world

10 The next level of evolution

Smart grid technologies for sustainable power

The power to change PCS 6000 STATCOM

20 Sustainable links

HVDC for a smarter grid

24 Storage for stability

The next FACTS generation

27 Smartness in control

> Integrated SCADA/DMS innovations help grid operators

33 Connected

Communication networks for smart grids

38 Closing the loop

Smart distribution management systems

Smart teamwork

Collaboration with recognized research institutes

49 Securing power

SVCs mitigate voltage collapses

Breaking ahead of expectations

PT1 embedded pole interrupter

63 Fit at 50

TrafoAsset Management™ - Proactive Services

70 Hidden treasure

Using drive data for diagnostic purposes

76 Smart metering

Monitoring energy consumption

79 The colors of intuition

Building- and room-control solutions

Railways and transportation



ABB, railways and transportation

The company's portfolio at a glance

Rail solutions to the mobility challenge

A UNIFE - ABB interview

14 On the fast track

High-speed trains

19 China's rail revolution

Transforming China's rail network

24 Greener rail for India

Upgrading India's railways

31 Switzerland by rail

Traction power for railways

35 Knowing the FACTS

FACTS in rail feeder systems

42 Static converters, dynamic performance

Frequency converters for railway electrification

48 Building on success

FSK II outdoor vacuum circuit breakers

Transforming ideas into movement

Vacuum cast coil dry transformers

55 Transforming suburban transport

Traction transformers for commuter trains

60 A perfect fit

Propulsion converters for all vehicle designs

66 Standardizing the traction motor

Modular induction traction motors

70 Dedicated service

ABB's broad service portfolio

77 Dawn of a new age

Electric vehicle charging units

82 Power from shore

Shore-to-ship power solutions

84 S³ - Speed, safety and savings

Ultra-fast earthing switch for MV switchgear

88 Electrifying history

Electric railway engineering at ABB

Energy and resources



Driving down carbon emissions

Environmental payback analyses with drives

10 Built for efficiency ABB's green building in South Africa

14 The drive to win

Direct torque control technology

19 Laying the course Electric propulsion in AHTS vessels

23 Facing the wind Alpha Ventus wind park

27 Semiconductors demystified Introduction to semiconductor technology

33 Reaching new levels ABB's UHV test center

36 Arc Guard System™

Reducing the risk of arc accidents 40 Disconnecting circuit breaker (DCB)

Air insulated substations with DCBs

47 Questionnaire

Help to make ABB Review even better

49 Collaborative process automation systems

System 800xA

Focus on productivity



The effective operator

System 800xA for the operator workplace

Safety in drives

Functional safety in AC drives

Seismic performance

Advanced seismic analyses of power products

20 Power electronic applications in utilities Semiconductors for power networks

27 Intelligent motor control

The UMC100 controller

32 Saving the best for last

Softstarters and variable-speed drives

40 Simply XTraordinary

Tmax XT family of molded case circuit breakers

46 Mobilizing transformers

400kV mobile transformers

51 Actively improving quality

PQF active filters

56 Shore-to-ship power

Reducing portside emissions

2010 index