

We create change in flow

energy monitor



Q2 2015

*Test stand at VSL, the Netherlands' National Metrology Institute (NMI)
photo by Flow Research*



Daniel Bernoulli

**Oil & Gas and Refining
Power & Renewables**

**Issues & Perspectives:
Flow Calibration**

**Global Spotlight:
International Energy Agency (IEA)**

**Company Korner:
Schlumberger acquiring Cameron**



Flow Research, Inc.

A *Worldflow* publication



Flowtime Wall Clock



EZ Faxback Response Form

Please use this form to request more information about any of the studies below. Return by mail, email or fax.

✓ Put a checkmark next to the studies you would like more information about.

New-Technology Flowmeter Studies

- The World Market for Coriolis Flowmeters, 4th Edition
- The World Market for Magnetic Flowmeters, 5th Edition
- The World Market for Ultrasonic Flowmeters, 4th Edition
- The World Market for Vortex Flowmeters, 5th Edition
- The World Market for Thermal Flowmeters
- The World Market for Mass Flow Controllers, 2nd Edition

Website

- www.flowcoriolis.com
- www.flowmags.com
- www.flowultrasonic.com
- www.flowvortex.com
- www.flowthermal.com
- www.flowmfc.com

Traditional Technology Flowmeter Studies

- The World Market for Pressure Transmitters, 4th Edition
- The World Market for Pos. Disp. Flowmeters, 2nd Edition
- The World Market for Turbine Flowmeters, 2nd Edition

- www.worldpressure.com
- www.flowpd.com
- www.flowturbine.com

Emerging Technology

- The World Market for Multiphase Flowmeters, 2nd Edition
- Multiphase: Module A: The World Market for Watercut Meters

www.flowmultiphase.com

Mass Flow Controllers

- The World Market for Mass Flow Controllers, 2nd Edition
- The World Market Update for Mass Flow Controllers

www.flowmfc.com

Cross-Technology Flowmeter Studies

- Volume X: The World Market for Flowmeters, 5th Edition
- Volume X: Module A: Strategies, Industries, and Applications
- The World Market for Natural Gas and Gas Flow Measurement, 3rd Ed.
- The World Market for Liquefied Natural Gas (LNG)
- The World Market for Oil and Oil Flow Measurement

- www.flowvolumex.com
- www.flowvolumex.com
- www.gasflows.com
- www.flowlng.com
- www.oilflows.com

Calibration

- Core Study: The World Market for Gas Flow Calibration Facilities
- Module A: The World Market for Liquid Flow Calibration Facilities

www.flowcalibration.org

Flow Research Services

- Worldflow Monitoring Service

www.worldflow.com

Name _____ Street _____

Title _____ City _____ State _____

Company _____ Country _____ Zip _____

Email _____ Phone _____ Fax _____



Return this form by mail, email, or fax to:

Flow Research

27 Water Street
Wakefield, MA 01880

www.flowresearch.com

+1 781-245-3200

+1 781-224-7552 (fax)

info@flowresearch.com

Energy Monitor

Q2 2015

Flow Research, Inc.

Energy Monitor
Editorial Team

Publisher & Executive Editor: Jesse Yoder, PhD

Associate Editors: Vicki Tuck, Leslie Buchanan, and
Norm Weeks

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880

(781) 245-3200 Fax: (781) 224-7552

www.flowresearch.com

www.worldflow.com

Copyright © 2015 Flow Research Inc. All Rights Reserved

Disclaimer

While every effort has been made to insure that this report is accurate and complete, Flow Research accepts no liability for consequences of any actions that are based on the findings in this report.

Energy Monitor Q2 2015

Publisher and Executive Editor: Jesse Yoder, PhD (jesse@flowresearch.com)

Associate Editors: Vicki Tuck, Leslie Buchanan, and Norm Weeks

Table of Contents

Issues and Perspectives: Flow Calibration	9
Global Spotlight: International Energy Agency (IEA)	12
Oil & Gas and Refining.....	14
In the News	15
Apache agrees to sell Australian operations for \$2.1 billion	15
Paul Simons named IEA Deputy Executive Director	15
H.E. Khalid Al-Falih appointed Chairman of the Board and Mr. Amin H. Nasser acting President and Chief Executive Officer of Saudi Aramco	16
BP and Sinopec set up joint venture marine bunkering business	17
Shell announces receipt of binding offer from DCC Energy to acquire its Butagaz LPG business in France	17
LUKOIL and GAZPROM sign agreements on the supplies of gas	18
LUKOIL puts the primary oil refining installation (ELOU AVT-1) into operation in the Volgograd region	18
Upcoming Trade Shows	19
Industry Pulse.....	20
API: Industry embraces new pipeline safety framework	20
Enbridge, TransCanada, Kinder Morgan working together to evaluate aerial-based pipeline safety technologies	20
ExxonMobil, Korea Institute of Technology and Korea Gas Corporation to collaborate on research and development.....	22
Scientific breakthrough will help preserve Kingdom's groundwater	22
New Projects.....	23
<i>North America</i>	
ExxonMobil begins production at Hadrian South in Gulf of Mexico	23
ExxonMobil announces Cold Lake project expansion starts production on schedule.....	23
Husky Energy begins steam operations at Rush Lake	24
Exxonmobil announces Kearl expansion project starts production ahead of schedule	24
<i>Western Europe</i>	
Statoil, Eni Norge, Lundin Norway, OMV and GDF SUEZ will collaborate on solving operational tasks tied to exploration in the Barents Sea	25
BP starts 7-year west of Shetland drilling program with new Deepsea Aberdeen rig.....	25

Table of Contents, continued

First Clair Ridge topside modules safely installed west of Shetland.....	26
<i><u>Eastern Europe / Former Soviet Union</u></i>	
Gazprom: Drilling of oil production wells starts in Chayandinskoye field	27
LUKOIL starts production tests at facilities for Kandym Early Gas Project in Uzbekistan	27
Termokarstovoye gas field brought on stream in Northern Siberia.....	28
Nord Stream II to enhance reliability of Russian gas supplies to Europe	29
<i><u>Mideast</u></i>	
Qatar Petroleum invites bids for Al-Shaheen oil field operation and development	29
<i><u>Africa</u></i>	
Repsol makes new gas discovery in Algeria.....	29
Start up of Kizomba Satellites fields offshore Angola	30
Eni: new gas and condensates discovery offshore Libya.....	30
<i><u>Asia/Pacific</u></i>	
Petronas achieves first oil from the Bukit Tua field in Indonesia.....	31
<i><u>Latin America</u></i>	
Repsol makes new gas discovery in Bolivia.....	31
Pemex agrees to supply crude oil to the Korean company Hyundai	32
ExxonMobil announces significant oil discovery offshore Guyana	32
LNG and Fracking	33
Ophir Energy plc appoints Golar as midstream partner for Fortuna FLNG Project in Equatorial Guinea	33
LNG America to provide Scandrill clean LNG fuel for drilling operations in Gulf Coast region.....	34
Anadarko selects contractor for initial onshore Mozambique LNG development	34
Queensland Curtis LNG plant starts production	35
Alaska LNG project LLC receives conditional authorization to export LNG to non-Free Trade Agreement countries	35
New milestone achieved with the steel cutting of the PETRONAS floating LNG2	36
Shell takes final investment decision for the Appomattox deep-water development in Gulf of Mexico.....	37
Company Korner: Schlumberger acquiring Cameron	37
Power & Renewables	40
In the News	41
Caterpillar expands renewable power generation offerings in conjunction with First Solar.....	41
US power sector emissions poised to fall to two-decade low in transformative year	42
Iberdrola Renewables announces wind power agreement with Tri-State Generation and Transmission Association	42
Super collaboration: GE and Cascade apply new technologies and super-computer capabilities to improve gas turbine combustion.....	43
GE inks investment deal with TerraForm Global to boost international wind growth.....	43

Table of Contents, continued

Upcoming Trade Shows	44
Industry Pulse.....	45
86% renewable by 2050 for China? Government study focuses on the future.....	45
IEA: Clean-energy innovation essential to meeting climate goals	45
Blattner Energy announces an industry record 25,000 megawatts of wind power.....	46
Energy Dept: New wind energy technology unlocks wind development opportunity in all 50 states.....	46
Governor Ige signs bill setting 100 percent renewable energy goal in power sector	47
European renewable energy progress report.....	47
India beats goal by increasing renewable energy capacity by 13%.....	48
New Projects.....	49
<i>North America</i>	
Equinix advances sustainability program with clean energy from Iberdrola Renewables	49
<i>Western Europe</i>	
PDO, GlassPoint Solar building one of world’s largest solar plants for Amal oil field	49
<i>Africa</i>	
Mainstream celebrates official opening of Jeffreys Bay, the biggest wind farm in Africa	51
<i>China</i>	
Apple announces new environmental initiatives in China.....	51
<i>India</i>	
Emerson to automate new NTPC Limited power plant that will help meet India’s growing energy needs.....	52
<i>Asia/Pacific</i>	
Enel green power signs agreement with Marubeni on Asia-Pacific renewables cooperation ...	53
<i>Latin America</i>	
Presidents of Brazil and Uruguay inaugurate Suzlon powered 65 MW Wind Energy Park in Uruguay	53

Copyright ©2015

All data and information in this report is proprietary and copyrighted by Flow Research, Inc. However, clients may reproduce this material internally for members of their own organization.

Disclaimer

While every effort has been made to ensure that this report is accurate and complete, Flow Research accepts no liability for consequences of any actions that are based on the findings in this publication.

Flow Research, Inc.

27 Water Street, Wakefield, MA 01880

+1 781-245-3200 or 800-245-1799

+1 781-224-7552 (fax)

info@flowresearch.com

www.flowresearch.com





Boulder Canyon, Boulder, Colorado

Photo by Flow Research

The **Energy Monitor** is part of the Worldflow Monitoring Service. Other publications include the **Market Barometer** and **Flash Reports**. **Worldflow Online** provides more in-depth information and analysis about the instrumentation business.

Here is our upcoming **Worldflow** schedule:

Q3 2015

Market Barometer — October 2015

Energy Monitor — November 2015

Q4 2015

Market Barometer — December 2015

Energy Monitor — January 2016

Q1 2016

Market Barometer — February 2016

Energy Monitor — March 2016