
Overviews of the Core Study and Modules A through D

Module A: Natural Gas Producers and Measurement Worldwide

Module B: Natural Gas Producers and Measurement in Mideast/Africa

Module C: Custody Transfer of Natural Gas

Module D: Strategies, Industries and Applications

Oman Gas Company
All photos by Flow Research

www.gasflows.com
A Modular Approach to the Natural Gas Flow Market

The World Market for Natural Gas and Gas Flow Measurement study features a core gas flow measurement study and four modules. The four modules can be individually ordered as standalone reports. Taken together, however, they provide the most comprehensive picture of the worldwide oil flow market from multiple perspectives. The in-depth research in the modules complements and builds on the detailed results of the Core Study. These modules show where growth is occurring and where it is not, and where to expect the highest returns. Strategies for succeeding in regional and worldwide markets are provided, along with descriptions of industries and applications that are key to understanding a complex marketplace.

Flow Research has been following the natural gas flow market regularly since we published the first edition of our worldwide gas flow measurement study in September 2004. We have also done user interviews that show that the interest in natural gas flow measurement remains at a very high level. Our objective is to provide the information you can use to make informed decisions in pursuing new business and higher returns in this market. This modular study has multiple goals:

- Determine worldwide supplier market size for natural gas flow measurement in 2014 for each technology type
- Forecast market growth through 2019 for all eight flow technologies used in this market
- Identify the industries and applications where natural gas flow measurement is used and provide shipments by application and industry
- Identify market growth sectors
- Create company and country profiles of the main suppliers into the natural gas flow measurement market as well as the main natural gas providers throughout the world, with a special focus on the Mideast
- Analyze products for the main companies selling into the natural gas flow measurement market
- Provide product descriptions and average selling prices in this market
- Offer strategies to manufacturers for selling into the natural gas flow measurement market
- Analyze the custody transfer market for natural gas

The World Market for Natural Gas and Gas Flow Measurement


Module A looks at the worldwide market by geographic region, then follows with in depth coverage of each region (except Mideast/Africa), including major countries, and the natural gas market.

Module B is wholly dedicated to coverage of the Mideast/Africa region, with regional and country-by-country data on flowmeter usage and the gas markets there.

Module C covers the worldwide market for custody transfer of natural gas.

Module D covers strategies, industries & applications.
A Unified Approach to the Natural Gas Flow Market

Throughout The World Market for Natural Gas and Gas Flow Measurement series, we use unified sets of segmentations to make data easy to compare. These include:

**Flowmeter technologies**

**New-technology Flowmeters**
- Coriolis
- Ultrasonic
- Vortex
- Thermal

**Traditional Technology Flowmeters**
- Differential Pressure
- Primary Elements
- Positive Displacement
- Turbine
- Variable Area

**Geographic regions**
- Worldwide
- North America
- Western Europe
- Eastern Europe/FSU (Former Soviet Union)
- Mideast/Africa
- Japan
- China
- Asia/Pacific
- Latin America

**Industries**
- Oil & Gas
- Refining
- Chemical
- Food & Beverage
- Pharmaceutical
- Pulp & Paper
- Metals & Mining
- Power
- Water/Wastewater
- District Energy
- Other

**Market shares by gas flowmeter type**

**Profiles of gas flowmeter suppliers**

**Regional books: Overall structure**

I. The Gas Flowmeter Market (by region)
- Growth Factors
- Market Size and Forecasts for Flowmeters

II. Natural Gas Data (by region and country)
- Production
- Reserves
- Imports
- Exports
- Consumption

III. Gas Market (by country)
- Country Overviews of leading countries in the region
- Country Natural Gas Data of leading countries
- Country Natural Gas Producers (profiles of leading producers)

How it all began — The idea for this series of studies started with three visits I made to the Mideast. My goal was to interview oil and natural gas producers to understand what types of flowmeters they were using, what flowmeter types they were planning to buy, and what projects were upcoming.

I completed 15 interviews in Saudi Arabia, the UAE, Oman, and Qatar. During these interviews I realized how important it is to understand the natural gas producers in order to really grasp the gas flowmeter market. These are the companies that set the trends with their buying decisions and their massive projects.

Generalize this insight to the whole world, and you have Module A. Module B focuses specifically on Mideast/Africa and shares business strategies I learned from my trip.

– Dr. Jesse Yoder, President, Flow Research, Inc.
Gas is hotter than ever, and that means gas flow measurement is also on the rise: Gas flow measurement and its associated revenues have grown significantly during the last few years.

Natural gas, a major source of energy for hundreds of years, is now an even more valued commodity that offers a cleaner and more economical alternative to oil. New technology is making recovery and delivery of natural gas more feasible than ever before, even from subsea wells. Natural gas reserves in North America and elsewhere are making it possible for Western countries to be less dependent on foreign suppliers.

In addition to the expansion in demand for natural gas and related energy products, market drivers include significant new capital project growth in large regional economies such as India, China, and the Mideast.

Flow Research believes this is an optimal time to quantify the growth in the gas flow market, and to take another in-depth look at an expanding market. We completed the 2nd Edition of this series of studies in 2012 and have continued following the market closely since then.

The Core Study, The World Market for Gas Flow Measurement, 3rd Edition will determine the size of the gas flow measurement market in 2014. It will show where growth is occurring (and where it is not) and where to expect the highest returns. The Core Study has multiple goals:

- Determine worldwide market size for gas flow measurement in 2014
- Determine worldwide market shares for the gas flow measurement market in 2014
- Forecast market growth through 2019 for all eight flow technologies used in this market
- Identify market growth sectors
- Create company profiles of the main suppliers into the gas flow measurement market
- Analyze products for the main companies selling into the gas flow measurement market
- Provide product descriptions and average selling prices in this market
- Analyze factors contributing to and limiting growth

The Core Study will determine the market size of the gas flow measurement market in 2014, with forecasts to 2019 for each technology type. It will also determine worldwide market shares for the gas flow measurement market in 2014.
Key Issues Addressed in

The core study and its modules address the following key issues:

- What is the technological state of the market today?
- Which applications are growing – and which are not?
- What regions of the world hold the greatest growth prospects – and why?
- Are there new competing technologies to the traditional devices – and what are they?
- What is the current breakdown in use between insertion and inline device types?
- Are there new gas flow measurement standards that must be understood?
- What industries represent the greatest growth potential – and why?
- What are the features that end-users are looking for in gas flow measurement?

Seventeen Chapters of In-depth Market Analysis

Chapter One: Executive Summary

Chapter Two: Scope and Method

Chapter Three: Paradigm Case Analysis

Chapter Four: The Worldwide Gas Flowmeter Market
Flowmeter technology overview
Shipments of Gas Flowmeters by Flowmeter Type Worldwide

Chapter Five: New-technology Gas Flowmeters
Growth Factors for New-technology Gas Flowmeters
Shipments of New-technology Gas Flowmeters by Flowmeter Type Worldwide

Chapter Six: Coriolis Gas Flow Products, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Seven: Ultrasonic Gas Flow Products, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Eight: Vortex Gas Flow Products, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Nine: Thermal Gas Flow Products, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Ten: Traditional Technology Gas Flowmeters
Growth Factors for Traditional Technology Gas Flowmeters
Shipments of Traditional Technology Gas Flowmeters by Flowmeter Type Worldwide

Dr. Jesse Yoder on the road to Dubai
Chapter Eleven: Differential Pressure Gas Flow Transmitter Products, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Twelve: Primary Elements Used in Gas Flows, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Thirteen: Positive Displacement Gas Flow Products, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Fourteen: Turbine Gas Flow Products, Market Size, and Forecasts
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Fifteen: Variable Area
Advantages and Disadvantages, Product Analysis, Growth Factors, Market Size, and Forecasts

Chapter Sixteen: Market Shares
Provides market shares of the major suppliers of flowmeters for gas flow measurement. Market shares are provided for the total worldwide market for each flow technology.

Chapter Seventeen: Supplier Profiles
Provides information on all major suppliers, including company overview, background, products, and strategy.

Supplier profiles
ABB
Aichi Tokei Denki
Air Monitor
Ametek: Solartron ISA
Azbil
Badger Meter
Brooks Instrument
Bopp & Reuther
Cameron
Emerson Process Management:
Bristol, Daniel, Micro Motion, Rosemount
Elster Group
Endress+Hauser
FLEXIM
Fluid Components International (FCI)
FMC Technologies
Fuji Electric
GE Measurement & Control Solutions
Hoffer Flow Controls
Honeywell, including RMG Group
IDEX: Faure Herman, Liquid Controls
Itron
KROHNE
OVAL Corporation
Schneider Electric/Foxboro
SICK
Siemens
Sierra Instruments Inc.
SMAR
Tokyo Keiso
Yokogawa
Even we didn’t know how exciting and comprehensive this study would become when we started researching the gas market following three separate trips to the Mideast. Nor did we realize how hot the natural gas market itself would become, especially in some regions. Or how hot some of the regions would become! But now we know. And you can too.

Flow Research is proud to offer you an in-depth look at the natural gas markets around the world, including flowmeter usage in those regions and countries, plus analysis of what all of it means to control and instrumentation suppliers who sell into the gas industry.

We think you’ll be amazed at the wealth of information we’ve pulled together for you – all in one package, at your fingertips.


- Worldwide, regional, and country-by-country data on flowmeters and gas markets
- Data including all countries participating in the natural gas market
- Detailed information on each geographic region (except Mideast/Africa; see *Module B*) including major countries, and natural gas suppliers
- Flowmeter growth factors, flowmeter market size and forecasts
- Production, reserves, consumption, imports, and exports

Our goal is to help you understand – in terms of regions and countries – where natural gas is located and how it is used. We want to put you ahead of the curve in the natural gas market so you can enhance your instrumentation sales and marketing efforts around the world.

We’ll tell you:

- How much produced natural gas is being exported and imported, and from where to where
- How much natural gas is being consumed, and where
- Which countries and regions are the top reserve holders, consumers, producers, importers
- Whether gas comes into and out of certain countries by pipeline or by LNG
- Which flowmeter types are being used where
- Which gas flowmeter markets are the fastest growing
- Regional trends underlying growth in the various flowmeter technologies
Gas Flowmeter Market

Module A covers the 2014 market size, with a forecast through 2019, for the eight flow technologies used in the gas industry worldwide by (all) eight geographic regions. It then gives more detailed information for each of seven of the eight geographic regions. (The Mideast/Africa region needs a whole module to itself; see Module B.)

The flowmeter data in this study provides a guide to which gas flowmeter markets are the fastest growing and which flowmeter types are being used in which region. In fact, the flowmeter data is broader than natural gas measurement, including industrial gases, greenhouse gases, and other gases.

Key topics addressed in Module A

Gas flowmeter data by type and region:
- The gas flowmeter market by region and country, including current market size and yearly forecasts through 2019
- Trends in gas flow measurement

Natural gas markets by worldwide, region, and country:
- The amount of dry natural gas being produced, exported, imported, and consumed by country, region, and worldwide from 2011 to 2014 (the last year data is available for all countries)
- Natural gas reserves from 2011 to 2014 (the last year data is available for all countries)

Gas market by region and country: analysis and data on production, reserves, imports, exports, consumption, leading companies, LNG strategies, major pipelines, projects, strengths, and weaknesses

Major producers of natural gas in the various regions: company history, organization, and business interests, including pipelines and field reserves, projects, partnerships, and affiliations

Gas technology overview, including definitions and terminology.

The Books of Module A

This module contains so much information that it is organized into four separate books to make it easier to handle and to find specific sections.

Book One: Worldwide View

Information in this book includes:
- overview data and worldwide analysis by region of the gas flowmeter market and the natural gas market, including technically recoverable shale gas resources
- discussion of production and exploration
- gas flow measurement worldwide
- a natural gas glossary
Regional Books: Overall Structure

I. The Gas Flowmeter Market (by region)
   • Growth Factors
   • Market Size and Forecasts for Flowmeters

II. Natural Gas Data (by region, including all countries participating in the natural gas market)
   • Production
   • Reserves
   • Imports
   • Exports
   • Consumption

III. Gas Market (by country)
   • Country Overviews of leading countries in the region
   • Country Natural Gas Data of leading countries
   • Country Natural Gas Producers (profiles of leading producers)

Book Two: The Americas

North America
   • United States: Chevron, ConocoPhillips, ExxonMobil
   • Canada

Latin America
   • Mexico: Petroleas Mexicanos (PEMEX)
   • Caribbean: Trinidad and Tobago
   • South America: Argentina, Brazil, Colombia, Peru, Venezuela

Book Three: Western Europe, Eastern Europe, FSU

Western Europe
   • France
   • Netherlands: Royal Dutch Shell
   • Norway: Statoil
   • United Kingdom: BP

Eastern Europe/FSU
   • Russia: Gazprom

Book Four: Asia

Japan

China
   • China National Petroleum Corporation, PetroChina

Asia/Pacific
   • Australia, India, Indonesia, Malaysia, Thailand
Flow Research’s new edition of our study on natural gas producers in Mideast/Africa is based on a long interest in this significant region, having visited it several times. *Module B: Natural Gas Producers and Measurement in Mideast/Africa*, has the same in-depth focus. *Module B* is oriented towards instrumentation companies that want to increase their sales to the Mideast.

The previous edition of this module, *Module B: A Strategic Approach to Doing Business in Mideast/Africa*, grew out of onsite interviews with 15 natural gas producers in the United Arab Emirates (UAE), Saudi Arabia, Qatar, and Oman – to better understand gas flow measurement trends in this region. We asked companies what kinds of flowmeters they are using and what their expectations are for the future. We have continued our research of this region and of the gas market therein. The result provides a very clear picture of flowmeter usage in the Mideast.

**Module B includes:**

**Flowmeter usage in the Mideast and Africa**
- Natural gas production, imports, exports, consumption, and reserves by country
- Relationships among the companies
- Flowmeter usage and expectations for the future
- Strategies for marketing to producers
- Country summaries and company profiles of the largest producers

**Rationale for Study**
Gas flow measurement applications and their associated revenues have grown significantly during the last few years. A major driver of this growth worldwide has been the expansion in demand for natural gas and related energy products. There has also been significant new capital projects growth in the Mideast during this time as well. Given the recent volatility of the major oil and gas countries in the Mideast and Africa, we believe that this is an optimal time to quantify the growth in this market, and to take another in-depth look at an expanding market.

**Gas and Flowmeter Data by Regions and Countries**
Module B provides significant data on flowmeter usage and the gas market. The study highlights gas developments by region, country, and suppliers. An overview chapter features comparison data on the largest suppliers.
The study also provides country-by-country data:

- Gross natural gas production
- Proved reserves of natural gas
- Imports of dry natural gas
- Exports of dry natural gas
- Dry natural gas consumption

Our analysts also share regional trends underlying growth in the various technologies.

Chapters on the regions contain profiles on major gas-producing countries and companies:

**Mideast**

- Bahrain
- Iran: National Iranian Oil Company (NIOC)
- Iraq: Republic of Iraq, Ministry of Oil
- Kuwait: Kuwait Petroleum Corporation (KPC)
- Oman: Petroleum Development Oman, Oman Gas, Oman LNG
- Qatar: Qatar Petroleum, Qatargas, Rasgas
- Saudi Arabia: Saudi Aramco, SABIC, Petrokemya, NIOC, SADAF, Chevron Phillips
- Syria
- Turkey
- United Arab Emirates: ADNOC, GASCO, Dolphin Energy
- Other Countries

**Africa**

- Algeria: Sonatrach
- Angola
- Egypt: Egyptian Natural Gas Holding Company (EGAS)
- Libya: National Oil Company (NOC)
- Nigeria: Nigerian National Petroleum Corp. (NNPC)

**Key topics addressed in Module B**

- Natural gas production, imports, exports, consumption, and reserves by country & region
- Flowmeter data by type and region
- Company and country/regional profiles of the large producers
- Relationships among the companies
- Strategies for marketing to producers
- Trends in flow measurement relative to these large companies
Flow Research is excited about the new edition of our study, *The World Market for Custody Transfer of Natural Gas*. The first edition was immediately popular. This new edition also covers natural gas, of course, but includes focus on some other gases, as well.

**The purposes of Module C:**

- Determine worldwide market size and market shares for custody transfer of natural gas in 2014
- Forecast market growth for all types of custody transfer flowmeters through 2019
- Identify the industries and applications where custody transfer flowmeters are used, as well as market growth sectors
- Analyze products for the main companies selling into the custody transfer flowmeter market
- Provide strategies to manufacturers for selling into this flowmeter market
- Profile the main suppliers of custody transfer flowmeters

**Consumption of Natural Gas Rising Fast**

The demand for natural gas is increasing substantially. According to the US Department of Energy’s Energy Information Administration (EIA), consumption of natural gas is expected to grow significantly through 2016. Custody transfer is obviously one of the most integral steps in the supplier to consumer process chain. Natural gas changes hands, or ownership, at a number of points between the producer and the end-user. These transfers occur at custody transfer points, and are tightly regulated by standards groups such as the American Gas Association (AGA). Other geographic regions have their own regulatory bodies. There are several flowmeter technologies in this market: some are well-established, whereas others are emerging.

New-technology flowmeters such as Coriolis and ultrasonic offer increased reliability, reduced pressure drop, and high accuracy. At the same time, suppliers are making improvements to the traditional technology meters, improving their performance. Turbine flowmeters are being made with stronger bearings, offering longer life. And improvements in pressure transmitters mean greater stability and accuracy when they are used to make pressure or flow measurements.

**An optimal time to quantify the custody transfer flowmeter market**

We believe that this is an optimal time to quantify the existing size and future growth in the custody transfer flowmeter market, and to take an in-depth look at the new technologies, manufacturers, and applications in what promises to be one of the fastest growing markets in the worldwide flowmeter industry.
Module C provides

- 2014 market data on Coriolis, ultrasonic, differential pressure (DP), and turbine flowmeters used for custody transfer applications
- A custody transfer product analysis for each flowmeter type
- Growth factors for each type of flowmeter
- Shipments by geographic region, including revenues and units
- Market shares worldwide and by geographic region for each flowmeter type
- Comparison of flowmeter types used in custody transfer
- Flowmeter market growth projections through 2019

In conducting this study, we contacted all known manufacturers of gas custody transfer flowmeters worldwide. Flow Research has identified recent entrants into this growing market. With profiles of companies and products, we assemble a comprehensive picture of the total custody transfer flowmeter market.

We asked suppliers to provide detailed information about geographic segmentation, industries sold into, types of flowmeters sold, and many other product segments. As a result, the study will identify where growth is occurring in the market, as well as the underlying factors for that growth. Our already completed end-user survey provides additional perspectives on this market.

Supplier Profiles

ABB
Ametek: Solartron ISA
Azbil
Cameron
Canalta Controls
Elster Group
Emerson Process Management: Bristol, Daniel, Micro Motion, Rosemount
Endress+Hauser
FMC Technologies
GE Measurement & Control Solutions: Dresser
Hoffer Flow Controls
Honeywell, including RMG Group
KROHNE
Schneider Electric/Foxboro
SICK
Siemens
SMAR
TMCo (The Measurement Company)
Yokogawa
Module D
Strategies, Industries, & Applications
Q4 2015  www.gasflows.com

Flow Research is doing a new edition of our study Module D, Strategies, Industries, & Applications. Module D has multiple purposes:

- Provide a world view of the market and identify future growth areas
- Discuss recent political developments and how they may affect market forces in the near future
- Report on product lines and shipments worldwide for Coriolis, ultrasonic, vortex, thermal, differential pressure, primary elements, positive displacement, turbine, and variable area flowmeters
- Discuss distribution channels and customer types
- Provide forecasted growth rates by both application and industry
- Provide realistic strategies for success for those entering or already in the flowmeter market

Rationale for Study
Gas flow measurement applications and their associated revenues have grown significantly during the last few years. A major driver of this growth worldwide has been the expansion in demand for natural gas and related energy products. There has also been significant new capital projects growth in large regional economies such as India, China, and the Mideast during this time. Given the recent volatility of the major oil and gas countries in the Mideast and Africa, we believe that this is an optimal time to quantify the growth in this market, and to take another in-depth look at an expanding market.

Module D provides shipments by application and industry for Coriolis, ultrasonic, vortex, thermal, differential pressure, primary elements, positive displacement, and turbine flowmeters.

Breakouts by industry and application
Industries
Data includes dollars and percentages of shipments by flowmeter type in 2014 and forecasted for 2019 in the following industries:

- Oil & Gas
- Refining
- Chemical
- Food & Beverage
- Pharmaceutical
- Pulp & Paper
- Metals & Mining
- Power
- Water/Wastewater
- District Energy
- Other
### Applications by Gas Flowmeter Type

This study segments applications differently for each type of gas flowmeter. The following are the applications included for each type of flowmeter:

#### New-Technology Flowmeter Applications

**Coriolis**
- Custody Transfer of Natural Gas (CTNG)
- Custody Transfer of Industrial Gases
- Compressed Natural Gas (CNG)
- Other

**Ultrasonic**
- Custody Transfer of Natural Gas (CTNG)
- Process Gas Measurement
- Flare/Stack Gas
- Other

**Vortex**
- Gas
- Liquid
- Steam

**Thermal**
- Continuous Emissions Monitoring (CEM)
- Flare Gas/Flue Gas
- Landfill Gas Recovery
- Biogas Recovery
- Biomass Fermentation and Recovery
- Coal Mine Methane Recovery
- Boiler Inlet
- Wastewater Treatment
- Compressed Air
- Natural Gas Submetering

#### Traditional Tech Flowmeter Applications

**Differential Pressure (DP) Transmitters and Primary Elements**
- Liquid
- Gas
- Steam
- Air

**Positive Displacement**
- Utility/Billing
- Other

**Turbine**
- Custody Transfer (gas)
- Utility/Billing
- Other
The Flow Research Founding Sponsor Program

To produce studies that most closely match our clients’ needs, Flow Research instituted the Founding Sponsor Program. This program enables companies who wish to participate at a high level in a study’s research to influence its scope and segmentation. In addition, Founding Sponsors receive regular updates from Flow Research on study progress, and receive a significant discount on the regular price of the study.

Procedure: Early in the planning phase of a study, Founding Sponsors receive a proposal that includes the proposed segmentation. Founding Sponsors can propose additional segmentation, and can also suggest changes to the proposed segmentation. While the decision to adopt particular segmentation ultimately lies with Flow Research, and is based on input from all contributors, we will do our best to accommodate the specific needs of each of our clients.

During the research phase of a study, Flow Research will issue regular reports that provide updates on the progress of the research. These reports will be sent to Founding Sponsors, who are then invited to provide any additional input or comments into the study.

Being a Founding Sponsor requires making an early commitment to purchase the study. However, in return, Founding Sponsors receive a significant discount off the regular price of the study. Payment can be made either in one amount at the beginning of the study, or split into two, with the second payment due upon delivery of the study.

For additional details, or to find out how the Founding Sponsor program applies to any particular study, please contact Flow Research. We look forward to working with you!

If you have any questions about the Founding Sponsor program, please contact Norm Weeks at +1 781 245-3200, or norm@flowresearch.com.
Flow Research

Dr. Jesse Yoder is President of Flow Research Inc., a company he founded in 1998 and the only market research company whose primary mission is to research flowmeter, calibration, level device, and other process control instrumentation markets. Dr. Yoder has 28 years of experience as a writer and analyst in process control and instrumentation. Since 1990, he has written more than 180 market research studies, most of them about flow and instrumentation. Information about Flow Research studies can be found at www.flowstudies.com or the specific websites in the studies list below. Dr. Yoder has written more than 240 articles on flow and instrumentation for trade journals. Links to many of these can be found at www.flowarticles.com. He has also authored two books, Shades of Experience includes discussion of viewpoint pluralism. The Tao of Measurement, coauthored with Dick Morley, and published by the ISA, deals with the past, present, and future of flow, sensors, and measurement. Dr. Yoder holds a patent for a new type of flowmeter. He started the Flowmeter Recalibration Working Group (www.frwg.org). The purpose of this group is to arrive at a group of criteria that end-users can employ to determine if their flowmeters need to be recalibrated.

Belinda Burum, Vice President, worked in high tech for 16 years as a writer and marketing communications manager. She joined Flow Research in 2002, and has worked on many projects.

Norm Weeks, Senior Market Analyst, joined Flow Research in November. His contributions in development, research and writing are significant, including involvement with studies, custom projects, White Papers, and the Worldflow quarterlies, Energy Monitor and Market Barometer.

Leslie Buchanan, Research Assistant and Publication Production Assistant, joined Flow Research in March 2010. At first working with the database, outreach and publication formats, she has become involved in many capacities with our studies, Worldflow and other publications.

Nicole Riordan, Executive and Marketing Assistant, joined Flow Research in 2009. She capably handles a wide variety of essential office functions, and also assists with our marketing and direct outreach efforts.

Victoria Tuck, Administrative Assistant, joined Flow Research in June, 2012. She assists with administrative and other tasks, including database, outreach, and the Worldflow publications.

Christina Glaser, Website Maintenance and Research Assistant, joined Flow Research in October 2010. In addition to general assistance, she took on the major role of refreshing, improving and maintaining our many company websites.

Rich West, Database and Research Assistant, joined Flow Research in 2014. He works with our database and outreach, assisting with customer liaison, and providing input and updates to manufacturer databases that are maintained for a variety of research purposes.

Overviews of Core Study + Modules A through D

Why Flow Research?
- We specialize in flowmeter markets and technologies.
- We have researched all flowmeter types.
- We have interviewed gas flow end-users onsite in many countries.
- We have more than ten years of historical data on the gas flow measurement market.
- We follow the flowmeter and energy markets on a quarterly basis through our Market Barometer and Energy Monitor publications.