Chevron's Application of the 'SANGEA Emissions Estimating System'

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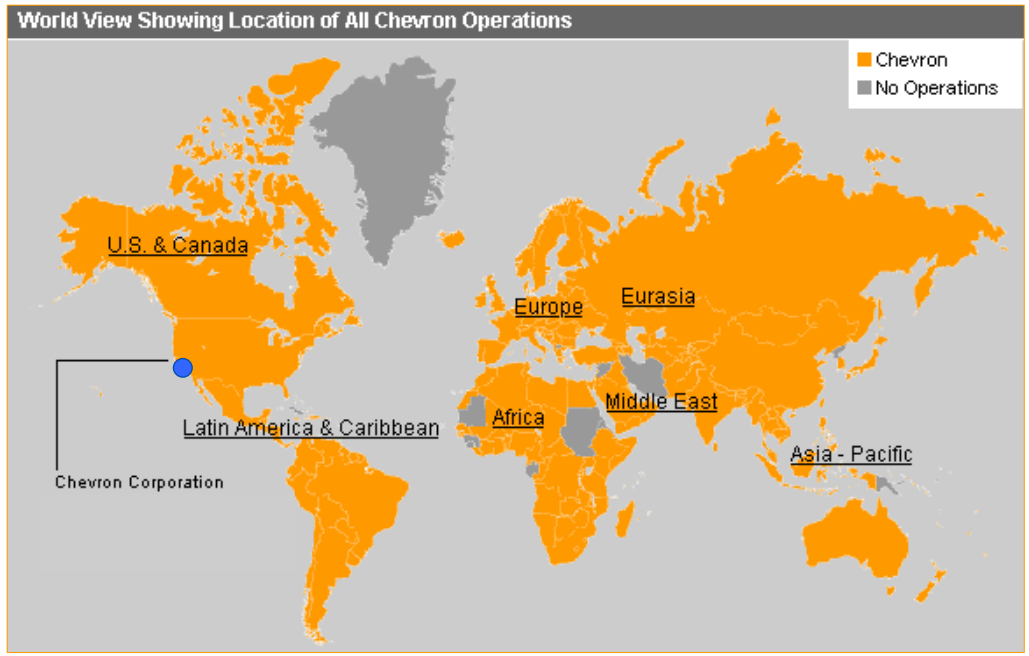
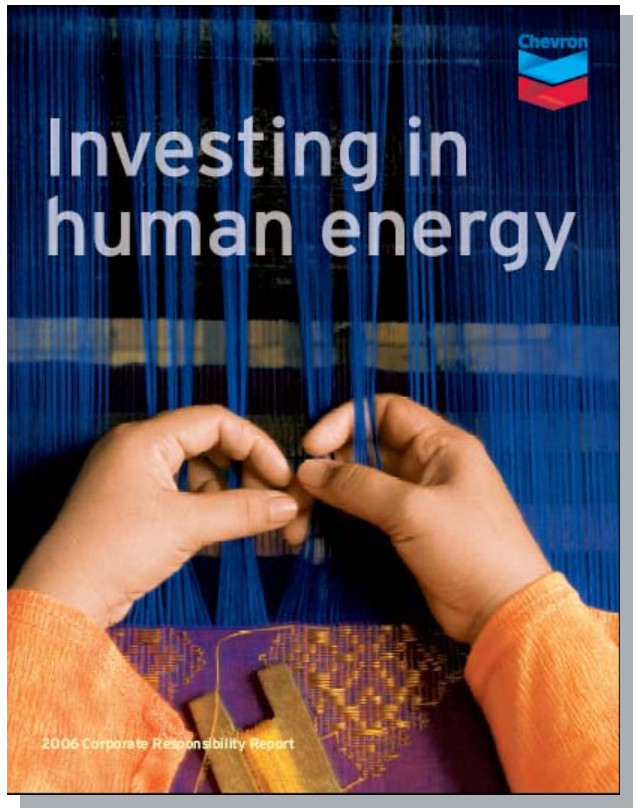
Global Environmental Challenge

- To find ways to provide and use reliable, affordable energy while reducing the long-term growth in greenhouse gas emissions:
  - As a company with global operations, we are respectful of the decisions on GHG management that are made by the states and 180 nations where we operate
  - Chevron believes that although fossil fuels are a finite resource, they will continue to meet the majority of global energy demands for at least the next 30 years



Concerns about Climate Change:
Chevron's response

- Integration of greenhouse gas emissions management into Chevron's business decisions:
  - Operating companies and business units are undertaking many business-driven activities that reduce GHG emissions and increase energy efficiency
  - We have developed a centrally-coordinated, comprehensive program to manage GHG emissions, known as the 'Four-fold Plan of Action'
  - Underlying these activities -- and helping to assess their results -- is a robust *greenhouse gas emissions inventory* for Chevron's worldwide operations



Chevron's Business-driven Response:
Overview of strategy and actions

Strategy element	Key actions
1. Reducing emissions of greenhouse gases and increasing energy efficiency	Set GHG emissions goal (*generally one year out*)
	Implement energy efficiency programs
	Overcoming gas-to-market barriers: established standards -- and taking action -- to reduce venting & flaring of natural gas
	Analyze cost of carbon scenarios in capital project planning
2. Investing in research, development and improved technology	Ongoing research and technology development, e.g. carbon dioxide capture & storage in geologic formations
3. Pursuing business opportunities in promising, innovative energy technologies	Offer services to help organizations implement energy efficiency, renewable and alternative energy projects
	Selective investments in alternative and renewable technologies, e.g., geothermal development, hydrogen business unit
4. Supporting flexible and economically sound policies and mechanisms that protect the environment.	Engagement under the Kyoto Protocol: comply with European Union Emissions Trading Scheme and develop projects under the Clean Development Mechanism
	Ongoing public policy activities

Source: adapted from 2004 CVX CR Report

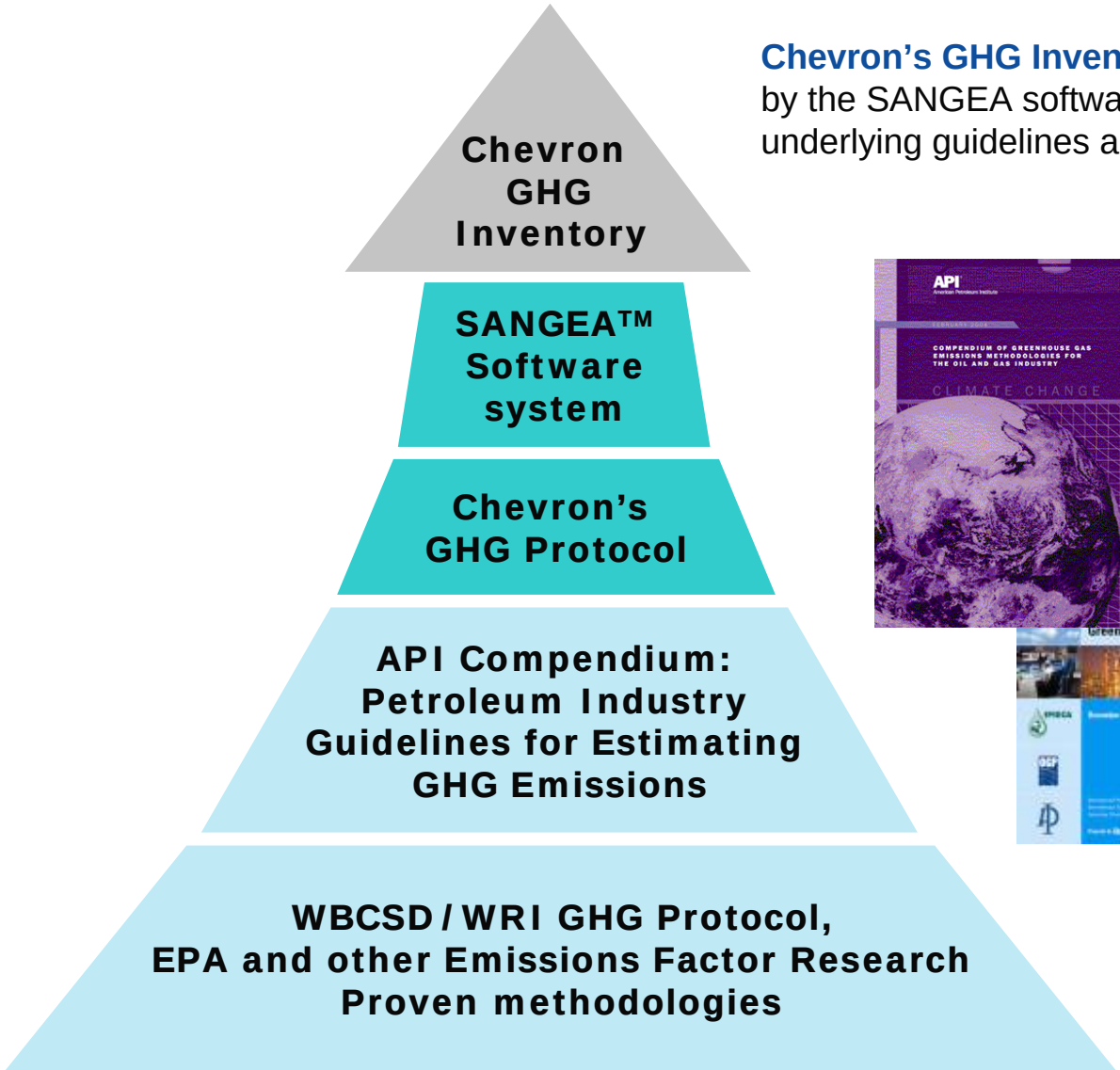
Management of GHG Emissions:

Based upon consistent m*easurement*

‘Characteristics’ of a robust greenhouse gas emissions inventory:

- Relevance – define appropriate boundaries
- Completeness – account for all GHG emissions within boundaries
- Accuracy – ensure minimal inaccuracies; always improving
- Transparency – address in factual, coherent and auditable manner
- Consistency – Use consistent methods / measurements

Management of GHG Emissions:
Based upon consistent m*easurement*



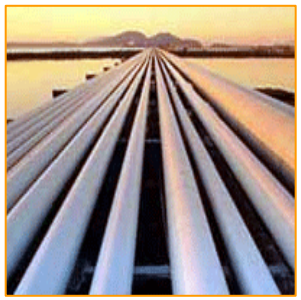
Chevron's GHG Inventory, generated by the SANGEA software, is based upon underlying guidelines and protocols

Inventory Overview:
The SANGEA™ Emissions Estimating System

Chevron-developed SANGEA™ software, now offered via API, plays a key role:

- Scoped for worldwide data on the following:
  - Greenhouse gases (CO2, methane and nitrous oxide emissions)
  - Criteria pollutant emissions
  - Energy use information
- Enables the user at an operation or facility to:
  - Enter monthly operating data
  - Calculate emissions
  - Perform data analyses
  - Create facility reports

SANGEA™ Emissions Estimating System:
Structured to enable comprehensive analysis



Decentralized Data Collection, Organized around *Reporting Entities*

- In 2007, 107 Chevron Reporting Entities are reporting GHG emissions with the SANGEA™ tool
- The user defines the reporting 'entity', which can be a single unit, a facility, group of facilities, an entire business unit, etc.

Organizational Boundaries

- Operated only
- Equity basis

Operational Boundaries

- Direct emissions
- Indirect emissions
- Energy export

SANGEA™ Emissions Estimating System:

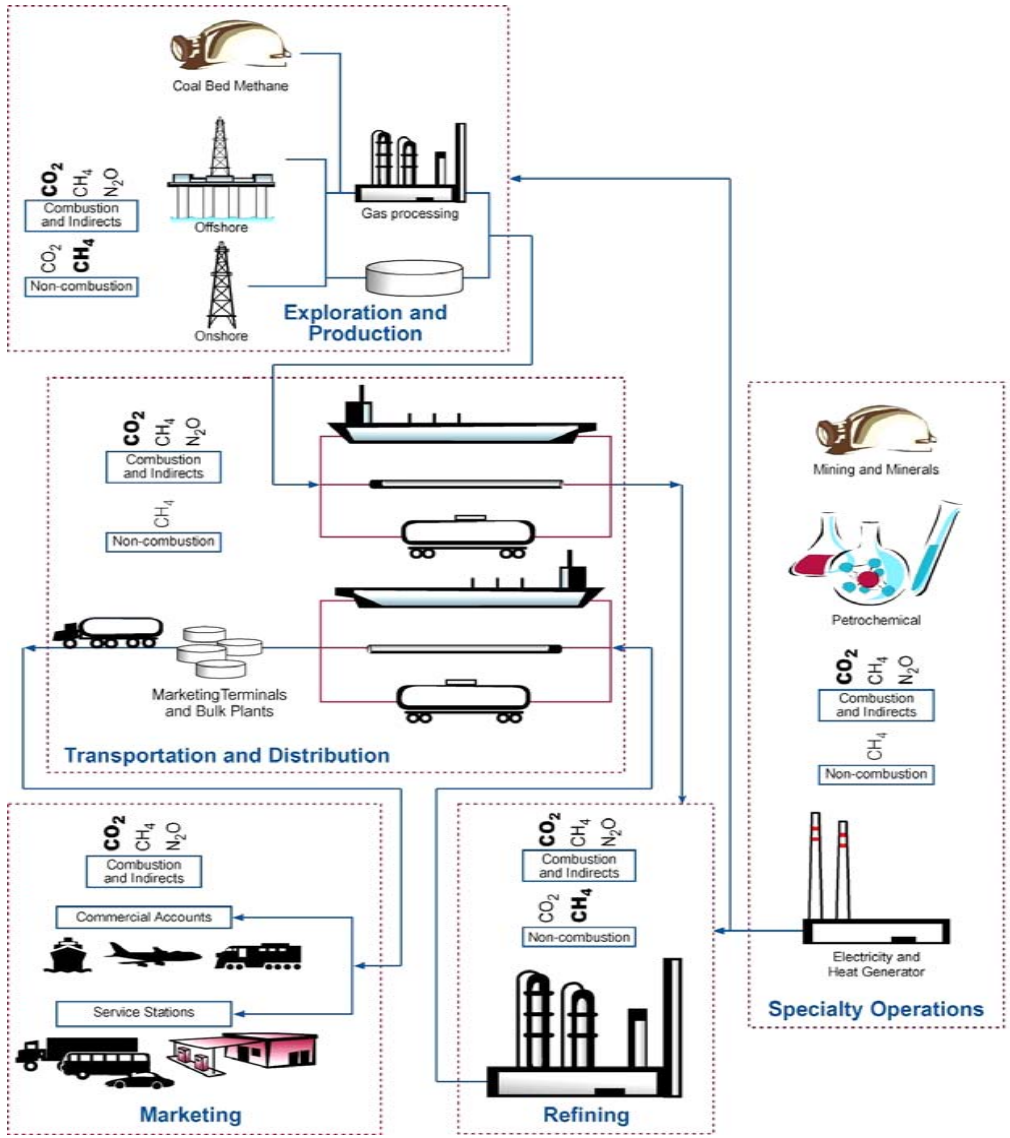
Applicable to all parts of our business

By Segment

- Exploration & production
- Transportation
- Distribution
- Refining
- Retail marketing

By Process

- Onsite fuel consumption
- Process emissions
- Flaring
- Venting
- Fugitive emissions
- Indirect emissions
- Onsite waste treatment



SANGEA™ Emissions Estimating System:
Sample of results

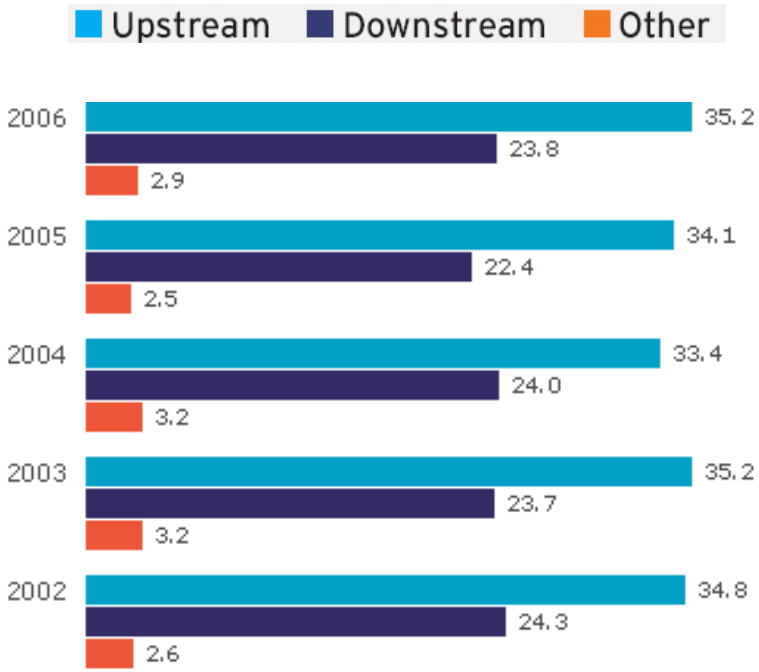
- **The reporting entities' summary sheets are data-rich** *(abridged example)*.
  - Quarterly process, integrated into Chevron's Operational Excellence Management System, to roll-up the input files for annual reporting at the corporate level
  - Extensive QA/QC

	Coke Combustion	Combustion	Flare	Indirect Emission	Crude Oil	Fugitive	Misc	Total
Energy (10^6 BTU LHV)	1,587,161	5,607,806	n/a	1,145,214	n/a	n/a		**8,340,181**
CO_2e (tonnes)	143,132	350,681	3,836	109,881	148	24		**607,702**
SOx (tonnes)	n/a	8	1	n/a	n/a	n/a	3,539	**9**
NOx (tonnes)	n/a	390	2	n/a	n/a	n/a	478	**392**
CO (tonnes)	n/a	170.9	11.0	n/a	n/a	n/a	0.0	**182**
VOC (tonnes)	n/a	11	5	n/a	166	1,748	0	**1,930**
PM (tonnes)	n/a	23	0	n/a	n/a	n/a	0	**23**
PM_{10} (tonnes)	n/a	48	0	n/a	n/a	n/a	0	**48**
$PM_{2.5}$ (tonnes)	n/a	15	0	n/a	n/a	n/a	0	**15**

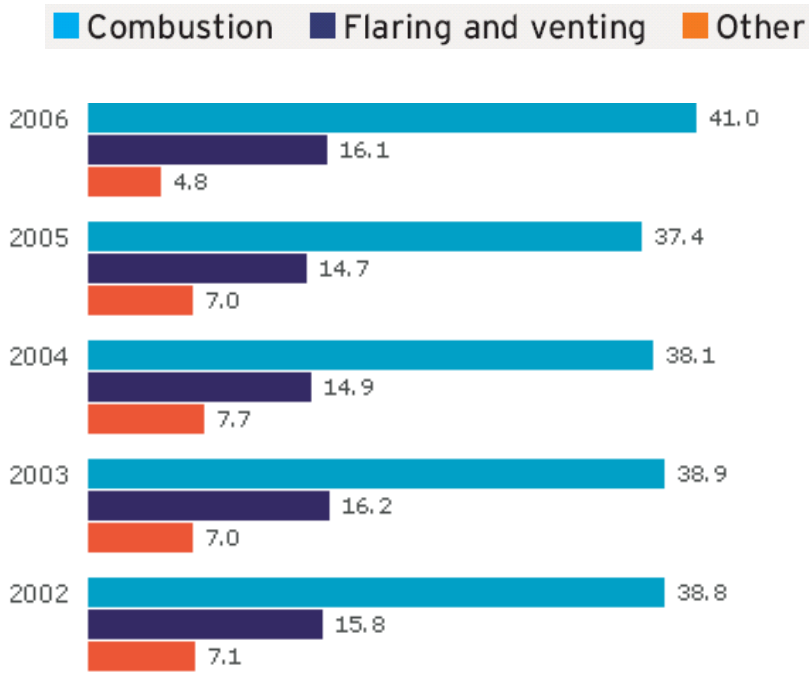
SANGEA™ Emissions Estimating System:

Gauging our progress with management of emissions

GHG Emissions by Sector
Millions of metric tons of CO2 equivalent



GHG Emissions by Source
Millions of metric tons of CO2 equivalent

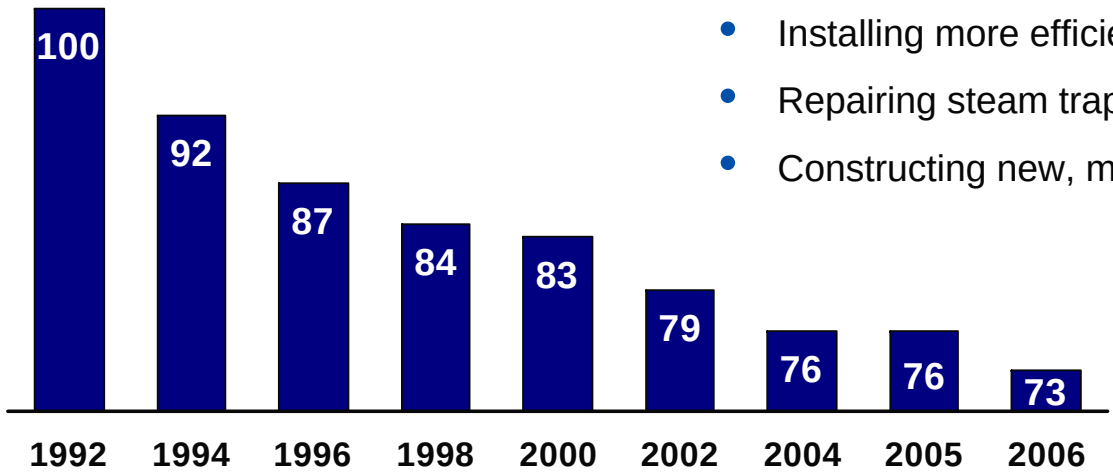


Note: Chevron's net increase of approximately 3 million metric tons of CO2-equivalent emissions from 2005 to 2006 can be attributed primarily to accounting of emissions from former Unocal assets for the full year of 2006, compared with just five months in 2005 (Chevron acquired Unocal in August 2005).

SANGEA™ Emissions Estimating System:
Gauging our progress with energy efficiency improvement

- The cost of energy to run Chevron's operations is substantial… $4.4 billion in 2005.

Chevron Energy Index
1992 = base 100



- Focus on efficiency, from production and shipping thru refining and marketing, e.g.:
  - Installing more efficient heat exchangers
  - Repairing steam traps
  - Constructing new, more efficient power plants.

Note: The Chevron Energy Index (CEI) measures and represents in a single figure the energy required to produce our products today against the 1992 baseline of 100 -- the amount of energy that would have been required to produce the same products in the base year.

SANGEA™ Emissions Estimating System:
Transparency, and the critical role of third-party audit

- To validate the strengths of our inventory system and identify areas for improvement, KPMG/URS completed during 2004 a review of our 2002-03 GHG data.
- **Continuous improvement**: during 2007, Chevron initiated a second GHG inventory verification, of 2004-06 data, with Det Norske Veritas (DNV)
- The review includes:
  - Upstream and downstream operations, shipping, power generation, chemical manufacturing, and coal mining.
  - Site visits to over 30 locations
  - Assessment of our inventory protocol
  - Assessment of SANGEA software.
  - Review of data management and aggregation processes.

The Landscape Continues to Change:

Companies with inventories are best positioned to respond to new regulatory drivers

1997 – The Kyoto Protocol (160+ nations; US and Australia have not ratified)

2005 - EU Emissions Trading Scheme (ETS) for CO_2

2006 – California, NE U.S. take steps

CANADA 2005-07

(1) Voluntary agreement with Autos
(2) Regulatory proposal for Large Emitters
(3) Proposed Canada Clean Air Act

EUROPE 2005-07

(1) EU Emissions Trading Scheme (impact on Chevron's operations in the UK and Netherlands)
(2) Potential for inclusion of aviation in the scheme
(3) Carbon fuels proposal

UNITED STATES 2005-07

(1) California's AB32, CPUC activity & carbon fuels proposal
(2) NE States Regional GHG Initiative (RGGI)
(3) Numerous Federal proposals on GHGs

AUSTRALIA 2003-07

(1) Voluntary GHG Challenge Agreement 2003
(2) State-level support for emissions trading and formation of an industry task force
(3) Federal task force on ET