

Summary of Carbon Majors' 2010 CO2 & methane emissions

Copyright Climate Mitigation Services

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CDIAC fuel flaring cement
957
6.9 UNs
7.66 2010 UNs/sec

ExxonMobil
Carbon Majors
CDIAC
33,486
27,946
77
886
MtCO2e
MtCO2/day
tCO2e/second

Table with columns: Rank, Entity, Oil & NGL, Nat gas, Coal, Total fuels, Cement, Flaring, Vented, Own fuel, Methane, All direct, Total 2010, % global, % CMEs. Includes sub-headers for emissions types.

Main data table listing 90 companies and their emissions across various categories like Oil & NGL, Nat gas, Coal, Total fuels, Cement, Flaring, Vented, Own fuel, Methane, All direct, Total 2010, % global, % CMEs.

Summary table with columns: Category, Value, % of total. Rows include Total CO2 & methane emissions, This study, MethCO2, CDIAC emissions, and Percent this study of total CDIAC, 2010.

Footer table with columns: Oil & NGL, Natural gas, Coal, Total fuels, Cement, Flaring, Vented, Own fuel, Methane, All direct, Total 2010, % of CDIAC, % of CMEs.

| AH | AI   | AJ    | AK   | AL            | AM | AN | AO | AP | AQ | AR | AS |
|----|--|-------|--|---------------|----|----|----|----|----|----|----|
| 1  | <b>Carbon Majors' 2010 CO2 &amp; methane emissions</b> |       |  |               |    |    |    |    |    |    |    |
| 2  | Richard Heede  |       |  |               |    |    |    |    |    |    |    |
| 3  | Climate Mitigation Services                            |       |  |               |    |    |    |    |    |    |    |
| 4  | 9-Jul-13   |       |  |               |    |    |    |    |    |    |    |
| 5  | by ownership category, alphabetized                    |       |  |               |    |    |    |    |    |    |    |
| 6  | Pasted values  |       |  |               |    |    |    |    |    |    |    |
| 7  | 9-Jul-13   |       |  |               |    |    |    |    |    |    |    |
| 8  | 1  | IOC   | Alpha Natural Resources, USA               | 182           |    |    |    |    |    |    |    |
| 9  | 2  | IOC   | Anadarko, USA                              | 96            |    |    |    |    |    |    |    |
| 10 | 3  | IOC   | Anglo American, UK                         | 242           |    |    |    |    |    |    |    |
| 11 | 4  | IOC   | Apache, USA                                | 97            |    |    |    |    |    |    |    |
| 12 | 5  | IOC   | Arch Coal Company, USA                     | 341           |    |    |    |    |    |    |    |
| 13 | 6  | IOC   | BG Group (British Gas) UK                  | 97            |    |    |    |    |    |    |    |
| 14 | 7  | IOC   | BHP Billiton, Australia                    | 320           |    |    |    |    |    |    |    |
| 15 | 8  | IOC   | BP, UK                                     | 554           |    |    |    |    |    |    |    |
| 16 | 9  | IOC   | Canadian Natural Resources, Canada         | 93            |    |    |    |    |    |    |    |
| 17 | 10   | IOC   | Cemex, Mexico                              | 27            |    |    |    |    |    |    |    |
| 18 | 11   | IOC   | ChevronTexaco, USA                         | 423           |    |    |    |    |    |    |    |
| 19 | 12   | IOC   | ConocoPhillips, USA                        | 359           |    |    |    |    |    |    |    |
| 20 | 13   | IOC   | CONSOL Energy, USA                         | 161           |    |    |    |    |    |    |    |
| 21 | 14   | IOC   | Cyprus Amx, USA                            | -             |    |    |    |    |    |    |    |
| 22 | 15   | IOC   | Devon Energy, USA                          | 93            |    |    |    |    |    |    |    |
| 23 | 16   | IOC   | EnCana, Canada                             | 84            |    |    |    |    |    |    |    |
| 24 | 17   | IOC   | ENI, Italy                                 | 258           |    |    |    |    |    |    |    |
| 25 | 18   | IOC   | ExxonMobil, USA                            | 655           |    |    |    |    |    |    |    |
| 26 | 19   | IOC   | HeidelbergCement, Germany                  | 31            |    |    |    |    |    |    |    |
| 27 | 20   | IOC   | Hess, USA                                  | 61            |    |    |    |    |    |    |    |
| 28 | 21   | IOC   | Holcim, Switzerland                        | 62            |    |    |    |    |    |    |    |
| 29 | 22   | IOC   | Husky, Canada                              | 42            |    |    |    |    |    |    |    |
| 30 | 23   | IOC   | Italcementi, Italy                         | 24            |    |    |    |    |    |    |    |
| 31 | 24   | IOC   | Kiewit Mining Group, USA                   | 59            |    |    |    |    |    |    |    |
| 32 | 25   | IOC   | Lafarge, France                            | 61            |    |    |    |    |    |    |    |
| 33 | 26   | IOC   | Lukoil, Russia                             | 322           |    |    |    |    |    |    |    |
| 34 | 27   | IOC   | Luminant, USA                              | 33            |    |    |    |    |    |    |    |
| 35 | 28   | IOC   | Marathon, USA                              | 59            |    |    |    |    |    |    |    |
| 36 | 29   | IOC   | Massey Energy Corporation, USA             | 91            |    |    |    |    |    |    |    |
| 37 | 30   | IOC   | Murphy Oil, USA                            | 27            |    |    |    |    |    |    |    |
| 38 | 31   | IOC   | Murray Coal Corporation, USA               | 59            |    |    |    |    |    |    |    |
| 39 | 32   | IOC   | Nexen, Canada                              | 36            |    |    |    |    |    |    |    |
| 40 | 33   | IOC   | North American Coal, USA                   | 40            |    |    |    |    |    |    |    |
| 41 | 34   | IOC   | Occidental, USA                            | 109           |    |    |    |    |    |    |    |
| 42 | 35   | IOC   | OMV Group, Austria                         | 45            |    |    |    |    |    |    |    |
| 43 | 36   | IOC   | Peabody Coal Group                         | 519           |    |    |    |    |    |    |    |
| 44 | 37   | IOC   | Repsol-YPF, Spain                          | 126           |    |    |    |    |    |    |    |
| 45 | 38   | IOC   | Rio Tinto, UK                              | 161           |    |    |    |    |    |    |    |
| 46 | 39   | IOC   | Royal Dutch Shell, The Netherlands         | 478           |    |    |    |    |    |    |    |
| 47 | 40   | IOC   | Ruhrkohle AG (RAG), Germany                | -             |    |    |    |    |    |    |    |
| 48 | 41   | IOC   | RWE, Germany                               | 148           |    |    |    |    |    |    |    |
| 49 | 42   | IOC   | Sasol, South Africa                        | 113           |    |    |    |    |    |    |    |
| 50 | 43   | IOC   | Suncor / Petro-Canada, Canada              | 89            |    |    |    |    |    |    |    |
| 51 | 44   | IOC   | Taiheyo, Japan                             | 10            |    |    |    |    |    |    |    |
| 52 | 45   | IOC   | Talisman, Canada                           | 62            |    |    |    |    |    |    |    |
| 53 | 46   | IOC   | Total, France                              | 398           |    |    |    |    |    |    |    |
| 54 | 47   | IOC   | UK Coal, UK                                | 19            |    |    |    |    |    |    |    |
| 55 | 48   | IOC   | Westmoreland Mining, USA                   | 46            |    |    |    |    |    |    |    |
| 56 | 49   | IOC   | Xstrata, Switzerland                       | 214           |    |    |    |    |    |    |    |
| 57 | 50   | IOC   | Yukos, Russia                              | -             |    |    |    |    |    |    |    |
| 58 | 1  | SOE   | Abu Dhabi, United Arab Emirates            | 387           |    |    |    |    |    |    |    |
| 59 | 2  | SOE   | Bahrain Petroleum Corporation              | 36            |    |    |    |    |    |    |    |
| 60 | 3  | SOE   | British Coal Corporation, UK               | -             |    |    |    |    |    |    |    |
| 61 | 4  | SOE   | CNOOC (China National Offshore Oil), China | 130           |    |    |    |    |    |    |    |
| 62 | 5  | SOE   | Coal India, India                          | 830           |    |    |    |    |    |    |    |
| 63 | 6  | SOE   | Ecopetrol, Colombia                        | 89            |    |    |    |    |    |    |    |
| 64 | 7  | SOE   | Egyptian General Petroleum, Egypt          | 129           |    |    |    |    |    |    |    |
| 65 | 8  | SOE   | Gazprom, Russia                            | 1,371         |    |    |    |    |    |    |    |
| 66 | 9  | SOE   | Iraq National Oil Company, Iraq            | 220           |    |    |    |    |    |    |    |
| 67 | 10   | SOE   | Kuwait Petroleum Corp., Kuwait             | 321           |    |    |    |    |    |    |    |
| 68 | 11   | SOE   | Libya National Oil Corp., Libya            | 219           |    |    |    |    |    |    |    |
| 69 | 12   | SOE   | National Iranian Oil Company, Iran         | 867           |    |    |    |    |    |    |    |
| 70 | 13   | SOE   | Nigerian National Petroleum, Nigeria       | 270           |    |    |    |    |    |    |    |
| 71 | 14   | SOE   | Oil and Gas Corp India, India              | 164           |    |    |    |    |    |    |    |
| 72 | 15   | SOE   | Pemex, Mexico                              | 602           |    |    |    |    |    |    |    |
| 73 | 16   | SOE   | Pertamina, Indonesia                       | 64            |    |    |    |    |    |    |    |
| 74 | 17   | SOE   | PetroChina, China                          | 614           |    |    |    |    |    |    |    |
| 75 | 18   | SOE   | Petroleo Brasileiro (Petrobras), Brazil    | 356           |    |    |    |    |    |    |    |
| 76 | 19   | SOE   | Petroleos de Venezuela, Venezuela          | 485           |    |    |    |    |    |    |    |
| 77 | 20   | SOE   | Petroleum Development Oman, Oman           | 124           |    |    |    |    |    |    |    |
| 78 | 21   | SOE   | Petronas, Malaysia                         | 260           |    |    |    |    |    |    |    |
| 79 | 22   | SOE   | Polish Oil & Gas, Poland                   | 12            |    |    |    |    |    |    |    |
| 80 | 23   | SOE   | Qatar Petroleum, Qatar                     | 271           |    |    |    |    |    |    |    |
| 81 | 24   | SOE   | Rosneft, Russian Federation                | 364           |    |    |    |    |    |    |    |
| 82 | 25   | SOE   | Saudi Aramco, Saudi Arabia                 | 1,550         |    |    |    |    |    |    |    |
| 83 | 26   | SOE   | Singareni Collieries Company, India        | 99            |    |    |    |    |    |    |    |
| 84 | 27   | SOE   | Sinopec, China                             | 160           |    |    |    |    |    |    |    |
| 85 | 28   | SOE   | Sonangol, Angola                           | 147           |    |    |    |    |    |    |    |
| 86 | 29   | SOE   | Sonatrach, Algeria                         | 386           |    |    |    |    |    |    |    |
| 87 | 30   | SOE   | Statoli, Norway                            | 243           |    |    |    |    |    |    |    |
| 88 | 31   | SOE   | Syrian Petroleum, Syria                    | 48            |    |    |    |    |    |    |    |
| 89 | 1  | State | China, Peoples Republic (coal & cement)    | 7,898         |    |    |    |    |    |    |    |
| 90 | 2  | State | Czech Republic                             | 92            |    |    |    |    |    |    |    |
| 91 | 3  | State | Czechoslovakia                             | -             |    |    |    |    |    |    |    |
| 92 | 4  | State | FSU (Former Soviet Union)                  | -             |    |    |    |    |    |    |    |
| 93 | 5  | State | Kazakhstan                                 | 287           |    |    |    |    |    |    |    |
| 94 | 6  | State | North Korea                                | 88            |    |    |    |    |    |    |    |
| 95 | 7  | State | Poland                                     | 294           |    |    |    |    |    |    |    |
| 96 | 8  | State | Russian Federation (not including FSU)     | 695           |    |    |    |    |    |    |    |
| 97 | 9  | State | Ukraine                                    | 145           |    |    |    |    |    |    |    |
| 98 | 90   |       | <b>Total</b>                               | <b>27,946</b> |    |    |    |    |    |    |    |

**Cell:** B9

**Comment:** Rick Heede:  
Alphabetical rank.

**Cell:** D9

**Comment:** Rick Heede:  
CMS has identified a total of 86 company, multinational, and state entities that produce, in aggregate, 84 percent of global carbon dioxide emissions from fossil fuel and cement manufacturing in 2004. (Note: See worksheet "SumSum.xls" for the CMS emissions from identified entities by year from 1886 through 2004. Historically, the emissions from the 86 identified entities represent ~61.5 percent of the global total since 1750, if compared to the ORNL/CDIAC industrial emissions for the anthropocene.

**Cell:** V111

**Comment:** Rick Heede:  
EDGAR data 1970-2008 extrapolated to 2010 by CMS on the basis of EDGAR published data on CO2 emissions through 2010. See workbook "AncillaryCH4&CO2.xls" worksheet on "General Non-CO2 data" rows 336-376. Total estimated EDGAR for 2010 is 120.9 TgCH4 (\*21); CMS excludes EDGAR estimate for "Energy manufacturing and transformation" of 6.5 TgCH4.