PICTET 1805 FUNDS

# PF(LUX)-Clean Energy

## Investing in the Energy Transition

August 2007

# Agenda

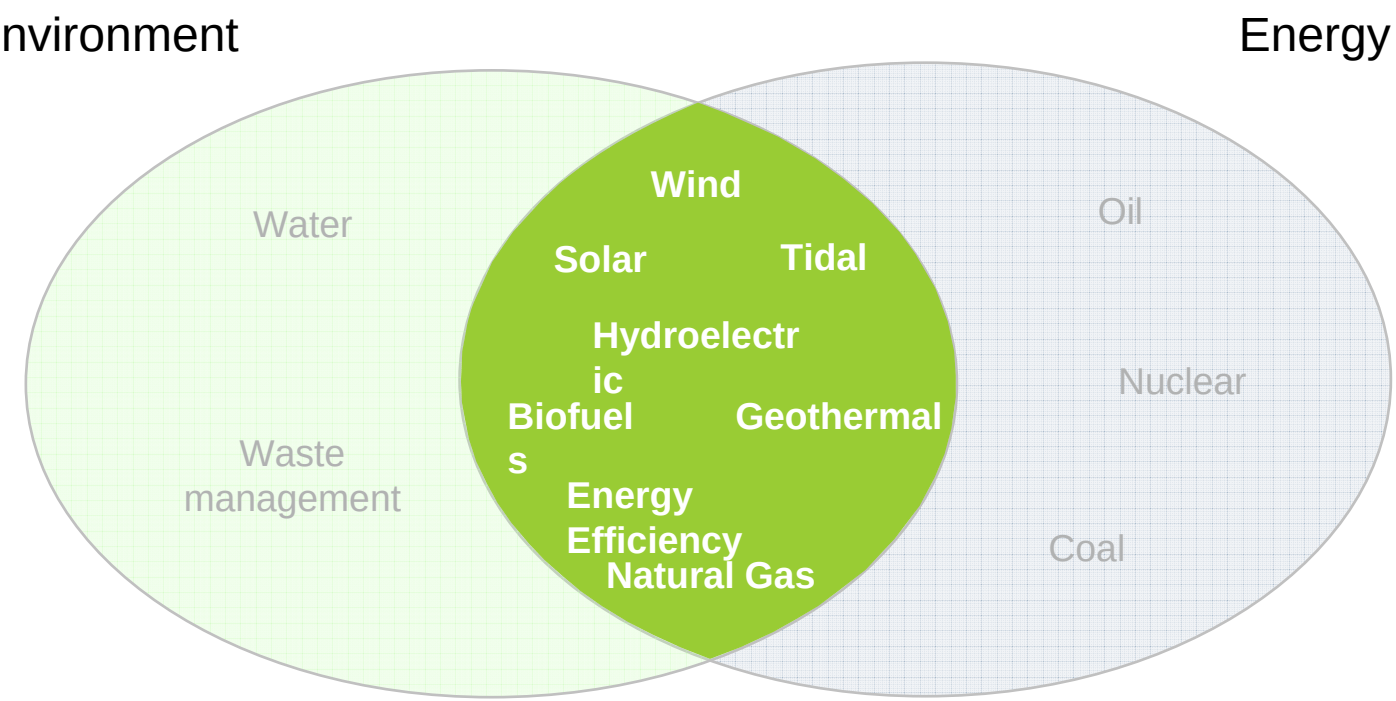
1. Investment case for Clean Energy
2. Investment process
3. Portfolio characteristics
4. Conclusions
5. Technicals
6. Appendices

# 1. Investment case for Clean Energy



# Clean Energy defined

**CLEAN ENERGY INVESTMENT THEMES**




***PF(LUX)-Clean Energy aims to invest in the universe of companies which will profit from the transition to Clean Energy***

# Drivers for Clean Energy

1. Environment: The debate on climate change is over, the world is responding

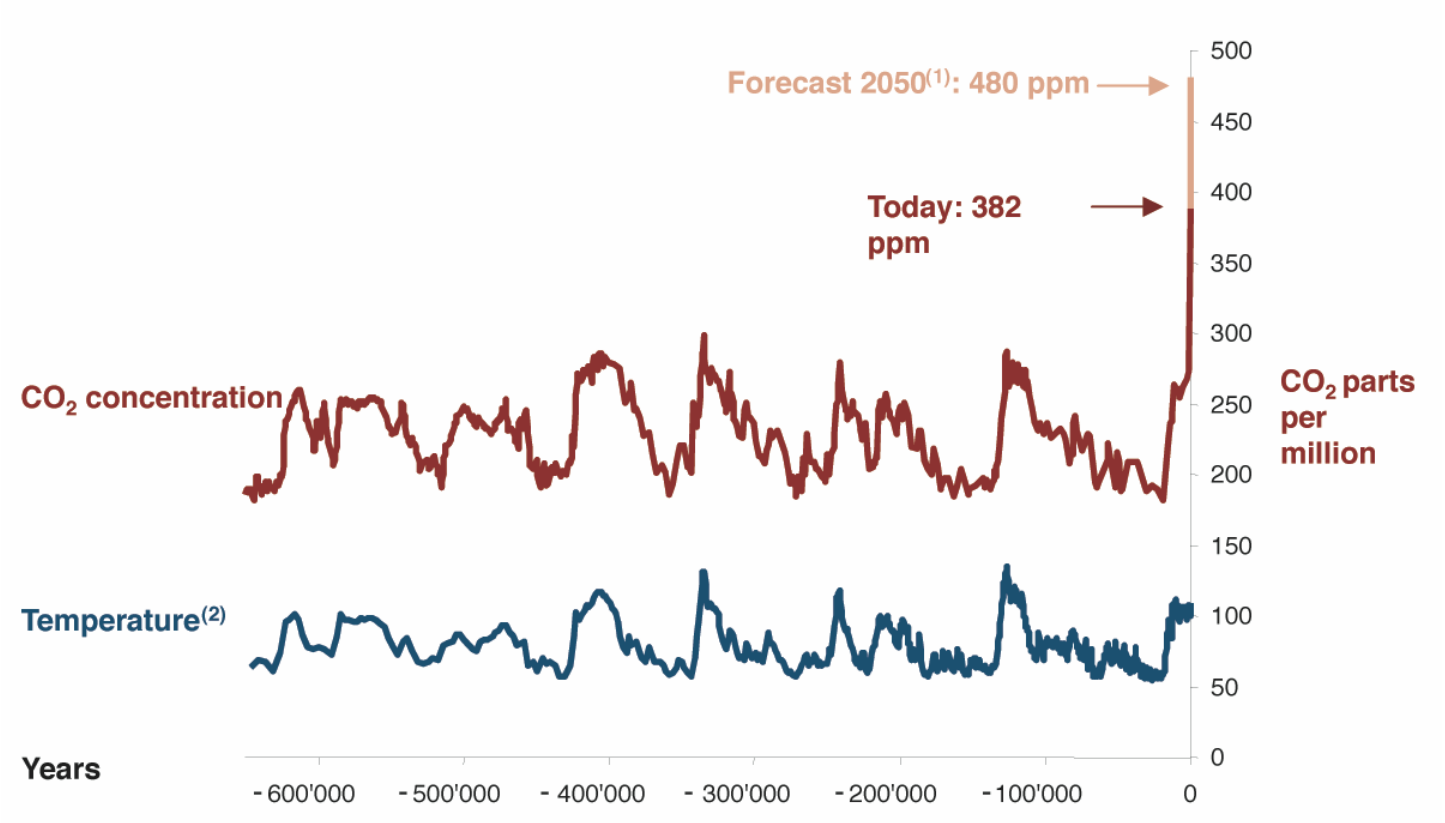
2. Energy supply: Today's energy resources are finite

3. Energy independence: Concerns over dependence on imported energy

***Multiple long term trends support the investment case for Clean Energy***

# The debate on climate change is over

## CORRELATION BETWEEN CO2 CONCENTRATION AND WORLD TEMPERATURE




*Source: University of Bern (Siegenthaler et al. , Science 2005; EPICA community members, Nature 2004)*

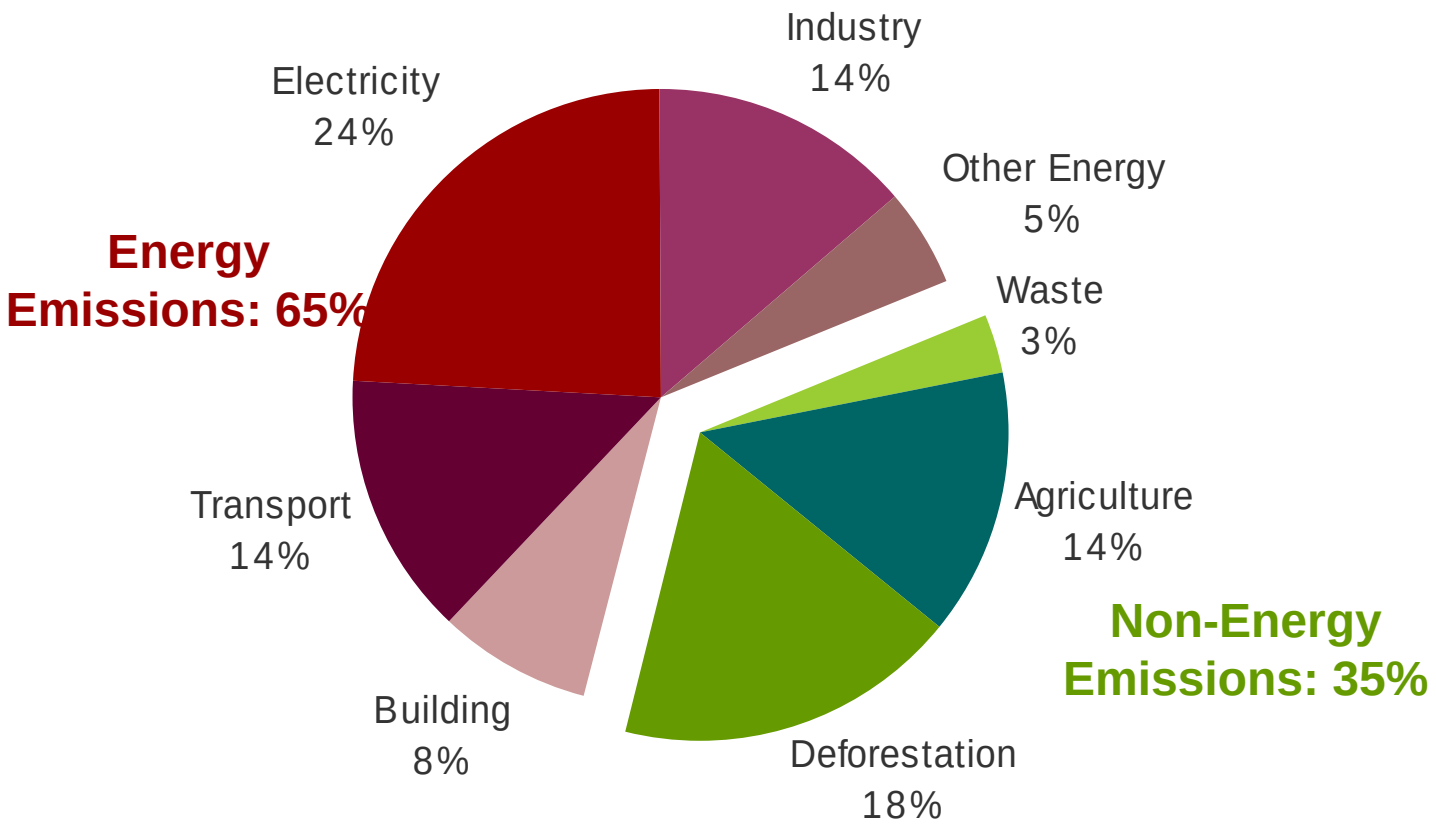
*(1) IPCC estimate, average of possible scenarios*

*(2) Deuterium: proxy used to estimate temperature in Antarctica*

***Science leaves little doubt with respect to the role of $CO_2$ in climate***

# Greenhouse gas emission sources

**SOURCES OF HUMAN GLOBAL GREENHOUSE GAS EMISSIONS (1)**



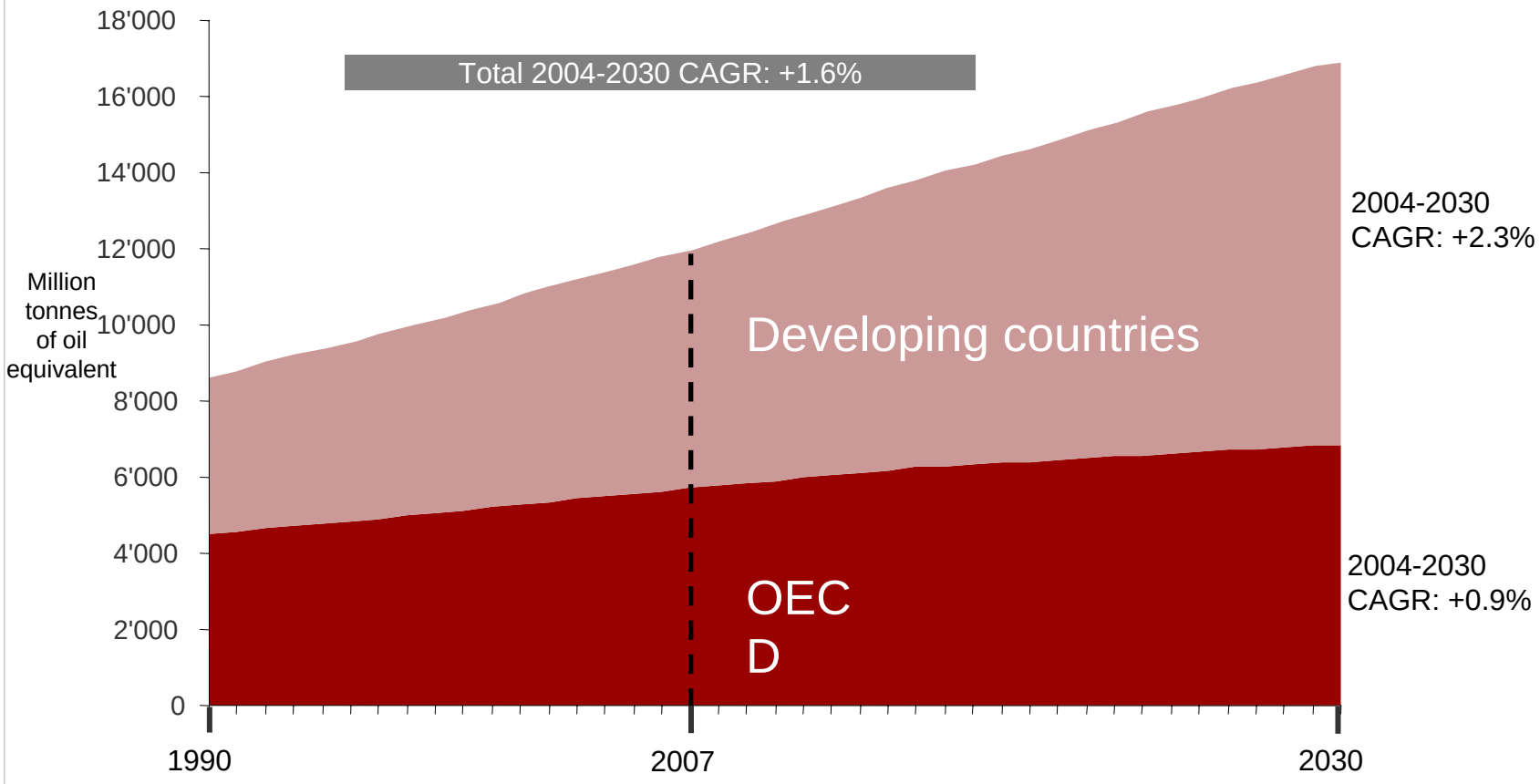

*Source: World Resources Institute*

*(1) Carbon dioxide 77%, Methane 14%, Nitrous Oxide 8%, Hydrofluorocarbons <1%, Perfluorocarbons <1%, Sulfur Hexafluoride <1%*

***Energy is the key contributor of human greenhouse gas***

# However demand for energy continues to increase

**WORLD ENERGY DEMAND: THE INTERNATIONAL ENERGY AGENCY BASE CASE**

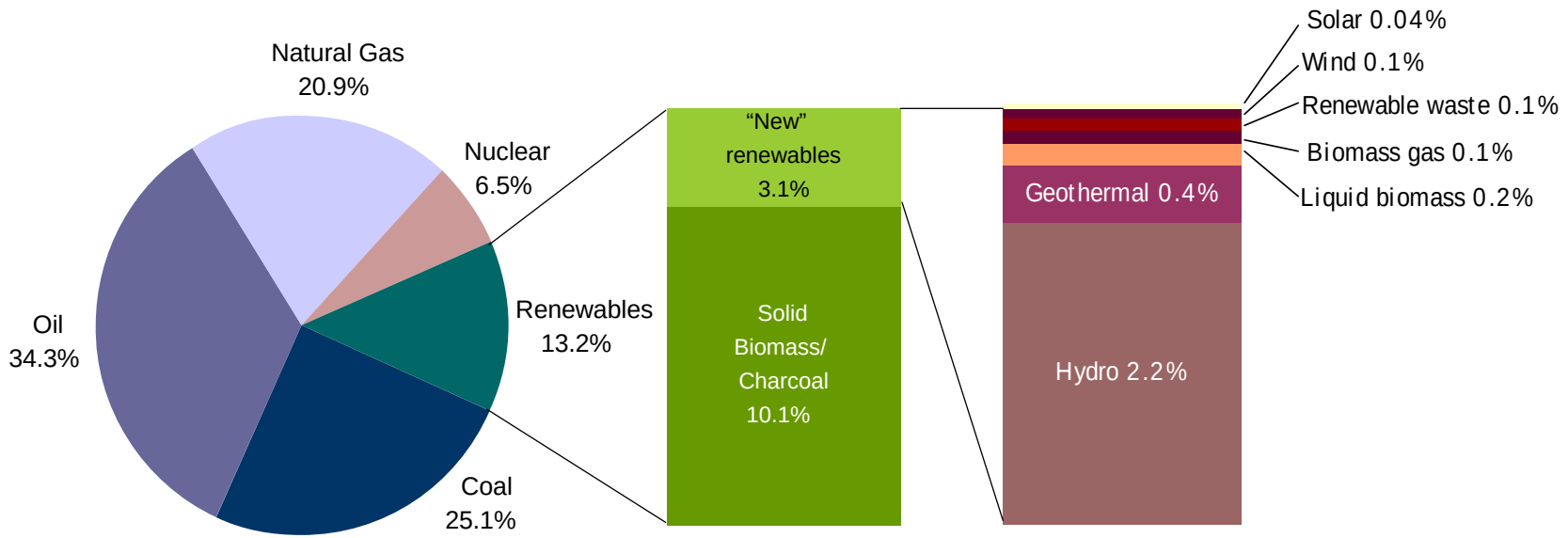



*Source: International Energy Agency, World Energy Outlook 2006*

***Emerging economies will drive the demand for energy***

# The current composition of energy sources

## TODAY'S WORLD TOTAL ENERGY SUPPLY

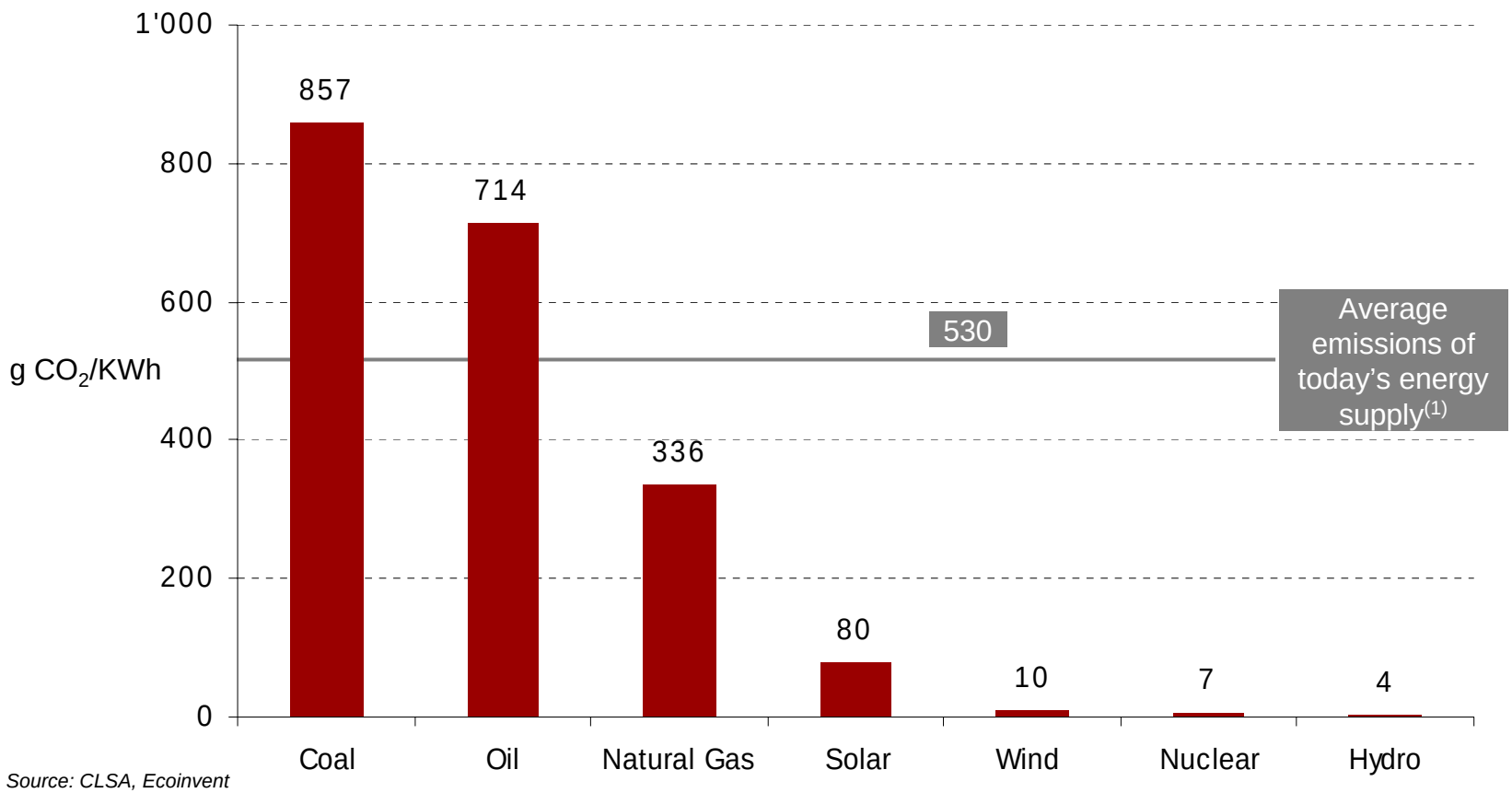



*Source: International Energy Agency; Statistics: 2006 Renewables Information*

***Today "new" renewables represent only a fraction of total energy***

# Carbon intensity of energy

## $CO_2$ EMISSIONS OF ENERGIES



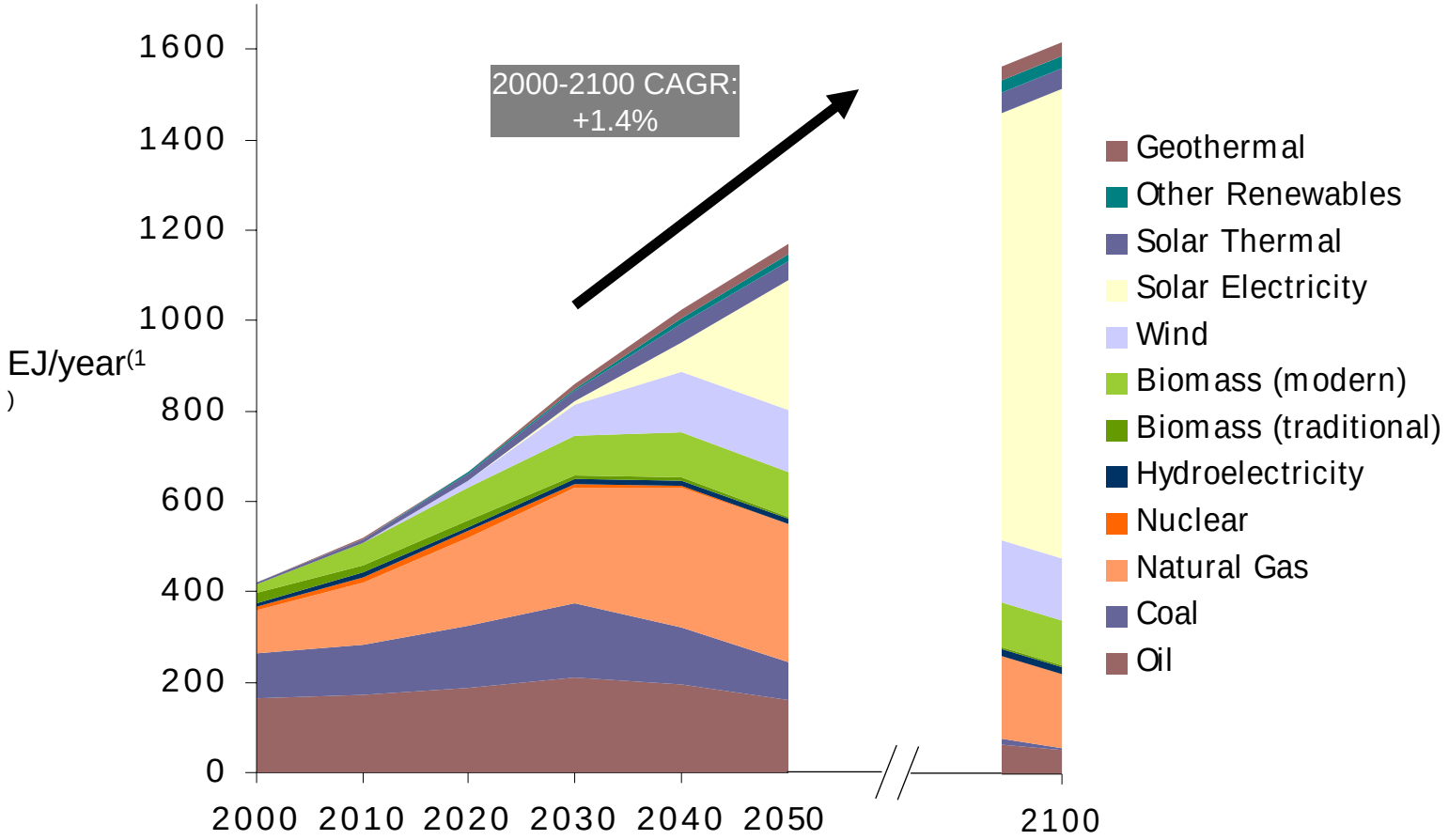

*Source: CLSA, Ecoinvent*

*(1) Pictet calculation*

***Energies which lower $CO_2$ emissions will be favored in the energy***

# The transition favors Clean Energy

## PROJECTED TOTAL GLOBAL ENERGY SUPPLY



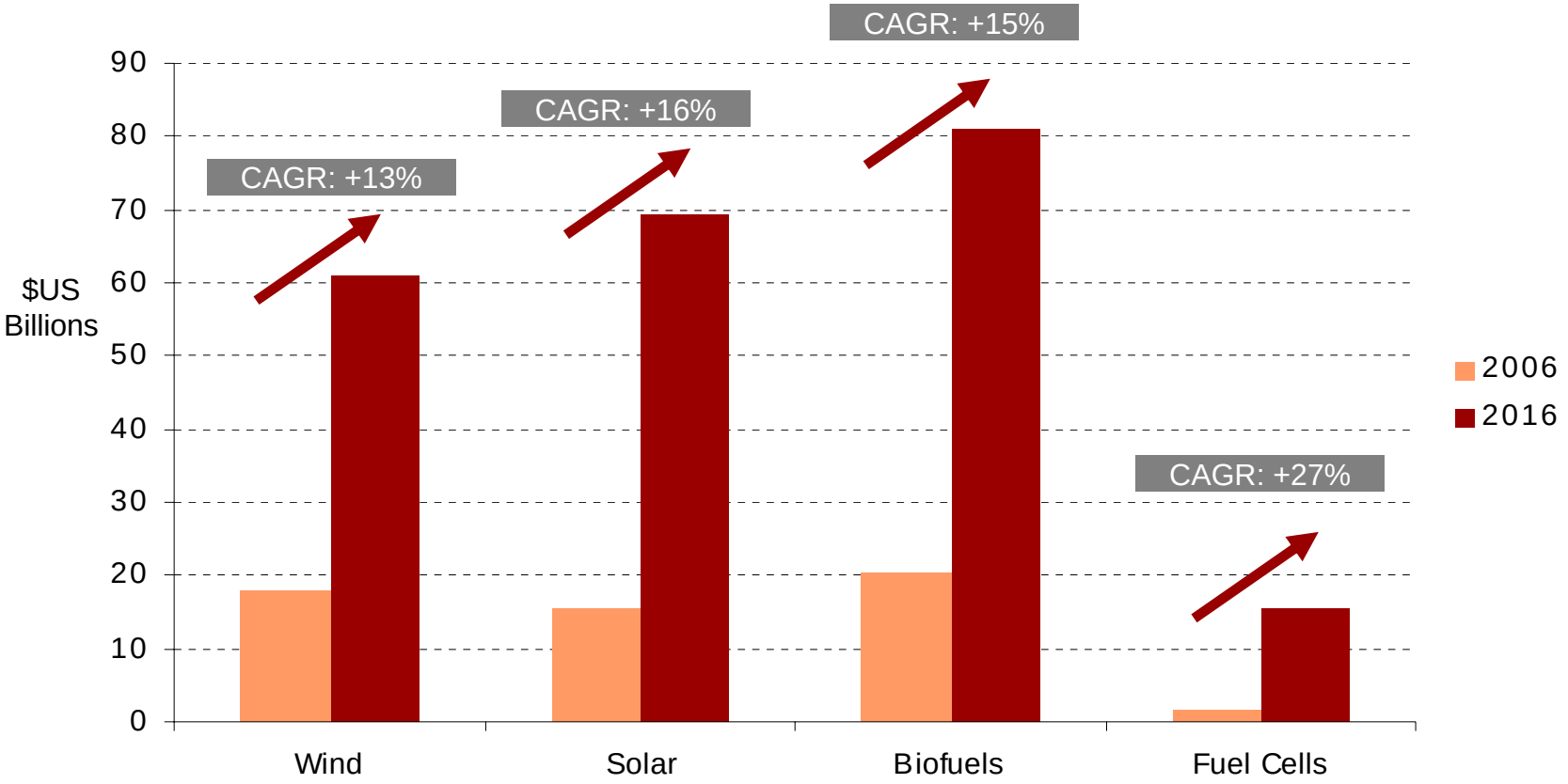

*Source: German Advisory Council on Global Change WBGU Berlin 2003*

*(1) EJ = Exajoules = $10^{18}$ joules*

***Clean Energy will grow strongly during the upcoming transition***

# Long term growth of renewable energy

**SELECT RENEWABLE ENERGY PROJECTED REVENUE GROWTH RATES**

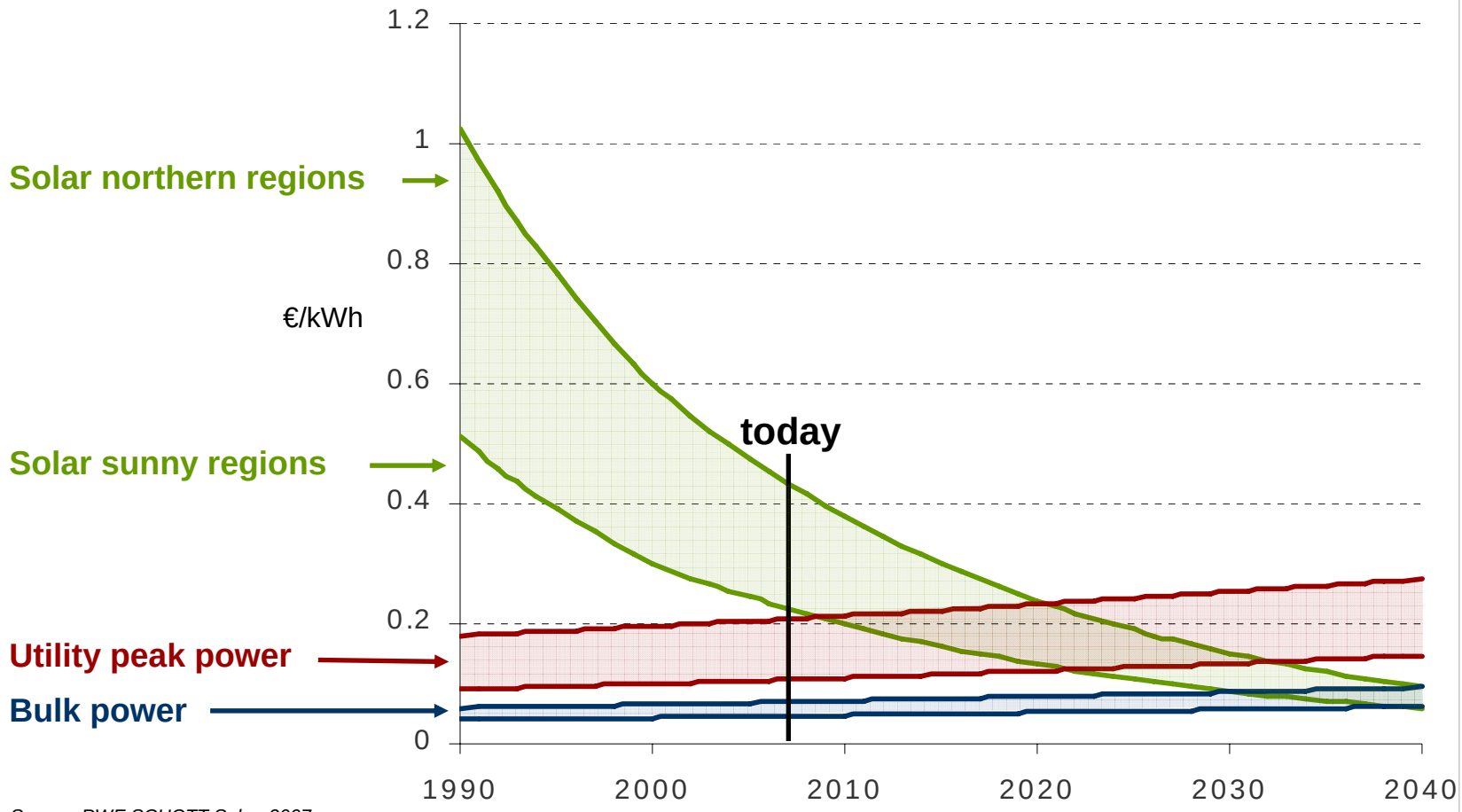



*Source: Clean Edge, March 2007; biofuels: global manufacturing and wholesale pricing of ethanol and biodiesel, wind: new installation capital costs, solar: modules, system components and installation)*

***Clean Energy is projected to grow substantially in the coming***

# Technological progress & scale to drive down costs

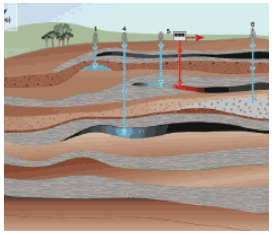
**RENEWABLE ENERGY COST CURVE EXAMPLE – SOLAR PHOTOVOLTAIC**




*Source: RWE SCHOTT Solar, 2007*

***Markets will expand as costs of renewables converge to traditional***

# Clean Energy presents opportunities

| | | | |
|---|---|---|---|
| Supply | **Carbon Free Energy** | - Solar<br>- Wind<br>- Hydroelectric<br>- Geothermal<br>- Tidal/Wave |    |
| | **Low Carbon Energy** | - Natural Gas<br>- Biofuels<br>- CO2 Capture & Storage<br>- Syngas<br>- Waste to energy |    |
| Demand | **Energy Efficiency** | - Lighting<br>- Batteries<br>- Power monitoring & control<br>- Heating, cooling & insulation<br>- Appliances<br>- Flywheels<br>- Fuel cell |    |

***Transition to Clean Energy will drive growth in diverse areas***

# 2. Investment process

# PF(LUX)-Clean Energy team

**Advisory Board**

**Bi-annual board to review industry developments**

## Investment Managers

Philippe de Weck
Senior Fund Manager

Dr. Philippe Rohner
Senior Fund Manager

Gabriel Micheli
Renewable Energy Analyst

**Daily meetings and exchange of ideas via internal chat system**

| Pictet Sector Analysts | Small Cap Team | Emerging Markets Team |
|---|---|---|

***Dedicated team supported by advisory board and experienced***

# From investment universe to investment portfolio


**FROM INVESTMENT UNIVERSE TO INVESTMENT PORTFOLIO**

| Supply | | | Demand |
|---|---|---|---|
| Resources | Technology & Equipment | Infrastructure | Energy Efficiency |

**Strategic definition of investment theme**

632 companies with a combined total market cap of 4.1 trillion USD

**Identification of investment universe**

> 20% of Clean Energy related Sales, EBITDA, or Enterprise Value

320 companies with combined total market cap of 1.3 trillion USD

**Construction of the portfolio**

30-60 companies

***Structured investment process which results in a well balanced***

# Investment process: Portfolio construction

- We prefer stocks with
  1. High degree of Clean Energy related activities (**complexity**)
  2. High **liquidity**
  3. Low **volatility**
  4. Attractive **industry** fundamentals
  5. Attractive company fundamentals (**alpha**)

*Portfolio weight = 6% - adjustments for complexity, liquidity, volatility and industry*
*+ company specific alpha*

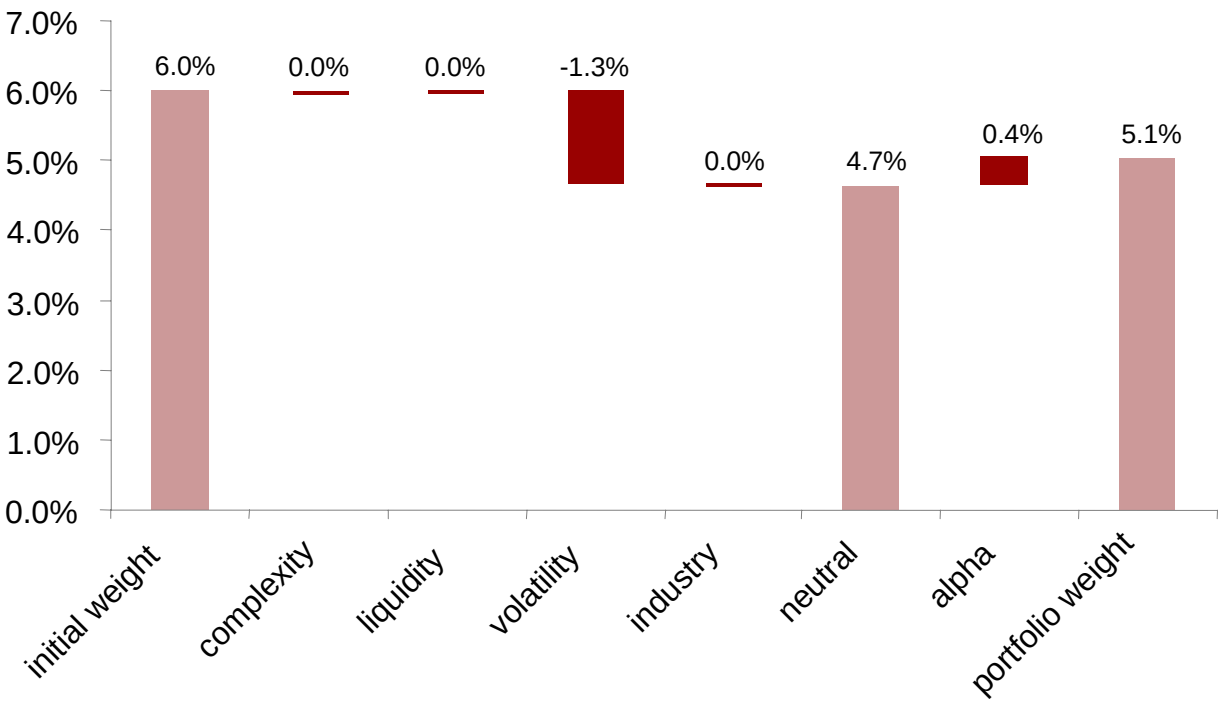
| | |
|---|---|
| Complexity: | max -6% as a function of the size of Clean Energy related exposure |
| Liquidity: | max -6% as a function of the trading activity of each company's equity |
| Volatility: | max -3% as a function of stock price volatility |
| Attractiveness: | max -3% as a function of industry score |
| Alpha : | +/- 3% as a function of franchise, management, valuation |

Portfolio weight of each stock of the investment universe floats between 0% and 9%

*Note: for further details, see slides 36 and 37.*

# Investment process example: Gamesa

## INVESTMENT PROCESS EXAMPLE




1. No deduction for complexity as 100% of activity is Clean Energy related
2. No liquidity discount
3. Deduction for volatility as it is 26%, which is above target zone of 15%
4. No industry discount as industry fundamentals are positive
5. Alpha factor of 0.4 % (takes into account business franchise, management score and valuation)

*Source: Pictet Asset Management, as per July 31th 2007*

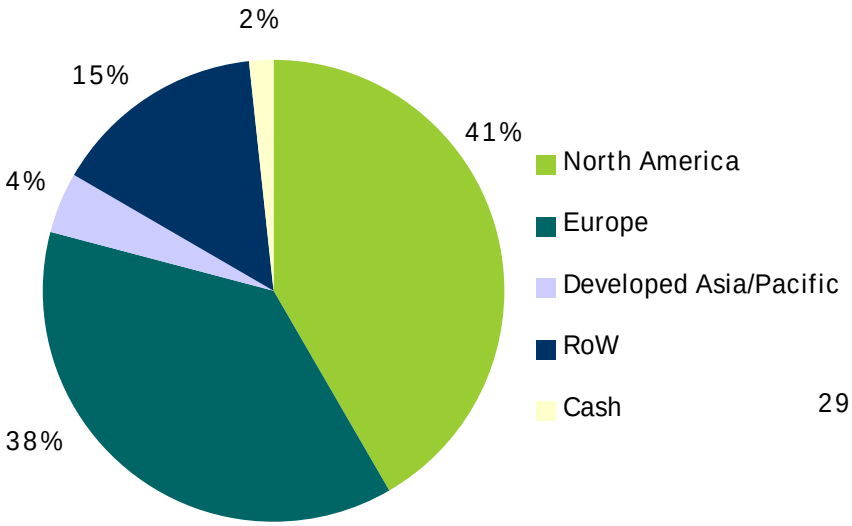
***Structured investment process taking into account important***

# 3. Portfolio characteristics

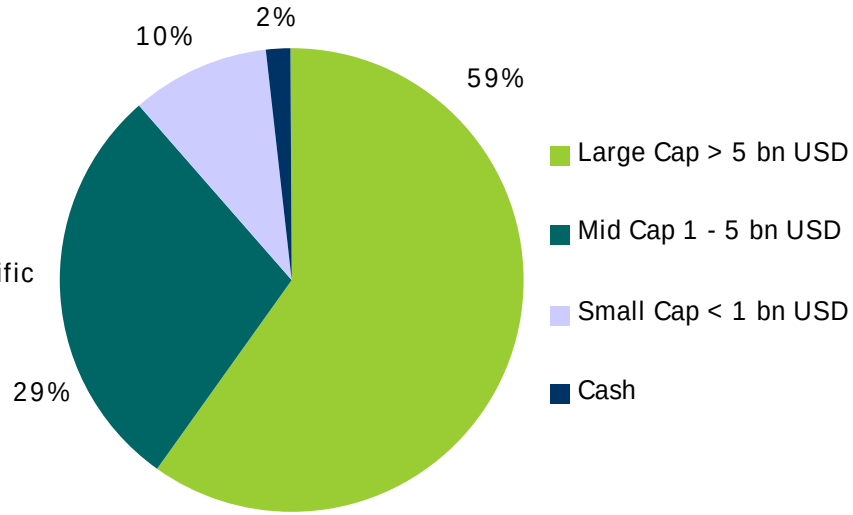
# PF(LUX)-Clean Energy portfolio characteristics

## PF(LUX)-CLEAN ENERGY PORTFOLIO

### Geographic breakdown




### Market Cap breakdown



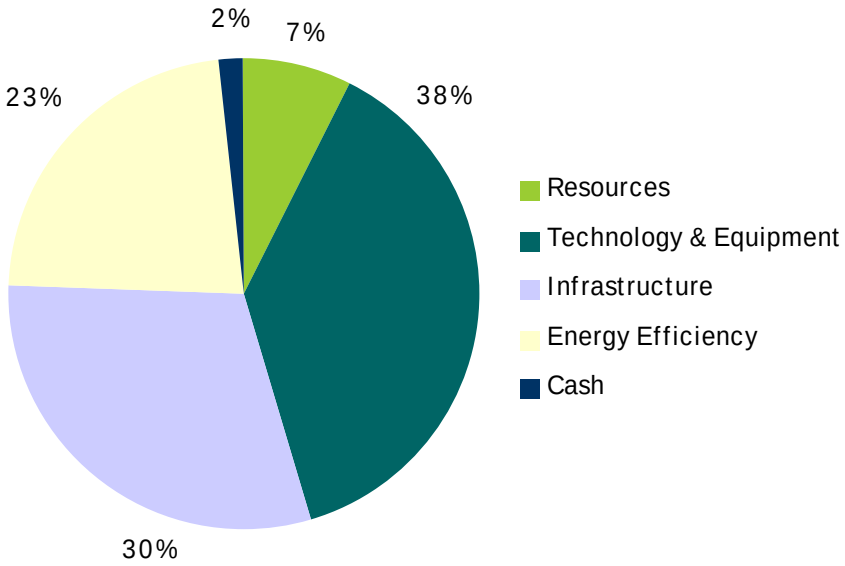

*Source: Pictet Asset Management, as per July 31th 2007*

***PF(LUX)-Clean Energy fund is well distributed across the world and size***

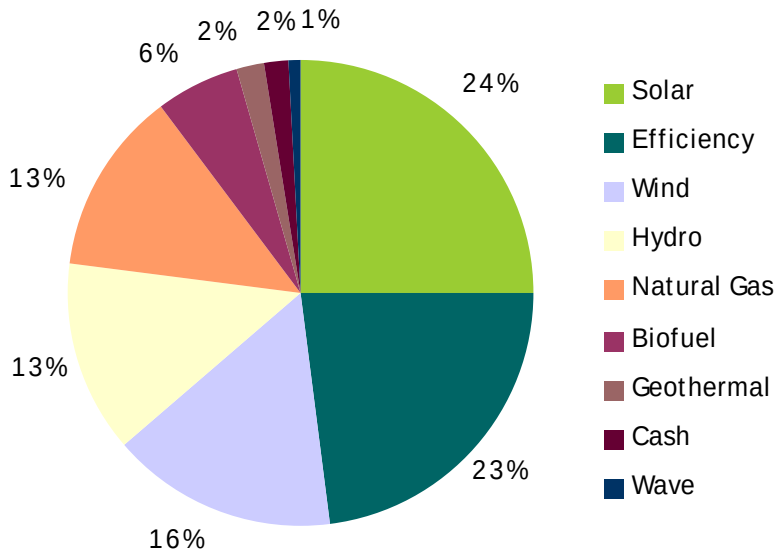
# PF(LUX)-Clean Energy portfolio breakdown

## PF(LUX)-CLEAN ENERGY PORTFOLIO

### Sub-sector breakdown




### Energy breakdown




*Source: Pictet Asset Management, as per July 31th 2007*

***PF(LUX)-Clean Energy fund is broadly diversified across sectors***

# Top 10 portfolio holdings

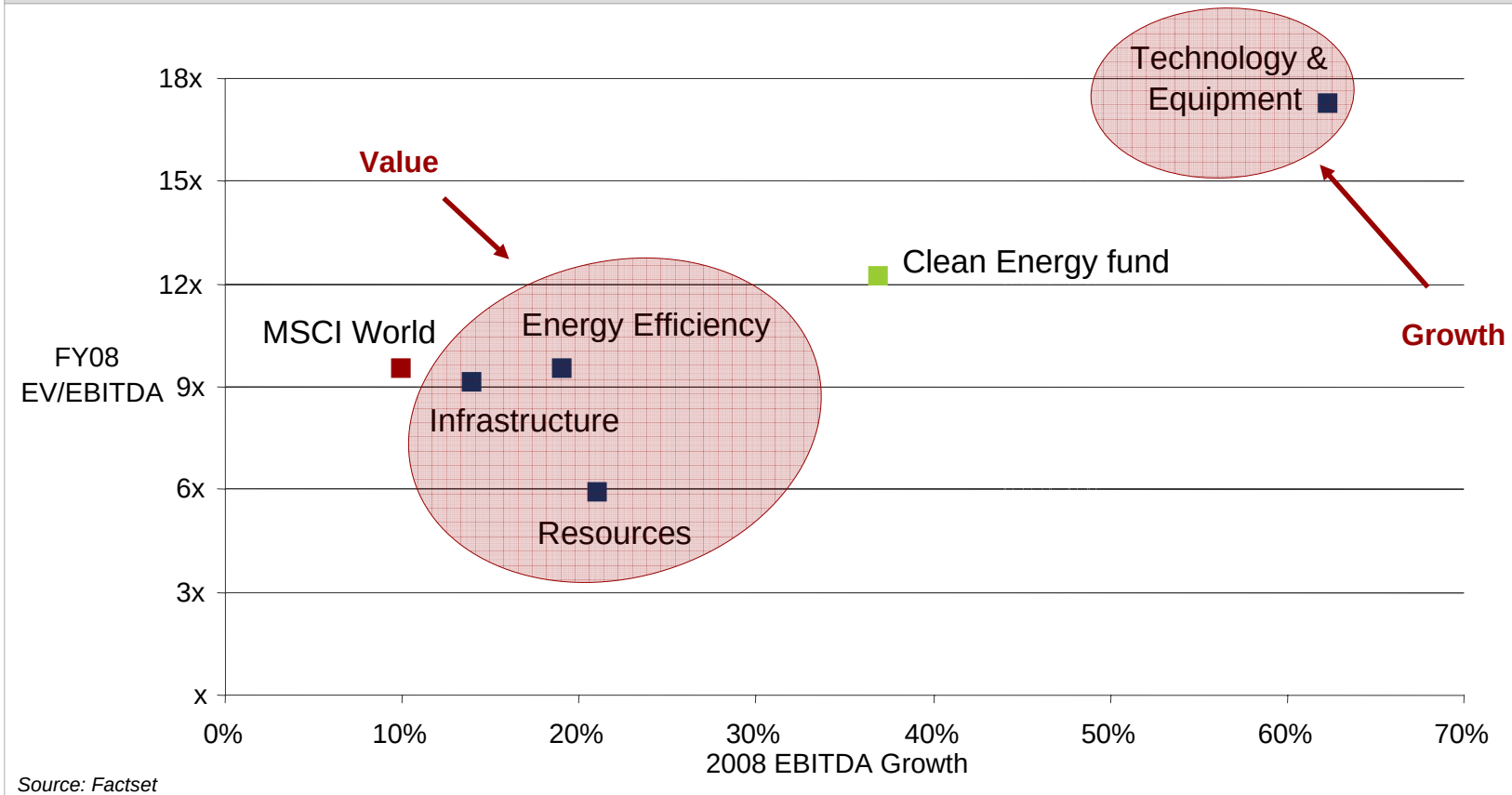
| Company | Domicile | % in Fund | Sector | Market Cap($bn) | % Clean Energy | Products and Services |
|---|---|---|---|---|---|---|
| Gamesa | Spain | 5.1% | Technology & Equipment | $10.0 | 100% | Manufactures wind turbines |
| REC | Norway | 4.0% | Technology & Equipment | $19.8 | 100% | Polysilicon, solar wafers, cells and modules |
| edp | Portugal | 4.0% | Infrastructure | $20.9 | 36% | Generates and distributes hydro and wind power |
| Chesapeake Energy | US | 3.1% | Resources | $15.9 | 100% | Exploration and production of natural gas |
| Q.CELLS | Germany | 3.1% | Technology & Equipment | $9.7 | 100% | Manufactures solar cells |
| SUNTECH 尚德电力 | China | 2.4% | Technology & Equipment | $6.1 | 100% | Manufactures solar cells and modules |
| Vestas | Denmark | 2.4% | Technology & Equipment | $12.5 | 100% | Manufactures wind turbines |
| Williams. | US | 2.4% | Infrastructure | $19.7 | 100% | Production, collection, processing & transportation of natural gas |
| FPL. | US | 2.3% | Infrastructure | $24.0 | 20% | Generates and distributes hydro and wind power |
| OPTO TECH | Taiwan | 2.2% | Energy Efficiency | $0.8 | 83% | Manufactures light-emitting diodes (LED) products |

*Source: Pictet Asset Management, as per July 31th 2007*

***Unique group of companies exposed to the transition to Clean Energy***

# PF(LUX)-Clean Energy financial characteristics

**EV/EBITDA VS EBITDA GROWTH**

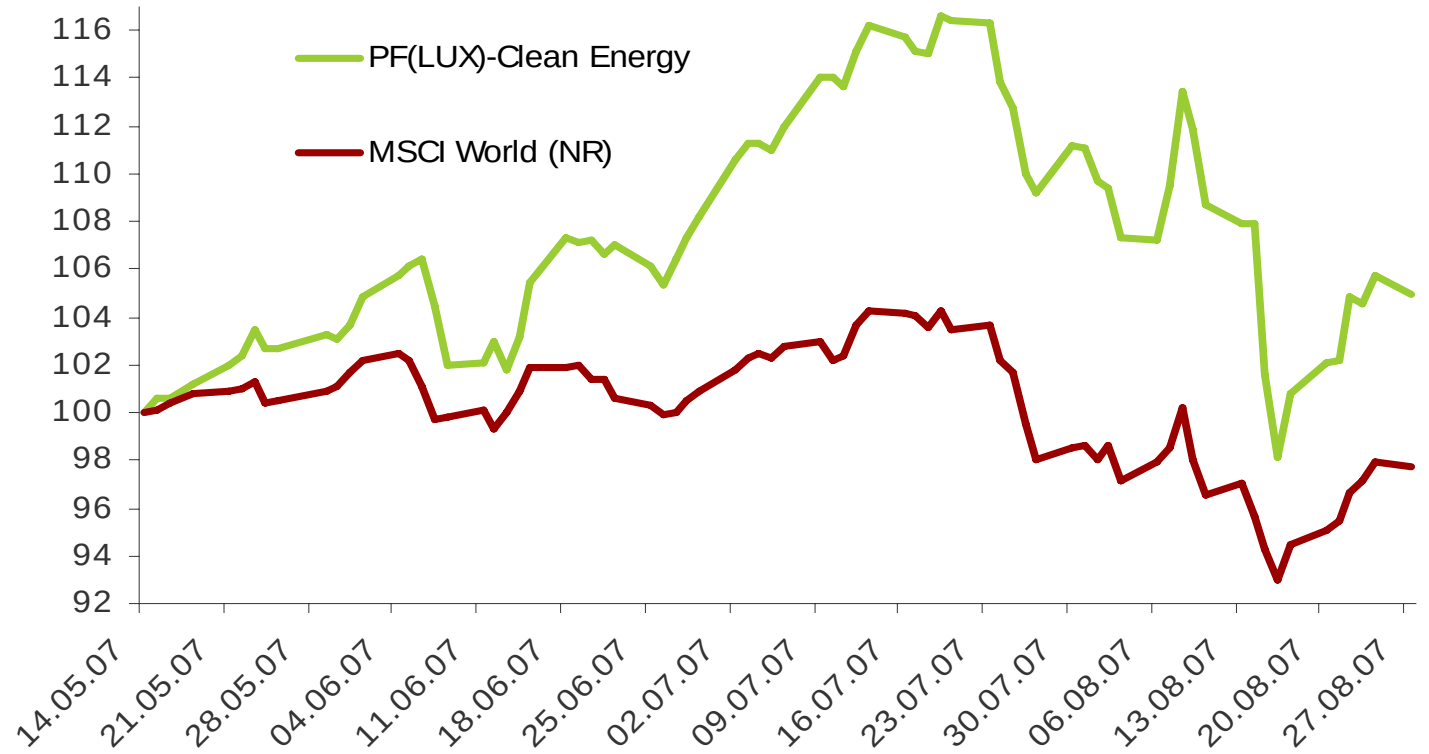



*Source: Factset*

***PF Clean Energy allows for investment in both "growth" and "value"***

# PF(LUX)-Clean Energy performance

**PERFORMANCE SINCE INCEPTION (14.05.2007)**



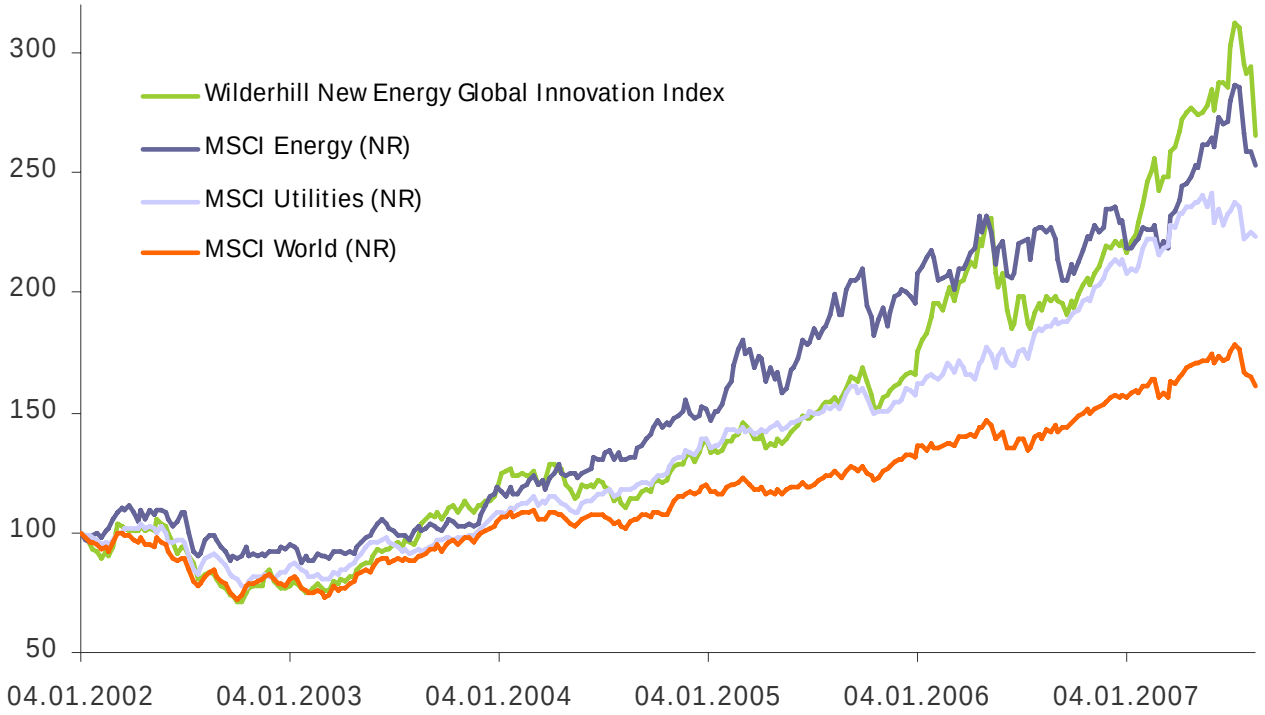

*Source: Bloomberg, as per August 27th 2007*

***PF(LUX)-Clean Energy has outperformed the MSCI world since***

# Renewable energy performance history

- PF(LUX)-Clean Energy transcends sectors but is best captured by a blend of the Wilderhill index with the MSCI Utilities and Energy indices

**HISTORICAL PERFORMANCE**




*Source: Bloomberg, weekly, as per August 17th 2007*

***Clean Energy has outperformed the MSCI world***

# 4. Conclusion

# Conclusions

- Why Clean Energy?
  - Climate change has joined energy supply and independence to make Clean Energy a “megatrend”
- Why now?
  - Wide-spread regulation is now being enacted to support Clean Energy
  - Economies of scale are rapidly driving down costs
- Why Pictet?
  - Unique investment universe and process
  - Extensive thematic fund experience

***The Clean Energy transition is imminent and will be a long duration investment***

# 5. Technicals



# Technicals

- Name: **PF(LUX)-Clean Energy**
- Law: Sicav under part I of Luxembourg Law of 20 Dec 2002
- Consolidation currency: USD
- Calculation: daily; settlement NAV + 3
- Inception: 14 May 2007 at NAV USD 100
- Assets under mgmt: 460 Mio USD as per 27th August 2007
- Dividend: reinvested (I, P-Cap, R) or distributed (P-Distr)
- Benchmark: MSCI World (net div reinvest)
- Share classes:

| | ISIN Codes | Mgmt | Admin/Custody | TER exp |
|---|---|---|---|---|
| **I USD** | LU0280430405 | 0.80 | 0.33 | 1.15 |
| **I EUR** | LU0312383663 | 0.80 | 0.33 | 1.15 |
| **P-cap USD** | LU0280430660 | 1.60 | 0.33 | 1.95 |
| **P-cap EUR** | LU0280435388 | 1.60 | 0.33 | 1.95 |
| **P-distr USD** | LU0280430744 | 1.60 | 0.33 | 1.95 |
| **R USD** | LU0280431049 | 2.30 | 0.33 | 2.65 |
| **R EUR** | LU0280435461 | 2.30 | 0.33 | 2.65 |

*I-Shares: minimum investment USD 1'000'000*

# 6. Appendices

# PF(LUX)-Clean Energy fund managers

**Philippe DE WECK** — **Technology & Industrial focus**

| | |
|---|---|
| Education: | Bachelor in Economics and International Relations, University of Pennsylvania |
| Experience: | |
| 1997-99: | Credit Suisse First Boston (New York): Investment Banking Analyst – Industrials |
| 1999-03: | Credit Suisse First Boston (London): Investment Banking Associate – TMT |
| 2004-05: | Pictet Asset Management: Technology Sector Specialist |
| 2005-07: | PF(LUX)–Telecom Fund Manager |
| Since 2007: | PF(LUX)–Clean Energy Fund Manager |

**Philippe ROHNER** — **Energy & Resource focus**

| | |
|---|---|
| Education: | Ph.D. in Chemistry, Swiss Federal Institute of Technology, Zurich |
| | MBA in Finance, Strathclyde University, Glasgow |
| Experience: | |
| 1997-02: | Pictet Institutional Brokerage Services: Equity Analyst – Chemicals |
| 2004-07: | Pictet Asset Management: Energy & Material sector specialist |
| Since 2002: | PF(LUX)–Water Fund Manager |
| Since 2007: | PF(LUX)–Clean Energy Fund Manager |

# Risks to the investment case

1. Regulatory framework fails to support clean energy technologies
    A. Global price for carbon
    B. Incentives to make Clean Energy competitive
2. Drop in price of conventional energy

# PF(LUX)-Clean Energy and nuclear, coal & oil

- PF(LUX)-Clean Energy does not categorize nuclear, coal & oil as Clean Energy
- The fund, however, does not exclude nuclear, coal & oil
- Investment process dictates a minimum of 20% Clean Energy activities
  - Companies can meet this criteria and also have nuclear, coal & oil activities
- In these cases nuclear, coal & oil are tolerated as part of the energy transition if future investment is clearly directed at Clean Energy

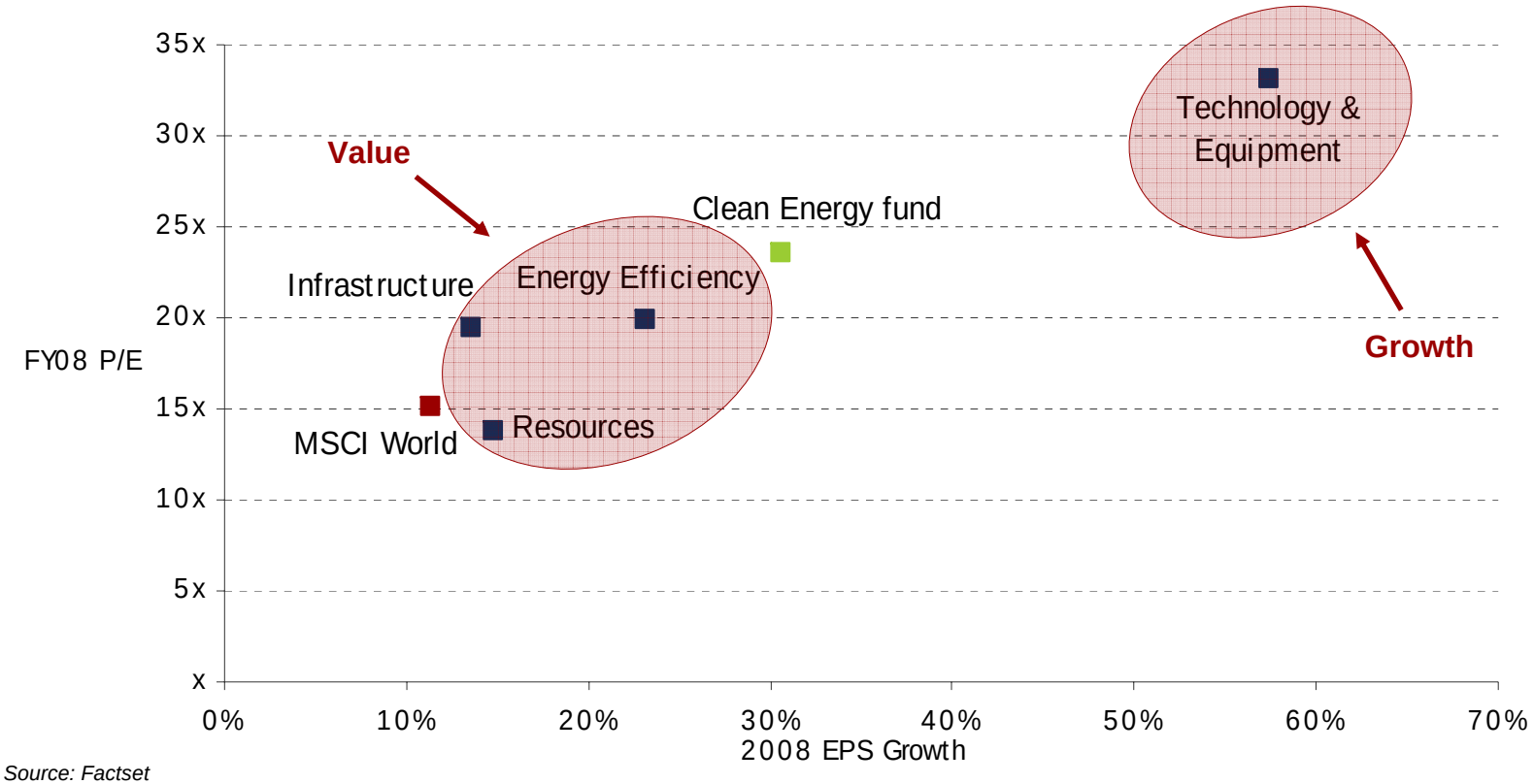
| NON INVESTABLE EXAMPLE: AREVA |
| --- |
| - Areva derives 100% of its revenue from nuclear energy<br>- Therefore it does not enter into the Clean Energy universe |

| INVESTABLE EXAMPLE: ENERGIAS DE PORTUGAL |
| --- |
| - EDP's value is 36% related to electricity from renewable sources (hydro, wind)<br>- As such, it qualifies for the Clean Energy universe<br>- However EDP has a 17% stake in a nuclear plant<br>- Future investment is clearly directed at Clean Energy |

***PF(LUX)-Clean Energy tolerates nuclear, coal & oil when a company is leveraged to Clean Energy***

# PF(LUX)-Clean Energy financial characteristics

## P/E VS EPS GROWTH




*Source: Factset*

***PF Clean Energy allows for investment in both "growth" and "value"***

# Investment process: Stock classification

- We have defined three classes of stocks
  - Class A: core holdings with positive strategic weighting
  - Class B: non core holdings with market cap > USD 100 mm
  - Class C: non core holdings with market cap < USD 100 mm

| CLASS | STRATEGIC WEIGHT (W) | MAX WEIGHT | DESCRIPTION |
|---|---|---|---|
| **A** | w > 0% | w + 3% | Core holding |
| **B** | w = 0% | 3% | Opportunity |
| **C** | w = 0% | 0.5% | Opportunity<br>- management recognises Clean Energy fund as strategic partner<br>- at least 80% Clean Energy related activities<br>- ideally covered by an analyst<br>- maximum weight of the group is 5% |

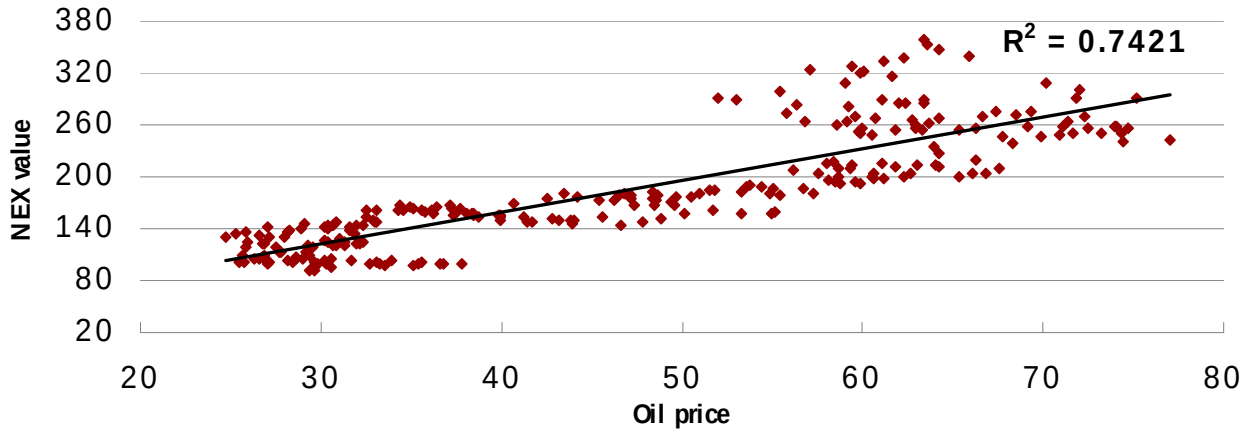
# Investment process: Determination of alpha factor

- We are looking for companies with:

| | Decision weightings | |
|---|---|---|
| | **Blue Chip** | **Small Mid cap** |
| **Strong fundamentals** | | |
| Sustainable business franchises | 30% | 30% |
| Proven Management | 20% | 50% |
| *And* | | |
| **Attractiveness of investment** | | |
| Valuation | 40% | 10% |
| Momentum | 10% | 10% |

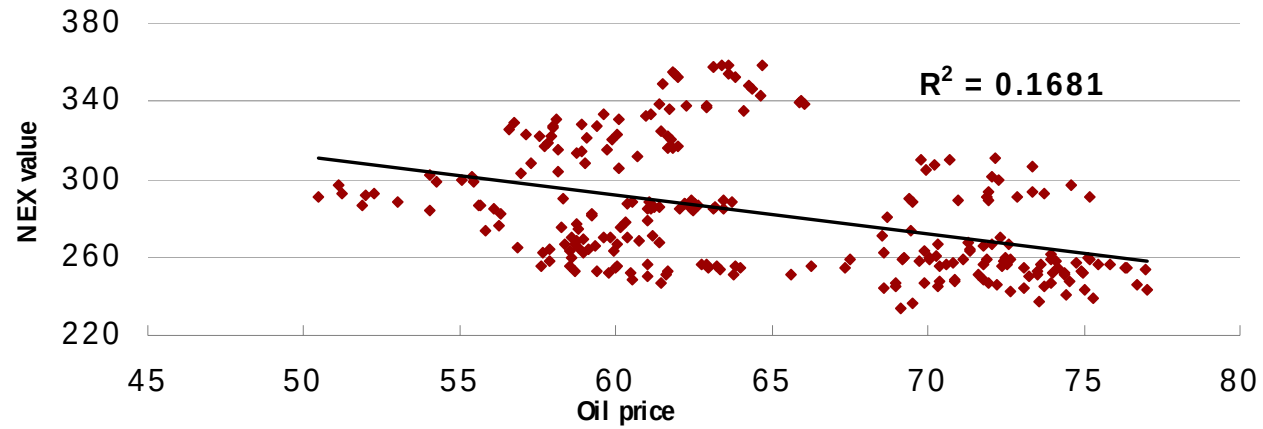
# Correlation between NEX and Oil

**WILDERHILL NEW ENERGY GLOBAL INNOVATION INDEX & OIL PRICE: 5 YEARS (BOTH IN $, WEEKLY)**




Correlation = 86.14%

**WILDERHILL NEW ENERGY GLOBAL INNOVATION INDEX & OIL PRICE: 1 YEAR (BOTH IN $, DAILY)**

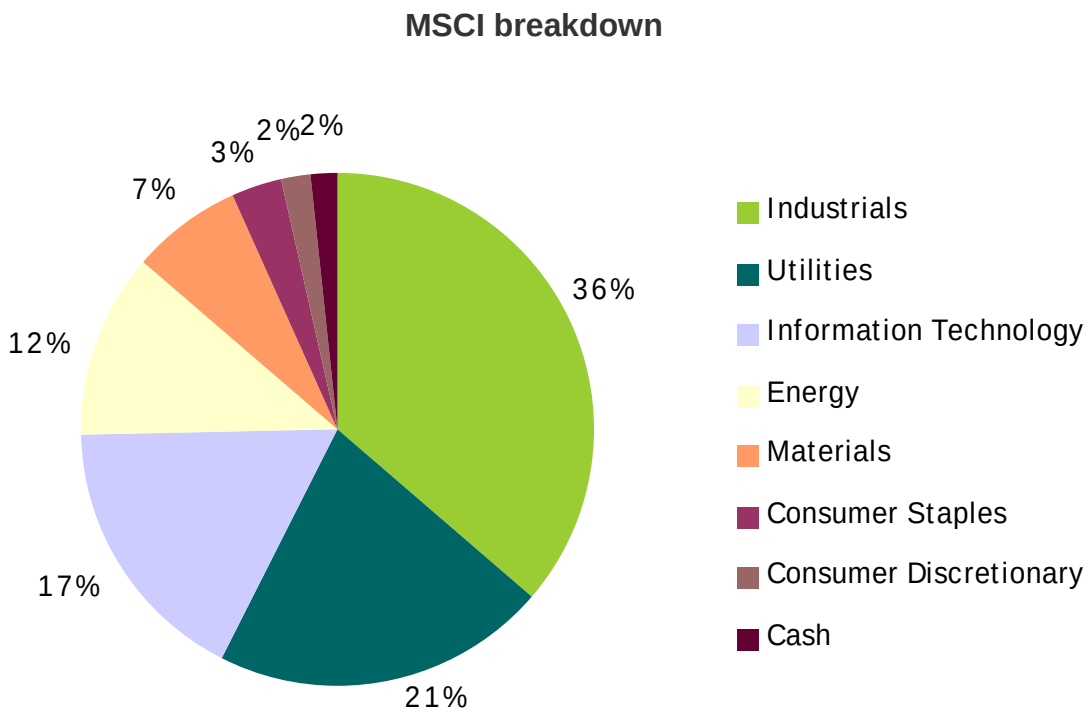



Correlation = -41.00%

Source : Bloomberg, NEX & CL1, April 2002-April 2007

# PF(LUX)-Clean Energy MSCI breakdown

## PF(LUX)-CLEAN ENERGY PORTFOLIO




*Source: Pictet Asset Management, as per July 31th 2007*