



# Water, alternative energy and climate change - environmental investment strategies

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# Climate Change – No Longer a Fringe Issue



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



- **“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperature widespread melting of snow and ice, and rising global average sea level”**

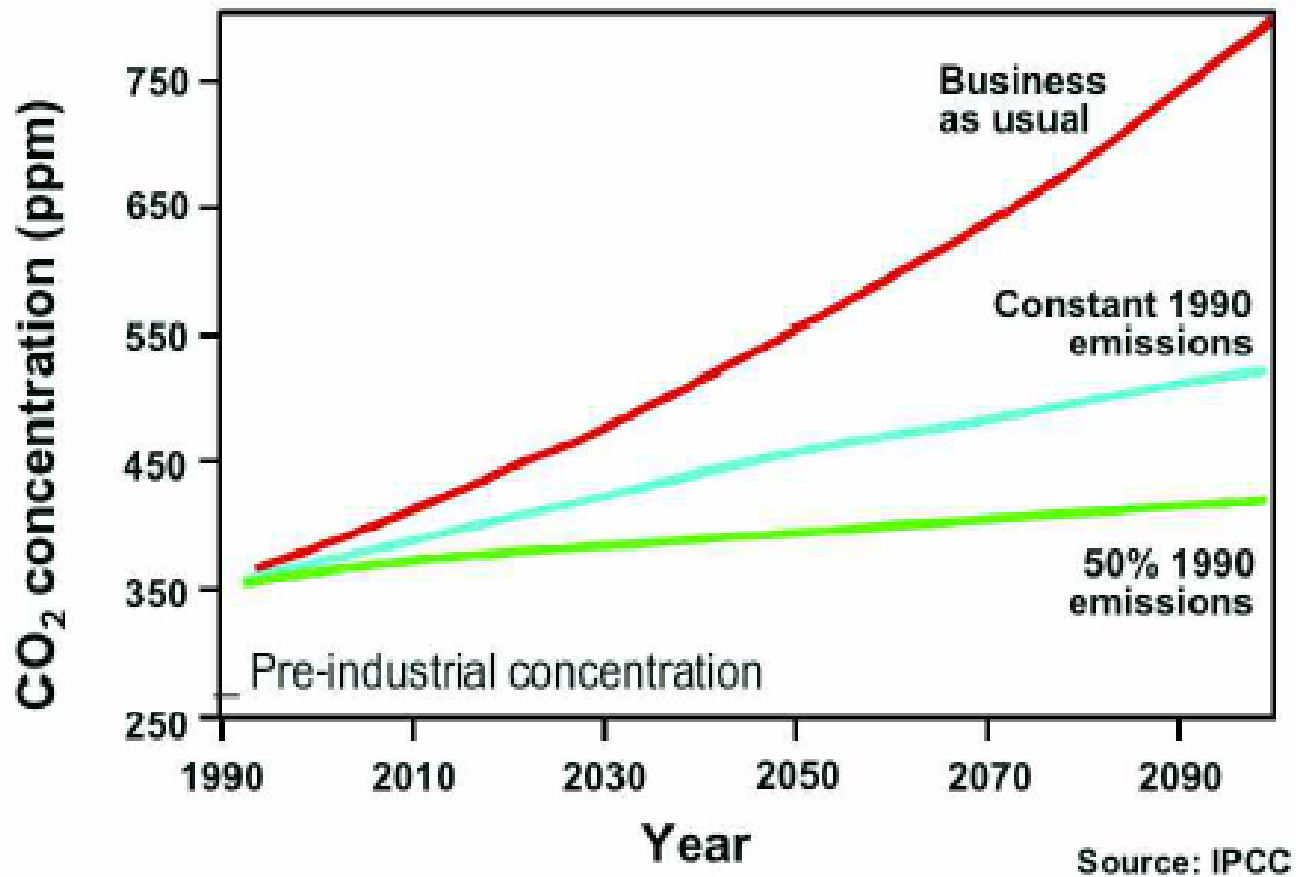
IPCC Fourth Assessment Report 2007



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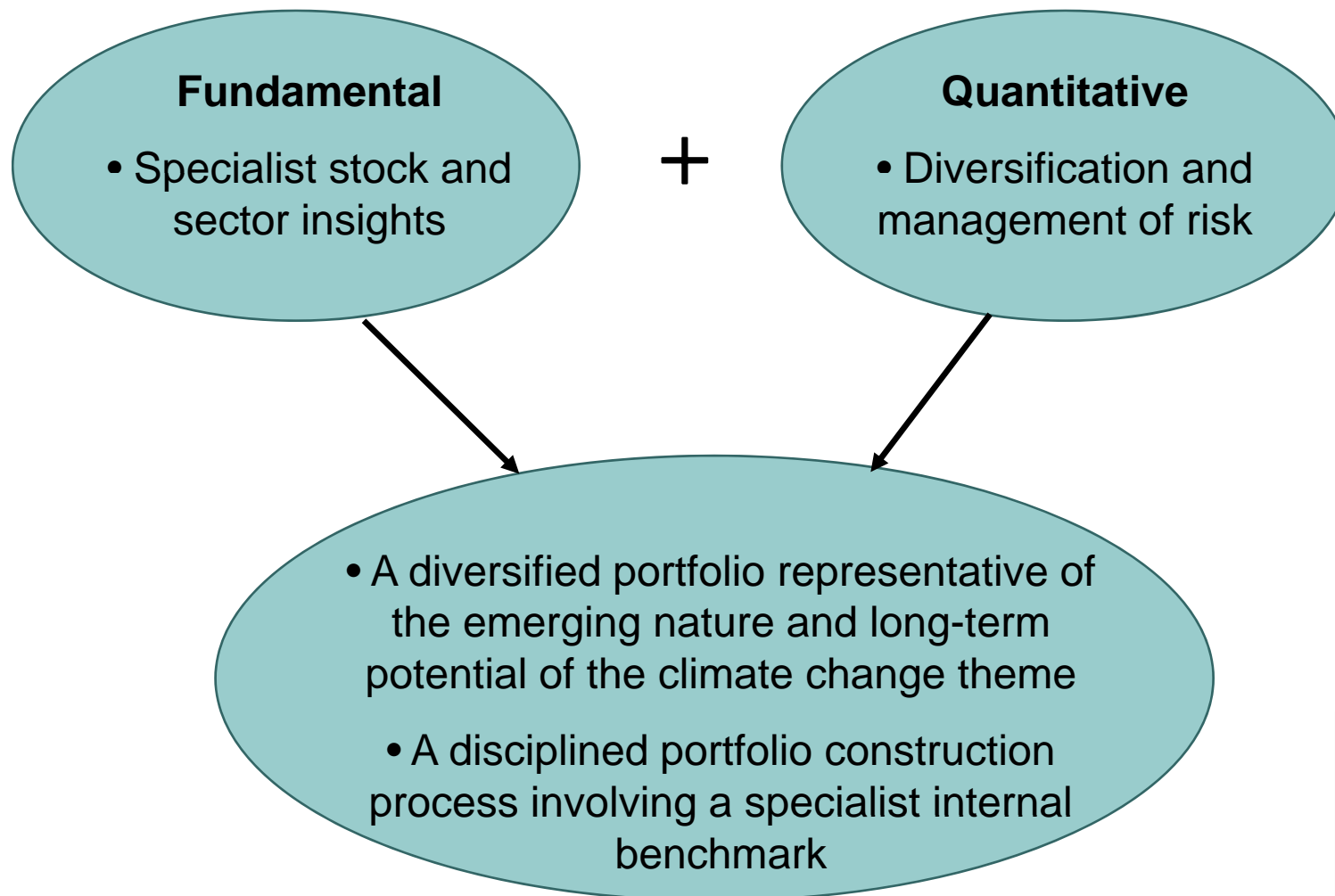
## Climate Change- Emissions projected to rise further



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## Constructing a Climate Change Portfolio





# Eco Investment Process – 4 Steps

STEP 1

Limit the scope of the theme

STEP 2

Define investment universe

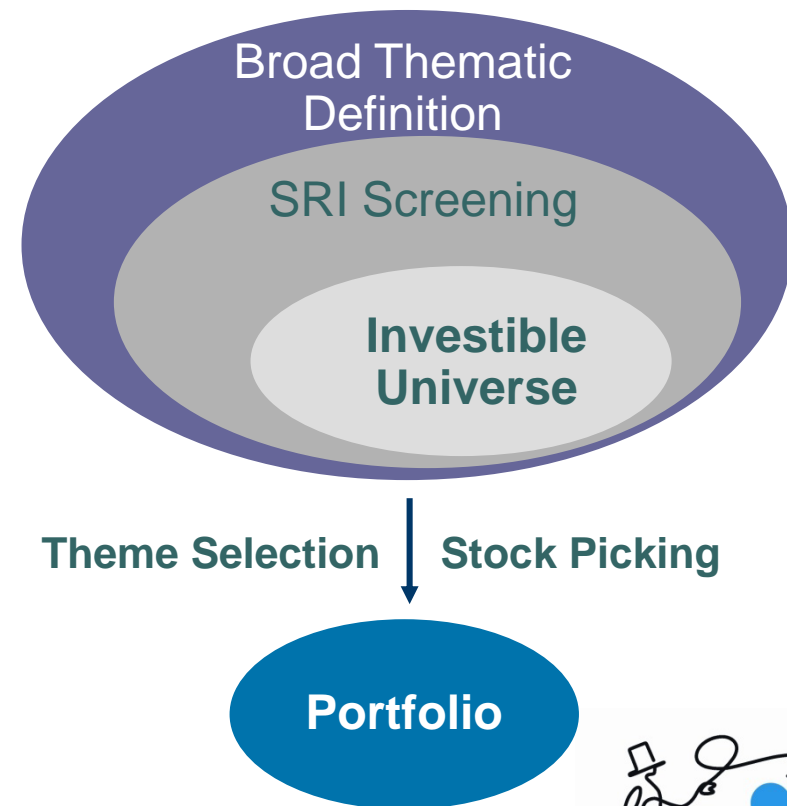
- Business activities make up more than 50% of revenues within the scope of the theme or
- Market leader at least 10% of revenue coming from these activities
- Universe screened for sustainability

STEP 3

Create investment framework

STEP 4

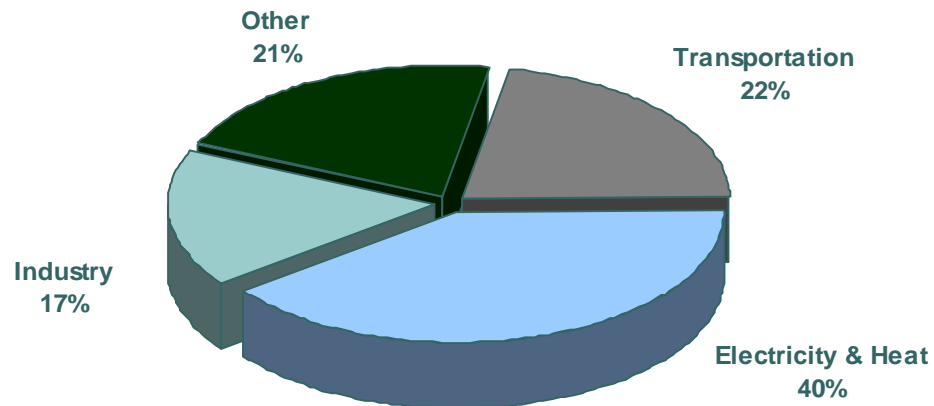
Create portfolio with sustainable climate change stocks





## Step 1: Limit the Scope of the Theme

### Source of Greenhouse Gas Emissions:



### Focus on Energy Generation, Usage and Transportation

“The universe reflects the factors and sources of the greenhouse gases causing climate change, the thematic areas where the solutions to climate change lie and the companies that compose each theme”

Source: World Resources Institute





## Step 1: Determine Sectors Driving Climate Change Solutions

- Physical  
temperature, wind,  
precipitation

**Water**

- Regulation  
environmental  
legislation, subsidies

**Cleaner Energy Sources**

**Energy Efficiency**

- Behavioral  
Voluntary actions, client  
behavior, reputational  
risk

**Better Waste Management**

**Carbon Credits Trading**



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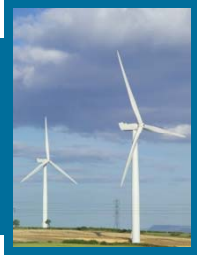


## Step 2: Define Investment Universe

- Pure Plays - primary focus on product/service with an orientation towards climate change mitigation (+50% of revenues).
- Market Leaders – diversified companies, market leaders within a particular ‘climate change’ sector (+10% and market leader)
- Universe screened for Social Responsible Investment (SRI) criteria:
  - Environmental Impact
  - Nuclear Energy
  - Human Rights
  - Military Industry
  - Corporate Governance





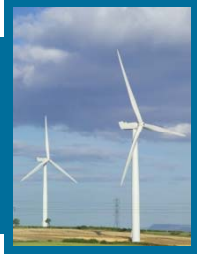


## Step 3: Create Investment Framework

- Investible universe (300 stocks) = internal benchmark
- Traditional methods of index development misses the potential of the climate change theme (small-mid cap opportunity set).
- Determining the strategic target weights for each climate change sector: Top down macro analysis + bottom up stocks insights (emerging technologies & innovations, ID long-term trends)
- Independent input from external scientists and industry experts: Environmental Advisory Committee (EAC)
- Determine neutral weights of each company within their component climate change sector



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## Step 3: Strategic Weights for Climate Change Sectors

<b>Water</b>	<b>15%</b>
<b>Cleaner Energy Sources</b>	<b>35%</b>
<b>Energy Efficiency</b>	<b>30%</b>
<b>Better Waste Management</b>	<b>10%</b>
<b>Carbon Credits Trading</b>	<b>10%</b>



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## Step 3: Strategic Weight Energy Efficiency = 30%

Focus has been on alternative energy

BUT

**Definition:** Delivering the same or better output with reduced power consumption

Focus shifting to Energy Efficiency

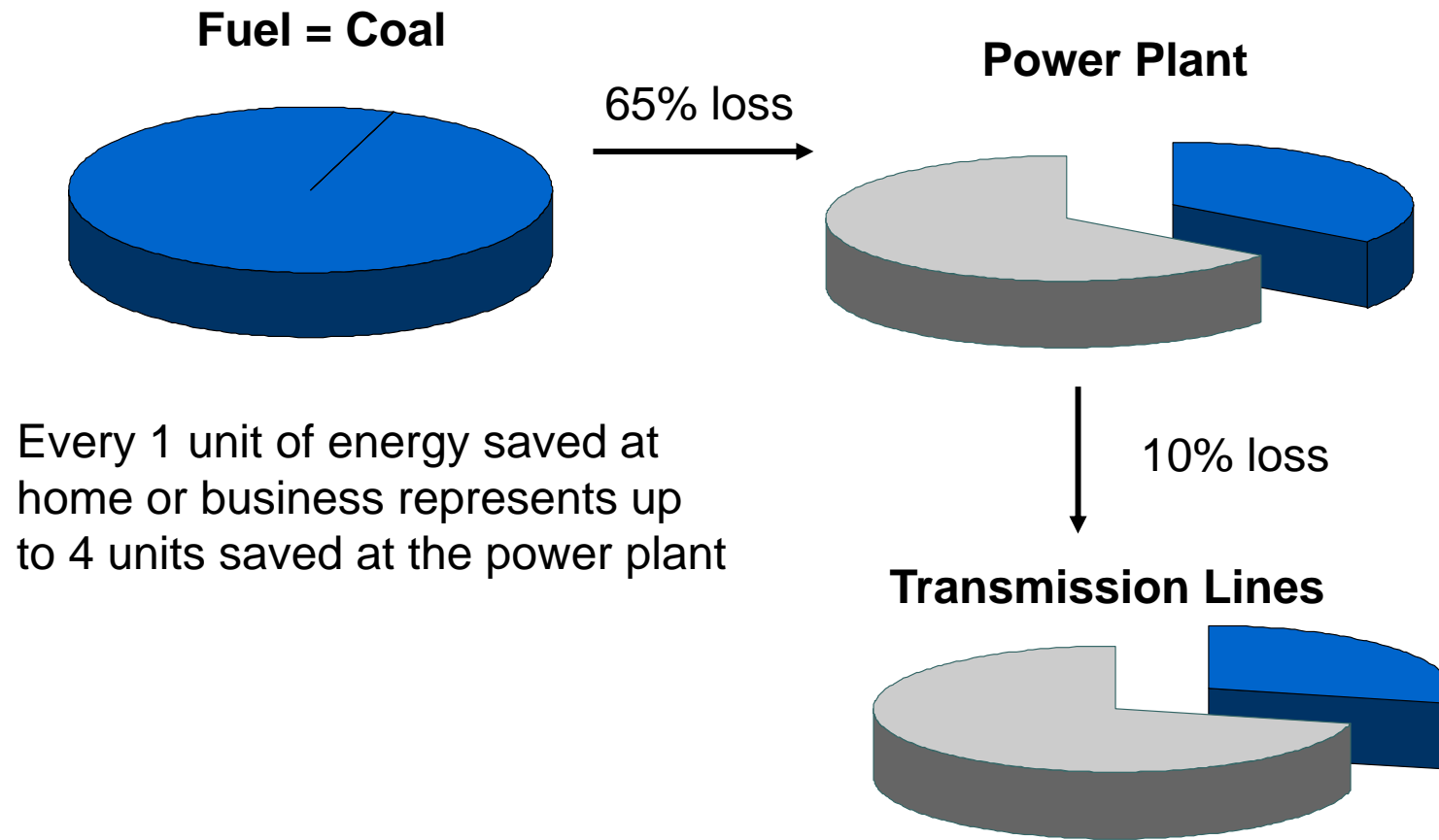
- Immediate Impact
- Multiplier effect



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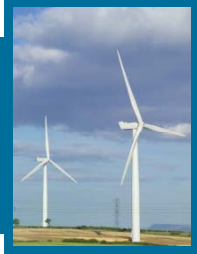
# Energy Efficiency Multiplier Effect



Source: Sustainable Energy, Choosing Among Options (Tester, Drake, Driscoll, Golay, Peters), UBS Research



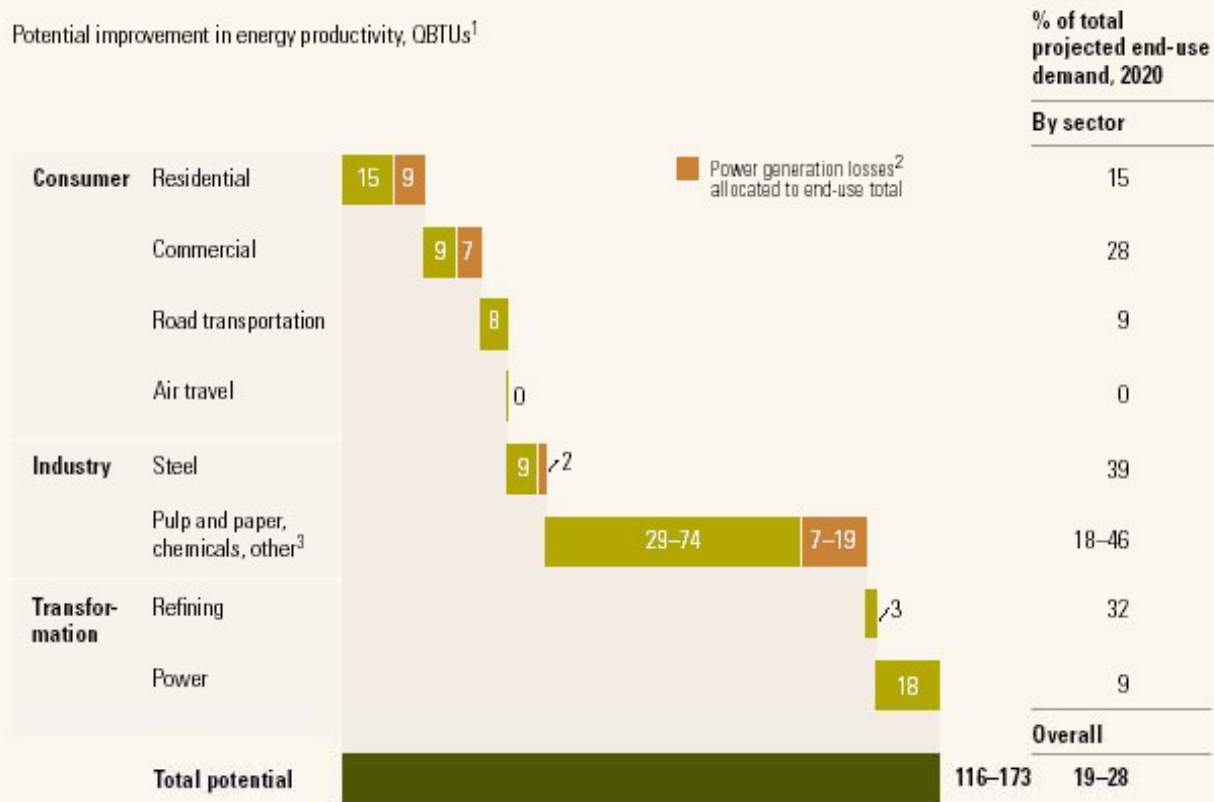
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# Potential Demand Reduction of up to 28% in 2020 through enhanced energy productivity

## Opportunities in conventional technologies

Potential improvement in energy productivity, QBTUs<sup>1</sup>



<sup>1</sup> From conventional technologies with internal rate of return  $\geq 10\%$ ; QBTUs = quadrillion British thermal units.

<sup>2</sup> For example, during generation and distribution.

<sup>3</sup> For example, cement, food processing.

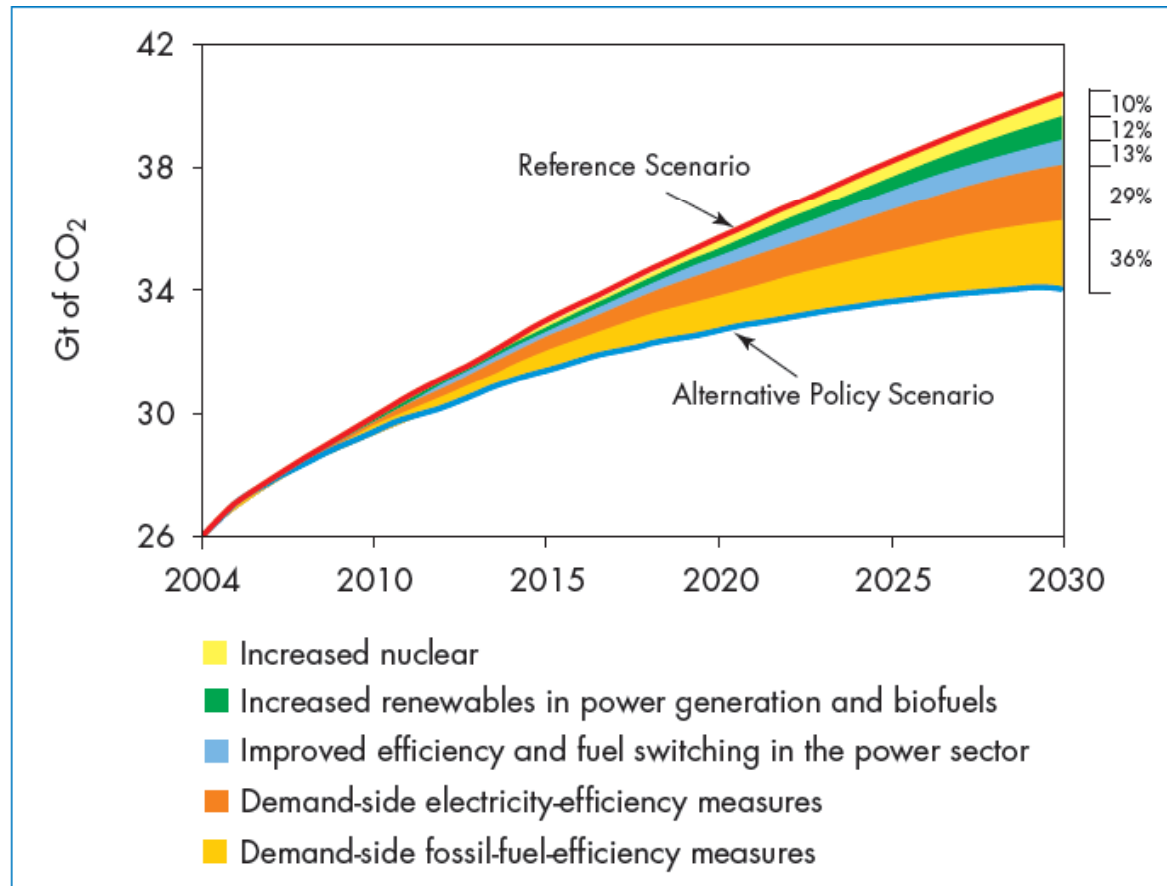
Source: McKinsey Global Institute analysis



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## 2/3 of Projected Co2 emission savings to come from energy efficiency



Source: IEA



## Sectors where efficiency measures are most productive: Top down – Bottom up

<b>Transport</b>	<ul style="list-style-type: none"> <li>•Low Emission Cars</li> <li>•Biofuels</li> <li>•Mass Transportation Systems</li> </ul>	<ul style="list-style-type: none"> <li>•Umicore</li> <li>•D1 Oils</li> <li>•Canadian Nat.</li> </ul>
<b>Buildings</b>	<ul style="list-style-type: none"> <li>•Insulation</li> <li>•Efficient Lighting</li> <li>•Water Heating</li> <li>•Control Light and Temp</li> <li>•Smart Mettering</li> </ul>	<ul style="list-style-type: none"> <li>•St Gobain</li> <li>•Phillips</li> <li>•Ceramic Fuel Cells</li> <li>•Schneider</li> <li>•Itron</li> </ul>
<b>Power Generation, Transmission &amp; Heavy Industry</b>	<ul style="list-style-type: none"> <li>•Combined Cycle Gas Turbine</li> <li>•Super Conducting Technologies</li> <li>•Control &amp; Instrumentation</li> <li>•Varibale Speed Drives &amp; Motors</li> <li>•Critiacl Power</li> </ul>	<ul style="list-style-type: none"> <li>•ABB</li> <li>•American Super Conductor</li> <li>•Schneider</li> <li>•ABB</li> <li>•Emerson</li> </ul>



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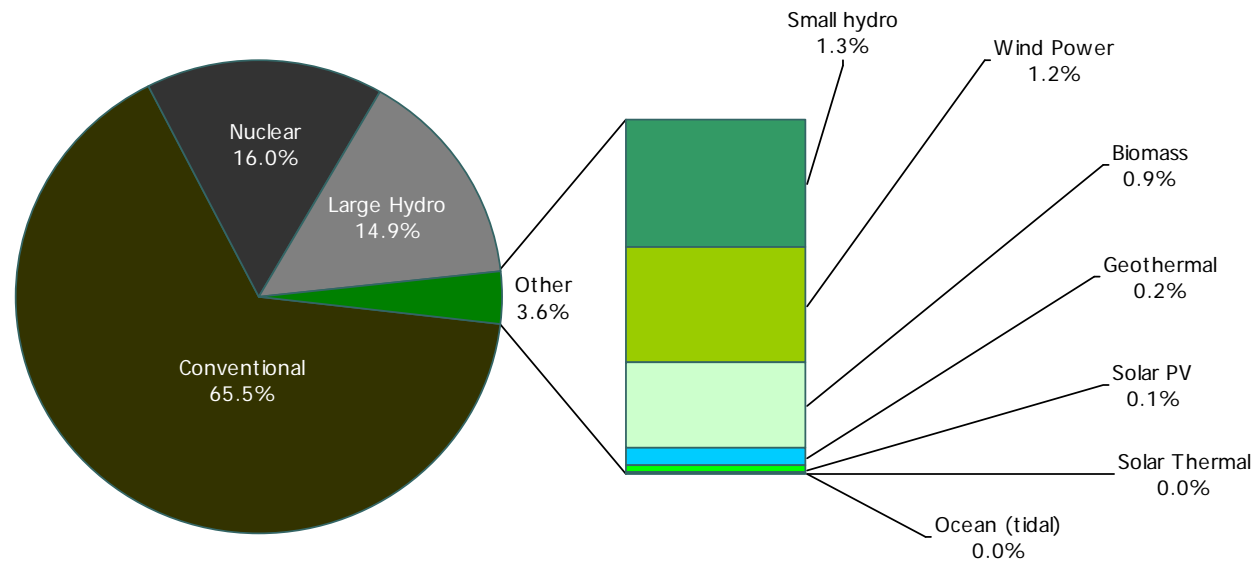
## Step 3: Strategic Weight Clean Energy = 35%

### Define Theme Renewable Energy

- Wind
- Solar
- Fuel Cells
- Biofuels
- Waste to Energy

**International Energy Agency:**  
30% of all energy related  
Investments in next 30 years will  
be in renewables

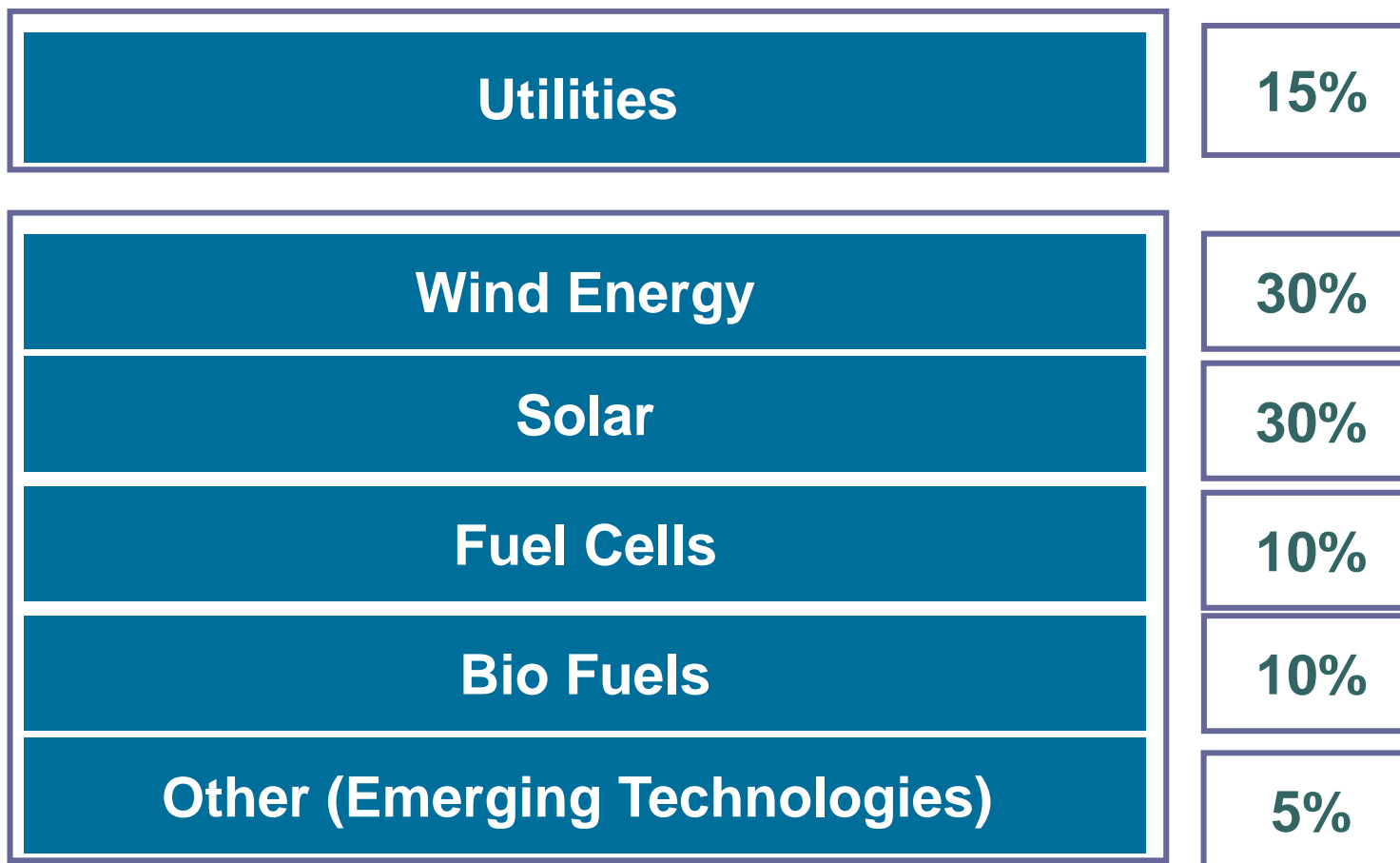
### Renewable electricity capacity, share of 2005 electricity production







## Multi-Layer: Sectors within Clean Energy Sources



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# Top down – Bottom up: Clean Energy Sources

Legislation	<ul style="list-style-type: none"> <li>•Tax Credits in US</li> <li>•Renewable Energy Law in Germany</li> </ul>	<ul style="list-style-type: none"> <li>•Vestas</li> <li>•Q-Cells</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Close to Commercialisation</li> <li>Emerging Technologies</li> <li>Polysilicon Shortage</li> </ul>	<ul style="list-style-type: none"> <li>•Ceramic Fuel Cells</li> <li>•First Solar</li> <li>•MEMC Electronic</li> </ul>
Pricing	<ul style="list-style-type: none"> <li>Increasing Electricity Prices</li> <li>Carbon Permits</li> </ul>	<ul style="list-style-type: none"> <li>•Fortum</li> <li>•Iberdrola Ren</li> </ul>
Corporate Activity	<ul style="list-style-type: none"> <li>Industry Consolidation</li> <li>IPOs / PIPEs</li> <li>Scarcity Value</li> </ul>	<ul style="list-style-type: none"> <li>•Theolia/Nordex</li> <li>•Hansen</li> <li>•31.4% Small Caps</li> </ul>

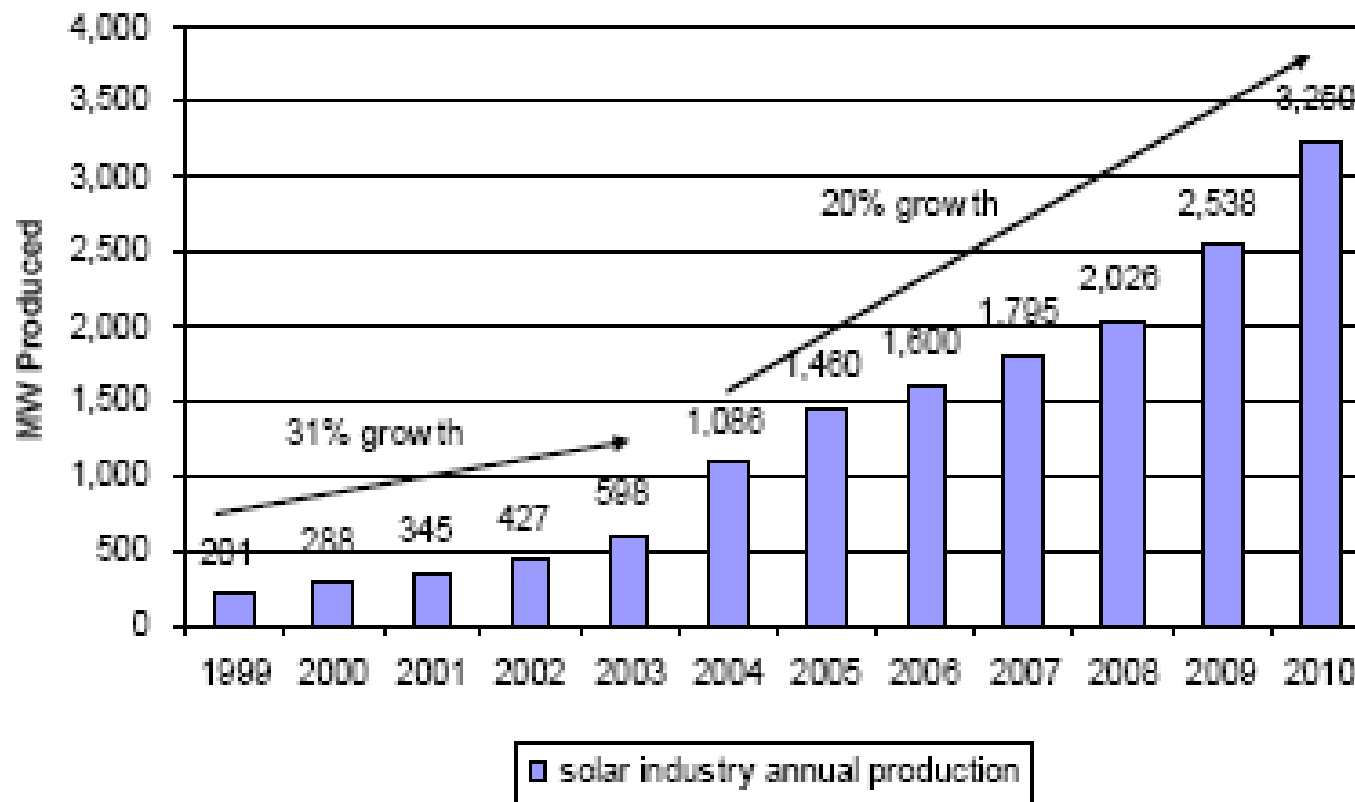


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## Solar Industry – US\$10 billion market

Expected growth rate – 20%+ growth a year



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## Step 3: Strategic Weight Water = 15%

Define the theme: 'Water Cycle'

**Stage 1:** Sources of water: ground or surface water

**Stage 2:** Filtration and disinfection process

**Stage 3:** Residential, commercial and industrial water use

**Stage 4:** Secondary disinfection treatment prior to discharge into the environment

Multi-Layer: Sectors within Water

**Water Infrastructure and Equipment**

**40%**

**Water Utilities**

**35%**

**Water Technologies**

**25%**



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# Top down – Bottom up: Water

<b>Urban Demand Growth</b>	<p>Infrastructure investment          Repair/replacing and maintenance          Increased water consumption per capita          Desalination</p>	<p><b>Flowserve</b>  <b>Wavin</b>  <b>Roper Industries</b>  <b>Veolia</b></p>
<b>Price Increase</b>	<p>Water Pricing          Visibility Within Regulated Utilities</p>	<p><b>Sabesp</b>  <b>Pennon</b></p>
<b>Outsourcing</b>	<p>Infrastructure, design of water systems          Municipals outsourcing water treatment</p>	<p><b>United Utilities</b>  <b>Arcadis</b></p>
<b>Tech &amp; Analytics</b>	<p>Analytics for quality and safety          Filtration treatment (legislation)          Metering for increased efficiency/charges</p>	<p><b>Millipore</b>  <b>Kurita</b>  <b>Badger Meter, Itron</b></p>
<b>Consolidation</b>	<p>Scarcity Value</p>	<p><b>45% Small Caps</b></p>



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## Step 4: Creating a Portfolio of Superior Climate Change Stocks

- **Sector Analysis**
  - Life cycle of sector
  - Structure of value chain
  - Bottlenecks in value chain
- **Company Analysis**
  - Life Cycle of company
  - Structure & quality of management
  - Product & services range
  - Positioning in value chain
  - Strategic Positioning and vision
- **Financials**
  - Balance Sheet
  - Access to capital
  - Earnings Growth
  - Profitability
- **Valuation**
  - FCF Models
  - 12mth FW PE
  - Sum of Parts
  - EV/EBITDA
- **Price Targets**

▪ Stock analysis mirrors many sectors in the broad market with adaptation to developing nature of 'climate change' companies.

### Managing Risk

<b>Tracking Error</b>	6-8 % vs. universe benchmark
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<b>Sector/The me</b>	+ or – 10% of the component theme
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<b>Stocks:</b>	+ or – 2% of neutral position
With Market cap of less than Euro 1bn	

With Market cap of more than Euro 1bn	+ or – 4% of neutral position
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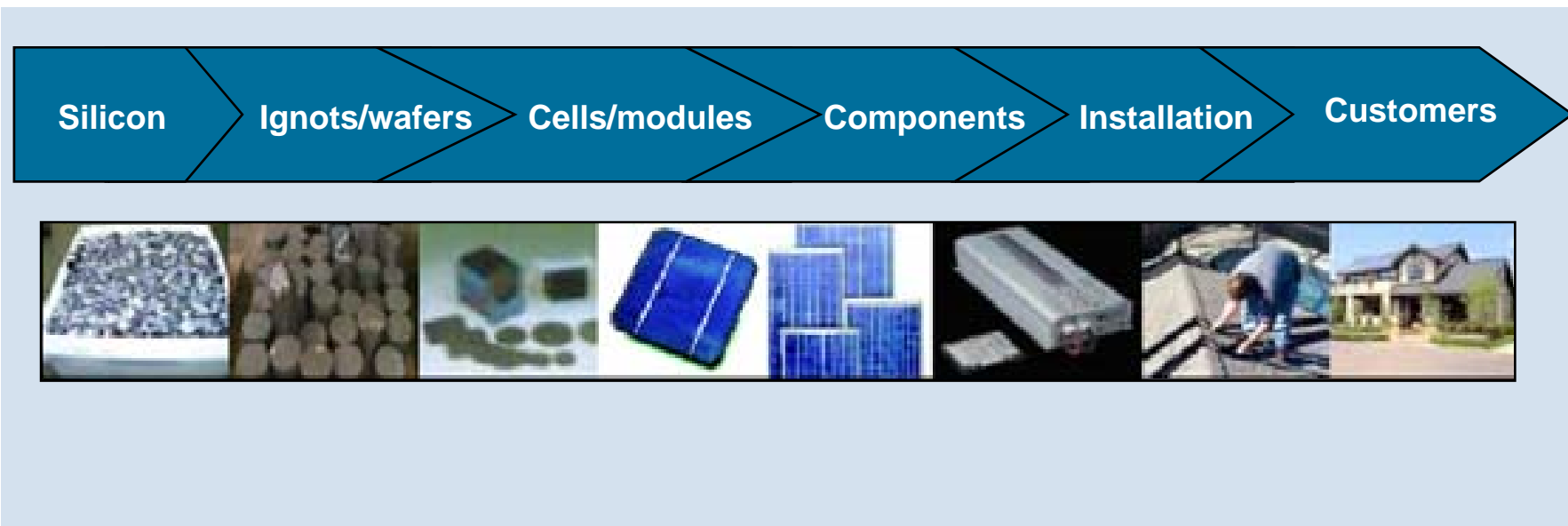


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## Step 4: Solar Industry Value Chain

- Understanding where a company sits within the structure of the value chain for a particular component theme is critical.





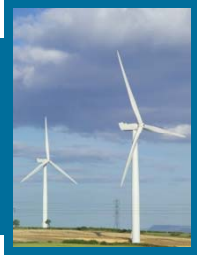
## Conclusion

- Climate change solutions represent an investment opportunity.
- Identify the key sectors associated with climate change
- Identify the stocks best positioned to deliver innovative solutions within each sector
- Combining fundamental insights with the creative use of quantitative techniques is key for:
  - analyzing and defining sectors within themes
  - constructing an investment universe/benchmark that represents the true potential of the Climate Change theme.
  - building diversified portfolios of superior stocks that are best positioned to deliver strong long term returns within a coherent risk control framework.



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Q&A

Questions?



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- Liontamer Investments Limited (AFSL: 306682) is the Australian registered subsidiary of KBC Asset Management NV (KBCAM)
- KBCAM's advantages in the ECO investments space:
  - a pioneering firm in Eco investing globally
  - experienced and dedicated specialist team of ECO Portfolio Managers
  - independent input by experienced scientists and industry experts of the Environmental Advisory Committee (EAC)
  - Socially Responsible Investing (SRI) is a core competence
  - over 7 years experience in constructing and maintaining an Eco investment universe
  - long established contact network with niche brokers
- For further information please contact:

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**Let's start thinking about...**

**This session was:**

- 1. awful**
- 2. mediocre**
- 3. good**
- 4. excellent**

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**Time's Up!**

**Let's start thinking about...**

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