

## **Industry/business use of ‘complementary measures’ for decarbonisation**

*Looking beyond pricing and regulation to voluntary and other approaches*

22 June 2015

*International Energy Agency, Paris*

## INTERNATIONAL ENERGY AGENCY

The International Energy Agency (IEA), an autonomous agency, was established in November 1974. Its primary mandate was – and is – two-fold: to promote energy security amongst its member countries through collective response to physical disruptions in oil supply, and provide authoritative research and analysis on ways to ensure reliable, affordable and clean energy for its 29 member countries and beyond. The IEA carries out a comprehensive programme of energy co-operation among its member countries, each of which is obliged to hold oil stocks equivalent to 90 days of its net imports. The Agency's aims include the following objectives:

- Secure member countries' access to reliable and ample supplies of all forms of energy; in particular, through maintaining effective emergency response capabilities in case of oil supply disruptions.
- Promote sustainable energy policies that spur economic growth and environmental protection in a global context – particularly in terms of reducing greenhouse-gas emissions that contribute to climate change.
- Improve transparency of international markets through collection and analysis of energy data.
  - Support global collaboration on energy technology to secure future energy supplies and mitigate their environmental impact, including through improved energy efficiency and development and deployment of low-carbon technologies.
  - Find solutions to global energy challenges through engagement and dialogue with non-member countries, industry, international organisations and other stakeholders.

IEA member countries:

Australia  
Austria  
Belgium  
Canada  
Czech Republic  
Denmark  
Estonia  
Finland  
France  
Germany  
Greece  
Hungary  
Ireland  
Italy  
Japan  
Korea  
Luxembourg  
Netherlands  
New Zealand  
Norway  
Poland  
Portugal  
Slovak Republic  
Spain  
Sweden  
Switzerland  
Turkey  
United Kingdom  
United States



International  
Energy Agency

Secure • Sustainable • Together

© OECD/IEA, 2015

**International Energy Agency**  
9 rue de la Fédération  
75739 Paris Cedex 15, France

[www.iea.org](http://www.iea.org)

Please note that this publication is subject to specific restrictions that limit its use and distribution. The terms and conditions are available online at [www.iea.org/t&c/](http://www.iea.org/t&c/)

The European Commission also participates in the work of the IEA.

# Table of contents

<b>Acknowledgements .....</b>	<b>2</b>
<b>Introduction .....</b>	<b>3</b>
<b>Session 1: Overview of the landscape – towards a typology of complementary approaches and a conceptual framework for action .....</b>	<b>4</b>
<b>Session 2: Focus on assessment – how well are these programs doing / what criteria do we use for evaluation? .....</b>	<b>5</b>
<b>Session 3A: Voluntary agreements and government-initiated programs .....</b>	<b>6</b>
<b>Session 3B: Business/NGO collaborations and company-led initiatives .....</b>	<b>7</b>
<b>Session 4: Challenges and opportunities in developing and transition economies and SOEs.....</b>	<b>8</b>
<b>Session 5: Possible role for complementary actions beyond Paris – suggestions for next steps ..</b>	<b>9</b>
<b>Annex: Agenda .....</b>	<b>10</b>

## Acknowledgements

The workshop was organised by the International Energy Agency (IEA) Environment and Climate Change (ECC) Unit. Liwayway Adkins and George Kamiya organised the workshop, with support from Sarah Kennedy and Audrey Glynnis-Glenn. Overall guidance was provided by Philippe Benoit (A/Director, Sustainable Energy Policy and Technology) and Takashi Hattori (Head, ECC Unit).

## Introduction

This document provides a summary of the presentations and discussions from the workshop on industry/business use of ‘complementary measures’ for decarbonisation held at the International Energy Agency (IEA) on 22 June 2015.

Over 70 representatives from industry, government, and NGOs from 17 countries in Europe, Asia, and North America participated in the one-day workshop. A full participant list is available [here](#).

**Philippe Benoit** (IEA) welcomed participants to the IEA and [presented](#) insights from recent IEA publications<sup>1</sup> to help frame the potential role of complementary measures in advancing decarbonisation.

---

<sup>1</sup>[2015 World Energy Outlook Special Report on Climate Change & Energy; Energy Technology Perspectives 2015](#)

## Session 1: Overview of the landscape – towards a typology of complementary approaches and a conceptual framework for action

Page | 4

This session provided an overview of the landscape with presentations from [Paul Simpson](#) (CDP), [Sandrine Dixon-Declève](#) (Cambridge Institute for Sustainability Leadership), [Yasuji Komiyama](#) (Japanese Ministry of Economy, Trade, and Industry), and [Nicoletta Piccolorovazzi](#) (Dow). The session was moderated by [John Moorhead](#) (BSD Consulting), co-author of the [Global 500 Greenhouse Gas Report: Fossil Fuel Energy Sector](#).

- **Context:** Business and investor appetite for climate change action has increased; numerous coalitions and organisations are supporting business action on climate change, e.g. CDP, PRI, CLG, etc.
- **Typologies:** Speakers presented [typologies](#) of corporate action, for [example](#): i) changing business norms through unilateral action; ii) market transformation through collaboration; iii) creating political space through 'statesmanlike' activity.
- **Terminology** (voluntary vs. complementary measures) may differ by geography, culture and stakeholder perspective (policy-makers vs. businesses). "Synergistic approaches" was proposed as a more inclusive term.
- **Business motivation:** Businesses are generally driven by profit maximisation and risk mitigation, thus actions must make business sense (e.g. strategic advantage, cost savings). Brand value is one of many motives for businesses to pursue action on climate.
- **Role of government:** Several speakers and participants noted that these measures should not be seen as substitutes for regulations, but as complements. For example, in Japan, voluntary agreements (VAs) complement the *Energy Conservation Law*, introducing more flexibility for responding to changes in economic conditions. Government has a role to play in creating regulatory and policy environments that support and incentivise business actions.
- **Metrics, tracking, and evaluation** are important aspects in ensuring additionality. For example, the PDCA (plan-do-check-act) evaluation cycle in Japan has been critical in its success. The Japanese experience suggests that the pledge and review style (PDCA) can be a useful tool for improving VAs in general and may be adaptable to a UNFCCC context. Also, enriching the new climate initiatives database could help drive greater ambition.

## Session 2: Focus on assessment – how well are these programs doing / what criteria do we use for evaluation?

This session focused on assessment and evaluation, with presentations from [Hiroyuki Tezuka](#) (Keidanren), [Rory Sullivan](#) (University of Leeds), [Timo Busch](#) (University of Hamburg), and [Luisa Florez](#) (AXA IM) and comments from [Keigo Akimoto](#) (RITE). [Dietrich Earnhart](#) (University of Kansas) moderated the session.

- **The Japanese Voluntary Action Plan**, initiated in 1997, has contributed to energy efficiency improvement and GHG reductions. CO<sub>2</sub> emissions intensity during the first Kyoto commitment period (avg. '08-'12) was 14% lower than 1990 levels. Looking ahead, Keidanren focuses on four pillars to halve emissions by 2050 through domestic emission reductions, low carbon products (e.g. cars), international contributions and partnerships (e.g. steel in India), and development of breakthrough technologies. Key lessons include the importance of effective target setting and evaluation mechanisms (PDCA cycle) and peer pressure within industries; this led to 29 of 61 industry associations raising their targets in 2012. RITE discussed some results from and challenges involved in their evaluation of the program.
- **Effectiveness of carbon management practices:** [An analysis](#) of 433 companies found no statistically significant evidence that carbon management practices, as reported in CDP data, were linked to declines in absolute carbon emissions. [Limitations](#) of the study include small sample size and time period (two years), data quality, and exclusion of Scope 3 emissions.
- **Effect on financial performance:** [A meta-analysis](#) of 21 corporate carbon and financial performance studies suggests that corporate carbon performance is, on average, *positively* related to financial performance. This effect was found to be larger when considering *emission ratios* compared to *absolute emissions*.
- **Investors** are aware and concerned about carbon risks and clients are pressuring investment managers to decarbonise portfolios. ESG scores can be used to assess and standardise carbon risk. The impact of “unburnable carbon” on financial performance is uncertain. Addressing indirect (Scope 3) emissions is important but challenging. Investors must look beyond divestment towards positive investment (e.g. in renewables).

## Session 3A: Voluntary agreements and government-initiated programs

This break-out group discussed actions and approaches that entail some government involvement, with presentations from [Martina Otto](#) (CCAC), [Sagarika Chatterjee](#) (PRI), [Seonghee Kim](#) (IEEJ), and [Clemens Rohde](#) (Fraunhofer ISI). [Hiroki Kudo](#) (IEEJ) moderated the session.

- **Voluntary agreements (VAs)** are implemented in diverse ways depending on the country setting and scale (international, national, subnational), and reflect the policy culture at hand. There is no single blueprint, but there are ways to design VAs so as to be synergistic with regulations and carbon pricing frameworks.
- **Voluntary action** can help prepare the ground for subsequent regulation, and can also be an effective “rapid response” with global reach. Voluntary actions addressed in this breakout session included short-lived climate pollutants (SLCPs) (which it was noted should be included in INDCs) as well as investor initiatives.
- Policy makers can encourage supportive **actions from investors**, such as carbon footprinting, incorporation of climate change into risk analysis, active ownership and low-carbon finance.
- **A comparison of VAs in South Korea and Japan** revealed some key lessons. South Korea, in comparison to Japan, lacks industry associations and government-business relations tend to be adversarial and distrustful. Regulations may be appropriate in some cases, for example if there is a need for urgent action. Although Korea ultimately decided not to adopt a voluntary approach, its examination of the Japanese VAP informed the development of legislation.
- **In Germany**, industry accounts for one-third of total energy demand. Energy-intensive industries can apply for tax exemptions if they sign a voluntary agreement to improve energy efficiency and introduce an Energy Management System (EMS, e.g. ISO 50001); these exemptions totalled EUR 9.2 billion in 2012.
- Some **factors for success** of VAs and government-initiated programs were listed:
  - An honest broker that can help explain the business case for voluntary actions and the benefits of working together.
  - Better data collection can help improve program effectiveness.
  - Transparency and mutual trust facilitated by common rules for reporting, monitoring, assessment.
  - Make the program as simple as possible, and as complex as necessary to enhance ambition.
  - Consider cultural and social factors at play.



## Session 3B: Business/NGO collaborations and company-led initiatives

This break-out group focused on business-led initiatives for decarbonisations, for example, industry/civil society collaborations and unilateral company actions. **Julien Colas** (EpE), **Eliot Metzger** (WRI), **Rory Sullivan** (University of Leeds), and **Xavier Riera-Palou** (Shell) shared their perspectives. The session was moderated by **Paul Simpson** (CDP).

Page | 7

- **Businesses face risks and opportunities** with climate change. Actions must make business sense and have CEO buy-in. Anticipating regulations can result in a competitive advantage. Partnerships are important and have been successful, e.g. WRI-business on renewable energy.
- **The retail sector** is largely unregulated, has disproportionately large Scope 3 emissions, and has been little studied (compared to energy intensive sectors). Comparative studies on retailers in the UK, US, and Japan showed different pressures and outcomes. For example, industry peer pressure and reputational risk were important drivers in Japan. US retailers have faced weaker market, government, and consumer and civil society pressures compared to UK retailers, resulting in weaker outcomes. The evidence from the retail sector indicates that while unilateral commitments can deliver significant improvements in energy use and emissions intensity, delivering absolute emissions reduction is extremely difficult without strong incentives or regulation.
- **Shell** has a four-pronged approach/strategy on climate change: gas, energy efficiency, biofuels, and CCS. They use three tools to implement this strategy: business CO<sub>2</sub> strategies (existing assets), \$40/ton CO<sub>2</sub> project screening value (PSV) (new projects and expansions), and CO<sub>2</sub> performance standards (*product* must be CO<sub>2</sub>-competitive in market). The PSV considers operational emissions (i.e. not product) and has improved efficiency of proposed new and expansion projects as a result (since early 2000s).
- **Integrating GHG and climate targets** into other sustainability goals may help to mitigate inadvertent harm in other areas (e.g. impacts to water) as a result of GHG-focused action.
- **Looking ahead**, businesses look to government for long-term signals for supportive policy. Supply chain emissions are of emerging interest, and businesses should look towards setting targets for Scope 3 emissions.

## Session 4: Challenges and opportunities in developing and transition economies and SOEs

Page | 8

This session focused on complementary measures in developing and transition economies and state-owned enterprises (SOEs) with presentations from [Dietrich Earnhart](#) (University of Kansas), [May Tan-Mullins](#) (University of Nottingham Ningbo China), and [Jean-Yves Caneill](#) (EDF). [Liwayway Adkins](#) (IEA) moderated the session.

- A distinction was made between the drivers for environmental behaviour at the enterprise level in **developing countries versus transition economies**. Whereas foreign firm ownership, multinational presence, and pressure from foreign customers in “green” countries was found to be important in the former, a stronger regulatory role for government as well as internal pressures within the firm (e.g. the need to reduce energy use) and from civil society were more important in the latter. China has elements of both kinds of economies and thus a unique mix of drivers.
- **Corporate Social Responsibility in China** is an active area and many companies now publish annual CSR reports, though questions remain about their actual environmental performance and contribution to pollution. This underscores the need for regulations and standardized rules. State-owned enterprises are some of the biggest emitters, and they are active in overseas markets, e.g. in Africa. The nature of SOEs is very complicated; many are publicly listed but are still under direction of the government; thus the Chinese government should take a more pro-active role in influencing CSR for SOEs.
- **In France**, EDF is one of the lowest CO<sub>2</sub> emitters among the major European energy utilities and this might be considered a consequence of state-ownership, because it was able to anticipate strong regulatory approaches and align internal targets accordingly.

## Session 5: Possible role for complementary actions beyond Paris – suggestions for next steps

This session explored the role of complementary actions in Paris and beyond. [Taishi Sugiyama](#) (CRIEPI), [Angel Hsu](#) (Yale), [María Mendiluce](#) (WBCSD), and [Emmanuel Guérin](#) (French Ministry of Foreign Affairs and International Development) shared their perspectives. The session was moderated by [Takashi Hattori](#) (IEA).

- A key task for Paris will be to establish a good **review process** to ensure additionality.
- **Subnational (non-state and non-governmental) commitments** are very important. These entities want their actions recognised independently and do not want their actions to be subsumed by national commitments.
- Recent analysis of the 29 **non-state climate commitments** at the UN Climate Summit found that most lacked explicit emissions information, did not specify the means for monitoring and evaluation, and were not accompanied by financial pledges. Only five were thus assessed to be additional.
- Actions that cannot be taken by business unilaterally, may be undertaken through business coalitions (e.g. by sector), organised as a value chain (Consumer Goods Forum) or by technology (WBCSD). Need to be pragmatic about what is the best form of concrete outcome, which requires having the right stakeholders around the table.
- The group explored the kinds of **institutional structures** that might emerge after COP21.

**Takashi Hattori** (IEA) closed the session with an overview of proposed next steps, including plans to include a chapter on this topic in the upcoming *Energy, Climate Change & Environment 2016* publication.

## Annex: Agenda

Monday, June 22, 2015

International Energy Agency, 9 rue de la Fédération, Paris, France

Page | 10

<b>9h00</b>	<b>Registration – coffee</b>	
<b>9h30</b>	<b>Welcome and opening remarks</b>	
(+0:20)	<b>Philippe Benoit</b>	Acting Director, Sustainable Energy Policy and Technology <b>IEA</b>
<b>9h50</b>	<b>SESSION 1 (Plenary, Room 1): Overview of the landscape – towards a typology of complementary approaches and a conceptual framework for action</b>	
(+1:10)	<i>What are the archetypal forms of voluntary and other complementary measures being undertaken by industry and business (for example, participation in voluntary programs, industry associations, or stakeholder groups, or alternatively, unilateral company actions)? How do voluntary/alternative measures fit into the broader policy landscape that includes market and regulatory approaches? What are the behavioural drivers for businesses operating in different cultural and market environments?</i>	
	<b>John Moorhead</b> <i>Moderator</i>	Executive Manager <b>BSD Consulting</b>
	<b>Paul Simpson</b>	Chief Executive Officer <b>CDP</b>
	<b>Sandrine Dixson-Declève</b>	Director <b>Prince of Wales's Corporate Leaders Group</b>
	<b>Yasuji Komiyama</b>	Director, Environmental Economy Office <b>Ministry of Economy, Trade and Industry (METI), Japan</b>
	<b>Nicoletta Piccolrovazzi</b>	Director, Global Technology & Sustainability (Olympic Operations) <b>Dow Europe GmbH</b>
<b>11h00</b>	<b>Coffee break</b>	
<b>11h30</b>	<b>SESSION 2 (Plenary, Room 1): Focus on assessment – how well are these programs doing / what criteria do we use for evaluation?</b>	
(+1:15)	<i>How effective are voluntary programs and company actions in improving energy and emissions profiles and is there an impact on company financial performance? Are investors reacting to perceived company climate risk and what are the challenges in incorporating it into company strategies and financial analysis?</i>	
	<b>Dietrich Earnhart</b> <i>Moderator</i>	Director, Center for Environmental Policy Professor, Economics <b>University of Kansas</b>
	<b>Hiroyuki Tezuka</b>	Chairman, Global Envir. Strategy WG General Manager, Climate Change Policy <b>Keidanren JFE Steel Corporation</b>
	<b>Keigo Akimoto</b> <i>Comments</i>	Associate Chief Researcher Group Leader, Systems Analysis <b>RITE (Research Institute of Innovative Technology for the Earth)</b>
	<b>Rory Sullivan</b>	Senior Research Fellow, Centre for Climate Change Economics and Policy <b>University of Leeds</b>
	<b>Timo Busch</b>	Professor and Chair of Sustainability and Management <b>University of Hamburg</b>
	<b>Luisa Florez</b>	Responsible Investment Analyst <b>AXA Investment Managers</b>

<b>12h45</b>	<b>Lunch</b>		
<b>14h00</b>	<b>SESSION 3 (Breakout groups with peer-to-peer sharing): Complementary programs from around the world</b>		
<b>(+1:15)</b>	<b>Group 3A. Voluntary agreements and government-initiated programs (Room 1)</b>		
<p><i>This break-out group will discuss voluntary actions and approaches that entail the involvement of government to some degree. This includes business sector-led initiatives that are developed in association with government (e.g. Japan), as well as activities that are initiated and/or supported by national governments or intergovernmental organisations. What are some factors of success, drawing on examples from specific countries and initiatives?</i></p>			
	<b>Hiroki Kudo</b> <i>Moderator</i>	Senior Research Fellow Sub-Director, Green Energy Certification	<b>IEEJ</b> (The Institute of Energy Economics, Japan)
	<b>Martina Otto</b>	Deputy Head of Secretariat	<b>Climate and Clean Air Coalition</b>
	<b>Sagarika Chatterjee</b>	Associate Director	<b>UN Principles for Responsible Investment</b>
	<b>Seonghee Kim</b>	Senior Researcher, Climate Change Policy Research Group	<b>IEEJ</b> (The Institute of Energy Economics, Japan)
	<b>Clemens Rohde</b>	Coordinator of Business Unit Energy Efficiency	<b>Fraunhofer ISI</b>
<b>(+1:15)</b>	<b>Group 3B: Business/NGO collaborations and company-led initiatives (Room 2)</b>		
<p><i>Businesses are initiating decarbonisation programs to meet their corporate objectives. These include programs by large retailers and other companies focused on internal operations, as well as efforts to decarbonize the supply chain. This session will look at initiatives being conducted by industry acting largely independently of government, through industry/civil society collaborations or unilateral company actions.</i></p>			
	<b>Paul Simpson</b> <i>Moderator</i>	CEO	<b>CDP</b>
	<b>Julien Colas</b>	Head, Energy and Climate Division	<b>EpE</b> (Entreprises pour l'Environnement)
	<b>Eliot Metzger</b>	Senior Associate, Markets & Enterprise	<b>WRI</b> (World Resources Institute)
	<b>Rory Sullivan</b>	Senior Research Fellow, Centre for Climate Change Economics and Policy	<b>University of Leeds</b>
	<b>Xavier Riera-Palou</b>	CO <sub>2</sub> Strategy Manager	<b>Royal Dutch Shell plc</b>
<b>15h15</b> <b>(+0:20)</b>	<b>Breakout Group Reports (Plenary, Room 1)</b>		
<b>15h35</b>	<b>Coffee break</b>		

<b>16h00</b>	<b>SESSION 4 (Plenary, Room 1): Challenges and opportunities in developing and transition economies and SOEs</b>	
(+1:00)	<i>What drives environmental actions at the enterprise level in developing and transition economies, and what lessons are there for energy use and GHG mitigation? What are special considerations for state-owned enterprises (SOEs), and how do they differ for enterprises in China, France, Brazil, etc.? What about SOEs operating overseas in environmentally sensitive sectors, such as energy?</i>	
	<b>Liwayway Adkins</b> <i>Moderator</i>	Environment & Climate Change Unit <b>IEA</b>
	<b>Dietrich Earnhart</b>	Director, Center for Environmental Policy Professor, Economics <b>University of Kansas</b>
	<b>May Tan-Mullins</b>	Associate Professor, International Relations <b>University of Nottingham Ningbo China</b>
	<b>Jean-Yves Caneill</b>	Head of Climate Policy <b>EDF (Électricité de France)</b>
<b>17h00</b>	<b>SESSION 5 (Plenary, Room 1): Possible role for complementary actions beyond Paris – suggestions for next steps</b>	
(+1:15)	<i>How can complementary actions enhance ambition in Paris and beyond? Do voluntary actions have a potentially interesting role to play in the upcoming climate agreement and ongoing UNFCCC process vis-à-vis recognition of subnational or non-state efforts? What are lessons learned and how can policy help to scale up/expand the more promising initiatives?</i>	
	<b>Takashi Hattori</b> <i>Moderator</i>	Head, Environment & Climate Change <b>IEA</b>
	<b>Taishi Sugiyama</b>	Leader, Climate Policy Project <b>CRIEPI (Central Research Institute of Electric Power Industry)</b>
	<b>Angel Hsu</b>	Research Scientist and Lecturer Assistant Professor of Social Sciences <b>Yale University Yale-NUS College Singapore</b>
	<b>Maria Mendiluce</b>	Director, Climate and Energy <b>WBCSD (World Business Council for Sustainable Development)</b>
	<b>Emmanuel Guérin</b>	Special Advisor to the Climate Change Ambassador <b>Ministry of Foreign Affairs and International Development, France</b>
<b>18h30-</b>	<b>Networking reception: l'Atome Café, 29 Boulevard de Grenelle (@ Rue Saint-Saëns)</b>	



International  
Energy Agency

online  
bookshop

[www.iea.org/books](http://www.iea.org/books)

PDF versions  
at 20% discount

International Energy Agency  
9 rue de la Fédération  
75739 Paris Cedex 15, France

Tel: +33 (0)1 40 57 66 90  
E-mail: [books@iea.org](mailto:books@iea.org)

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

IEA Publications  
9, rue de la Fédération, 75739 Paris Cedex 15

Printed in France by IEA, August 2015