Does Energy Efficiency Need Global Governance?

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1. Foreword.

The language of politics is notoriously ambiguous[3]. Most of the time the terminology used in political discourse has a variety of interpretations. This stems not only from the fact that many of these terms come from a long series of historical changes – some of the fundamental words have been inherited from Greek historians, like *democracy*, *aristocracy*, *despot* as well as *politics* – but also because up to now political science has not been able to determine and impose in a univocal and universally accepted way the meaning of most currently used terms. Most of these terms come from every day language which maintains its fluidity and uncertain boundaries.

Therefore, to get our point across, we think, it is practical to define and clarify first our understanding of the terminology and concepts involved in this paper with a particular emphasis on the meaning of governance and government. In addition, we shall try to identify the key attributes of global governance, examine their applicability to energy efficiency and make an attempt to give an answer to the question in the title.

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2. Governance & Government.

Above all it is important to distinguish the subtle differences between government and governance. *Government* (in Europe, but also *Cabinet* in UK and *Administration* in the USA) means the group of people who exercise the political power. Of course, government and state work together while *Governance* is usually associated with the process of management and interaction between government and state. *Global governance* has a wider dimension than the state boundaries. Adil Najam has defined global governance as the management of global process in the absence of global government[4]. Thomas G. Weiss, director of the Ralph Bunche Institute for International Studies at the Graduate Centre of the City University of New York, defines global governance as "collective efforts to identify, understand or address worldwide problems that go beyond the capacity of individual States to solve". He asserts that global governance may be defined as "the complex of formal and informal institutions, mechanisms, relationships, and processes between and among States, markets, citizens and organizations, both inter- and non-governmental, through which collective interests on the global plane are articulated, rights and obligations are established, and differences are mediated"[5]. Mireille Jardin has defined global governance "as the set of rules, norms and decision-making processes elaborated and (or) implemented at global level, to order and regulate the actions of citizens, firms and states in a given domain[6]" Last, but not least, Martin Ortega states that "global governance can be generally described as the management of global problems and the pursuit of global objectives through the concerted efforts of

[4] Adil Najam et alia: "Global Environmental Governance: a Reform Agenda". Ottawa, International Institute for Sustainable Development, 2005.
5 Extract from UN Economic and Social Council Document from 2006

[6] Mireille Jardin et alia «Global Governance of Biodiversity» IFRI, H.& E. Reports n°6 December 2010.

state and other international actors"[7] Whatever the definition you prefer, five elements we can consider as common denominators:

- *Management* in the sense of defining decision making and vesting power for action;
- *Global problems*, such climate change, scarce resources, maintenance of peace and security and so on;
- *Global objectives*, for instance, protection of human rights, reduction of global warming;
- *Concerted efforts* which imply co-operation, constant negotiations and the willingness to compromise;
- *States and other international actors*, which include State, international organisations, non-governmental organisations and so on.

It's also important to underline that global governance is not the government of the world or a region and that the decision to adopt or not a global governance scheme in a defined domain, implies the acceptance that no single country is able to tackle the complex problems in this domain on its own and should renounce a part of its sovereignty by sharing a few common rules.

3. Global Energy Challenges, Energy Efficiency and Global Governance

Due to the strategic role energy plays in our industrial societies and the international nature of energy issues, as well as the interactions with other areas of interest, such as sustainable development, international finance or the fight against corruption, it is not strange that much global political attention has been

[7] Martin Ortega «Building the future. The EU's contribution to global governance» Chaillot Paper n°100.

given to finding solutions to global problems that hinder the continual exploitation of conventional and new energy sources.

The world faces three urgent energy related *global challenges* that require serious mobilization of global political will and resources: firstly, security of energy supply and demand are becoming critical for the economic activity of both producing and consuming states; secondly, global Green House Gases (GHG) emissions, most of them produced by the energy sector, must be reduced to stabilize GHG concentration at a level that would prevent catastrophic climate change; and thirdly, access to affordable, reliable and clean energy must be provided to billions of people to stimulate economic activity, alleviate poverty and pave the way to regional economic co-operation and security.

Over the past two decades the *energy interdependence between countries*, and especially its major impact on national security of supply, has asserted its place on the global agenda. With the advance of globalization and vast improvements in energy trade, there have been substantial changes to countries energy profiles. Cheaper energy imports have become a strong competitor to indigenous resources. The global trade opportunities stimulated more resourceful countries like Australia, South Africa and Russia to increase their exports and make their economies more dependent on the energy trade revenues. Moreover, some countries, like the UK, after years of being net exporters became net importers. As a result of the technological changes and rapid development of clean energy from renewable sources, new energy exporting nations are emerging.

Politicians from leading economies have *acknowledged that no single country is able to tackle the complex energy problems with domestic policies only*. For example, the UK

Government[8] stated that "the most effective way to reduce the potential security consequences of issues such as climate change and rising energy demand is to take the tough decisions now to tackle them, both as global issues in their own right and their implications for global security." The report goes on further to assert that, "The distinction between 'domestic' and 'foreign' policy is unhelpful in a world where globalization can exacerbate domestic security challenges."

It is no wonder then why energy and security of energy supply have risen to the top of the global agenda and the urgent need for *concerted action by States and other international actors* has been recognised across countries political, economic, energy and defence stakeholders.

It is widely accepted by all stakeholders that energy efficiency policies and measures are the most affordable and consensual tools to tackle the global problems outlined above. That is because of the intrinsic nature of energy efficiency which yields more now, within sovereign boundaries, using available local and/or imported resources, without any prejudice to others.

Drawing on two very well-known sources, it can be illustrated that: i) energy efficiency is the most affordable tool for abating the GHG emissions, well-supported by the McKinsey's abatement curve[9] shown in Figure 1,

[8] "The National Security Strategy of the United Kingdom" presented to the Parliament in March 2008
[9] "Pathways to Low-Carbon Economy", McKinsey & Company, 2007

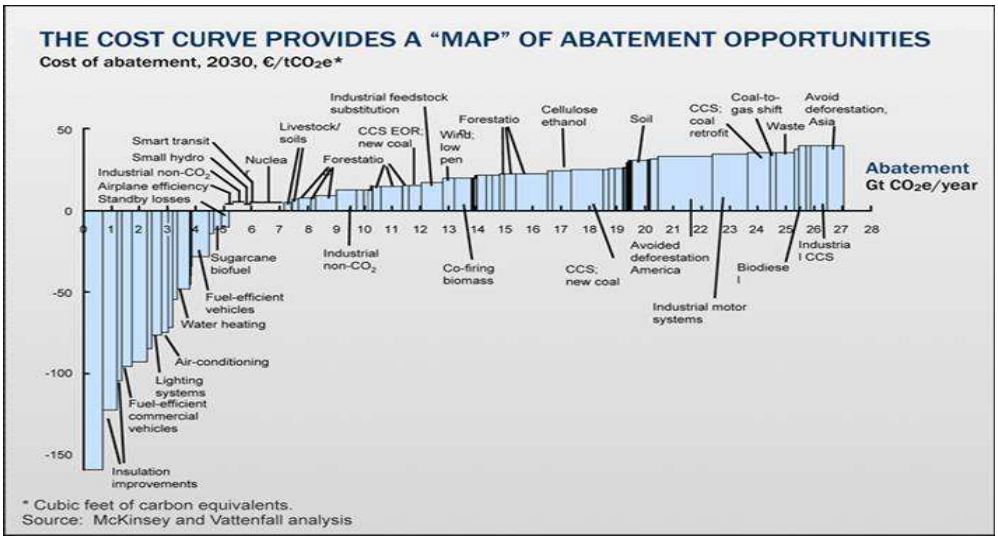
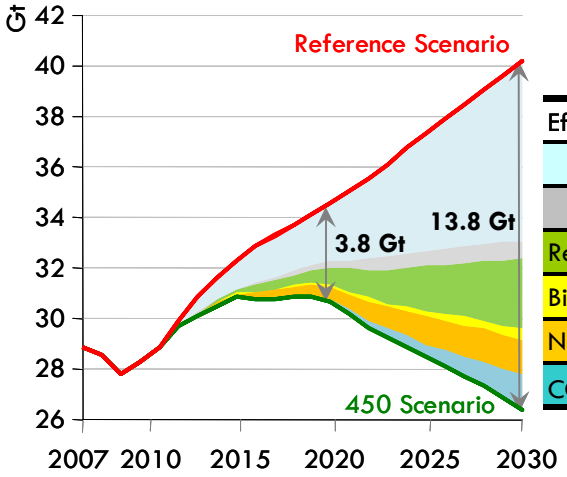


Fig. 1 McKinsey's abatement curve

And that energy efficiency holds huge potential as pointed out by the Energy Agency (IEA) in their World Energy Outlook 2009, stating that efficiency measures shall "account for two-thirds of 3.8 Gt of abatement in 2020 with renewables contributing close to one-third. (See Figure 2.)



Share of abatement %	2020	2030
Efficiency	65	57
End-use	*59*	*52*
Power plants	*6*	*5*
Renewables	18	20
Biofuels	1	3
Nuclear	13	10
CCS	3	10

Fig. 2 IEA's abatement curve[10]

[10] The 450 scenario corresponds to the long term stabilization of the atmospheric concentration of GHG at 450 ppm CO2 equivalent. Stabilisation at 450 CO2 equivalent corresponds around 50% probability of restricting the increase in the global average temperature to 2°C.

However, the full potential of energy efficiency to mitigate global energy issues has hardly been harnessed even in the most advanced economies in the world. A huge gap remains between national policy and implementation signifying that using energy efficiency as a tool to indirectly resolve global energy problems outlined above is not as easy as is often expected. Energy efficiency policies and measures at local or national level, where existing, are not always being implemented. The International Energy Agency stressed in their recent publications[11] that of its 25 energy efficiency policy recommendations only 57% have been fully implemented in the OECD countries. This is indicative of the slow take up of energy efficiency improvements and a gap between policy and implementation that is holding further progress back. Furthermore, organizations and agencies are still operating at a project level versus a programmatic level and institutional and market failures are preventing the private sector from implementing and investing in energy efficiency.

In fact, not only the OECD countries are falling behind in implementing energy efficiency, but also the less developed countries have found it difficult to address a wide range of market and institutional failures, predominantly due to financial constraints. Governments in the developed countries, however, have *accepted the need for concerted action* and have extended technical and financial support to the less developed countries to bridge that gap recognising that by implementing energy efficiency policy and measures internationally they will help alleviate the *global energy issues* such as rising global energy demand, economic development

[11] "Implementing Energy Efficiency Policies: are IEA Member Countries on Track?", IEA, 2009

and access to energy, climate change, and most importantly address the growing global issue of energy security.

As argued above, the following observations could be made:

- energy efficiency is a potent multi-purpose tool for resolving *global energy problems*;
- *States and international organisations* have recognised the need for global interactions in a world of expanding *energy interdependence*;
- They have started taking *concerted actions* to scale up the successful implementation of energy efficiency initiatives globally, however;
- No system or fairly weak systems exist to *manage and support* the process of global and local formulation and diffusion of energy efficiency polices and measures.

Testing the above observation against the five elements defined as common denominators of global governance, one may conclude that the establishment of a global governance on energy efficiency could be a very successful mechanism to help address the urgent global energy issues as it would provide a more coherent system to manage and support the process of implementation of energy efficiency.

4. International Mechanisms in Support of Implementation of Energy Efficiency

International institutional mechanisms have failed to keep up with the growing energy interdependence of world's energy structures. Although it has been widely acknowledged that States should seek common resolution to common problems without seeking to maximize their own self-interest in the energy

sector, the progress in establishing global energy governance constructs have been slow.

So far, many attempts have been made for setting frameworks for regulating multilateral relations in the energy sector, but non of them can pass the global governance criteria test. Most notably, this includes the International Energy Agency, the OECD's energy arm, which acts as think-tank rather than a global governance construct. Moreover, the IEA itself has its own set of constraints, and chief among them is the fact that the world's largest producer countries, including Saudi Arabia, Russia, Azerbaijan, Turkmenistan are not in its constituency. The IEA excludes as members, the emerging energy consuming players like China, Brazil and India. Moreover, in 2008 for the first time ever non-OECD countries surpassed OECD countries in terms of global energy consumption as the developing nations became more important than the developed countries in addressing global energy issues.

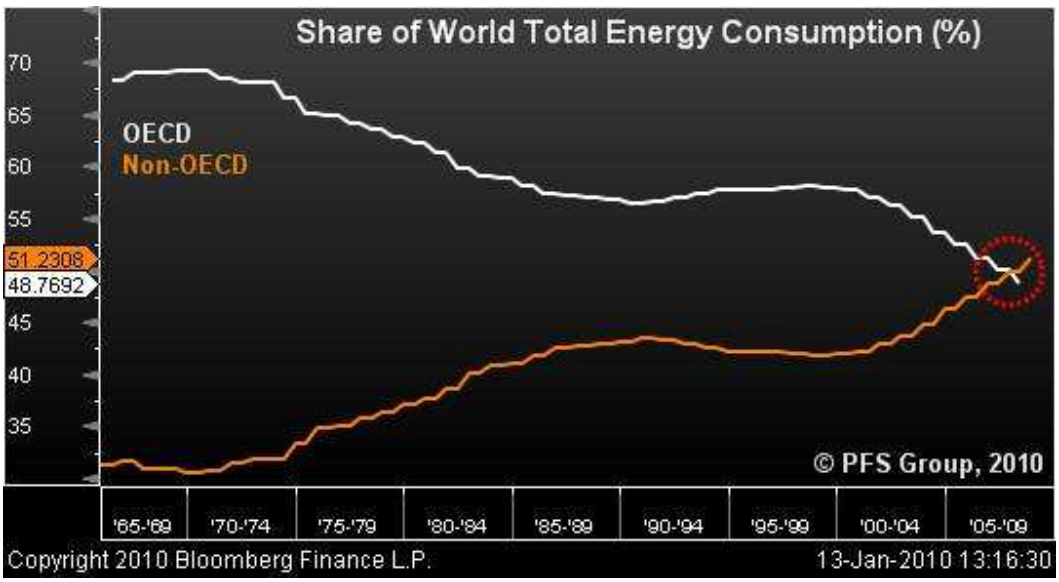


Fig. 3 Share of World Total Energy Consumption

In response to this global shift in energy use, the dialogue between the G8 and the emerging economies was initiated in 2005 with the Gleneagles Dialogue and continued and strengthened with the Heiligendamm Dialogue Process, clearing the road for the creation of a new multilateral forum in which developing and developed countries could share and discuss global policy issues. This led to the establishment of the International Partnership for Energy Efficiency Co-operation (IPEEC). The Partnership provides a forum for discussion, consultation and exchange of information. It was envisaged by an initiative of the European Commission in 2007, agreed on in the G8 Summit in Toyako in 2008 and launched at the G8 Energy Ministerial Meeting in Rome in 2009. It brings for the first time developed, emerging and developing countries to the same table to discuss in a structured manner energy efficiency issues at a global level. The IPEEC declaration states that: "… while all countries, both developed and developing, share common interests for improving their energy efficiency performance, there is abundant potential for international cooperation among them and developed countries need to play an important role in cooperation with developing countries, accelerating dissemination and transfer of best practices and efficient technologies and capacity building in developing countries, which will contribute to improvement of energy efficiency at a global level…" IPEEC is structured around a permanent Secretariat with support functions hosted by the International Energy Agency, an Executive Committee that convenes twice a year and Policy Committee that convenes once a year. While those meetings are designed to provide high level discussion on the Partnership itself, the actual work is carried out under the IPEEC Task Groups, i.e. initiatives for high level discussion on specific international energy efficiency

measures promoted by individual IPEEC Members and carried out jointly with other countries and organisations, both members and non-members of IPEEC.

The Energy Charter Treaty is one of the most successful examples of a binding multilateral instrument containing the key criteria of governance, namely sharing common rules. It plays an important role as part of an international effort to build a legal foundation for energy security, based on the principles of open, competitive markets and sustainable development.

The Energy Charter Treaty and the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA) were signed in December 1994 and entered into legal force in April 1998. To date, the Treaty has been signed or acceded to by fifty-one states from Europe, Asia and the Middles East, including both developed and developing countries, the European Community and Euratom (the total number of its members is therefore fifty-three).

The Contracting Parties to the Energy Charter Treaty recognised energy efficiency as a tool for solving energy problems and vigorously pursued the establishment of PEEREA to serve as a strong platform for stimulating the international dialogue between all stakeholders and addressing indirectly the global energy problems by encouraging implementation of energy efficiency policies and measures in the Member States. Since entering into force in 1998, PEEREA has affirmed its reputation as the only binding international instruments for implementation of energy efficiency in both developed and developing countries.

The achievements of PEEREA could serve as nurturing grounds for a wider, a truly global system of governance on energy efficiency that manages and supports the process of implementation of energy globally in countries with different levels of development and energy profiles. Such a strategy should be carefully devised as it also risks diminishing the efficiency of actions taken at local level, as well addressing the constraints and sometimes diverging priorities of developed and developing countries as well as energy exporting and energy importing countries, land-locked countries and maritime countries, new energy technology producing countries and those who are dependent on technology transfer, and others. To make best use of the benefits of global governance on energy efficiency, the fastest way forward could be by developing new tools taking the bottom-up approach by forging new collaborations between actors at the national and sub-national level, who can propose operational solutions to help in the transformation of behaviours as well as facilitate technological change, under the umbrella of an inclusive multilateral governance framework guaranteeing equity, strategic vision and effective management of the process of implementation of energy efficiency.

The course of modernisation and expansion of the Energy Charter Process opens up a window of opportunity to develop PEEREA further so that it could become a global governance mechanism in support of implementation of energy efficiency by setting some common, binding rules and targets. Such rules may be softer just encouraging the Contracting Parties to co-operate in energy efficiency; or harder, whereby establishing individual and specific goals and targets to achieve within an agreed timeframe. The modernisation of PEEREA could be modelled on the experience of the European Union on implementing energy efficiency by introducing common rules for all its members that managed to

achieve significant improvements in energy efficiency implementation from 1990 to 2006, reaching almost a 40% average decrease in final energy consumption per unit of GDP.

5. Conclusions.

The world faces urgent energy related global challenges, further exacerbated by the growing energy interdependence of world's energy structures, which requires serious mobilization of global political will and resources.

Although it has been widely acknowledged that States should seek common resolution to common problems without seeking to maximize their own self-interest in the energy sector, the progress in establishing global energy governance constructs have been slow.

It is widely accepted by all stakeholders that energy efficiency policies and measures are the most affordable and consensual tools to tackle the global energy challenges, however, the full potential of energy efficiency to mitigate global energy issues has hardly been exploited due to gaps between national policy and implementation .

The establishment of a global governance on energy efficiency could be a very successful mechanism to help address the urgent global energy issues as it would provide a more coherent system for managing and supporting the process of implementation of energy efficiency.

Building global governance on energy efficiency on the basis of existing international energy frameworks like the IEA and IPEEC will be difficult due to their intrinsic constraints. However, with a little effort it would be possible to modernise PEEREA, drawing on the EU experience, so that it could become a global governance mechanism in support of implementation of energy efficiency by setting some common, binding rules and targets for its constituency taking into account that the targets and result should not by measured with the same yardstick and should be carefully designed to fit the specific national and sub-national needs.

The common rules to share should be devised drawing on the experience of the most successful countries implementing energy efficiency improvements adapting these as much as possible to the local contexts so that they specifically support both reduction in GHG emissions and energy access in the developing world. In addition, such rules should stimulate fast and effective implementation of energy efficiency globally.

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