

A Monthly Look at Successful Sustainability Initiatives

Green Light

Creating a sustainable energy future through trade

Global Agenda Council on Governance for Sustainability

November 2013



Green Light is published by the World Economic Forum's Global Agenda Council on Governance for Sustainability.

About Green Light

Green Light is a new publication highlighting innovative partnerships and concepts for collaboration which offer solutions at scale from the bottom-up to the world's most pressing sustainability challenges.

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Published by World Economic Forum,
Geneva, Switzerland, 2013

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Foreword



James Bacchus
World Economic
Forum's Global
Agenda Council on
Governance for
Sustainability

Welcome to the fourth edition of Green Light, a monthly newsletter from the Global Agenda Council on Governance for Sustainability aimed at highlighting promising economic and environmental initiatives. The Council was established by the World Economic Forum to help identify and promote new ways to serve both people and the planet through sustainable development.

Our goal is not only to share green ideas, especially those on collaboration and public-private partnerships, but also to inspire people to replicate and even scale up similar initiatives wherever they are.

We are driven by a common belief in the importance of sustainable development. Worldwide, there is an increasingly urgent need to bring about more prosperity and equality, while preserving a planet imperilled by climate change and a host of other environmental challenges.

In this edition of Green Light, we look at a joint initiative – proposed by the Global Green Growth Institute, the Peterson Institute for International Economics and ICTSD – that would use trade as a spur to promote sustainable energy. The initiative highlights the positive role of trade in scaling up and deploying renewable energy, a crucial step in supporting a shift away from fossil fuel so as to ensure energy security and to address climate change.

We hope you enjoy this issue and that you will find it a source of inspiration for your work.

James Bacchus

James Bacchus is Chairman of the World Economic Forum's Global Agenda Council on Governance for Sustainability. He chairs the global practice group of the Greenberg Traurig law firm, and is an honorary professor at the University of International Business and Economics in Beijing.



The challenge: Mitigating climate change

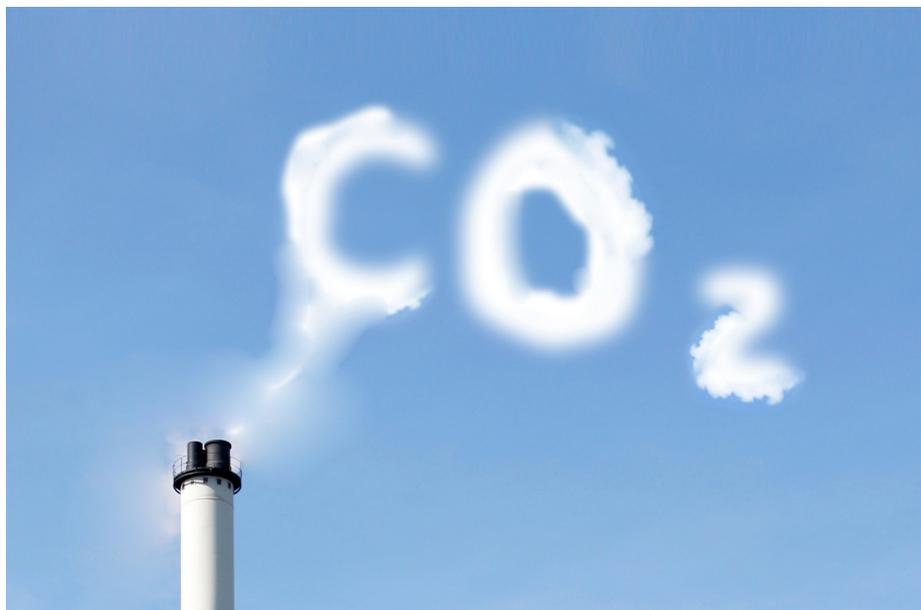
Climate change represents an unprecedented and critical challenge for humanity and tackling it undoubtedly requires a coordinated, global effort. The first step is to achieve widespread, if not unanimous, recognition of the problem.

The first part of a six-yearly update on the physical effects and causes of global warming from the [Intergovernmental Panel on Climate Change \(IPCC\)](#) in September achieved this recognition for all but the most diehard of sceptics. The report's conclusions that humans are, with 95% certainty, the dominant cause of global warming over the past six decades, were widely reported.

Of the many alarming findings, the IPCC's authors noted that atmospheric concentrations of greenhouse gases caused by the burning of fossil fuels – overwhelmingly carbon dioxide, but also methane and nitrous oxide – have increased to levels unprecedented in at least the last 800,000 years; CO₂ concentrations have increased by 40% since pre-industrial times, primarily from fossil fuel emissions.

Much of the climate change resulting from carbon dioxide emissions will be “irreversible” for many centuries, according to the report, even after a complete cessation of net anthropogenic CO₂ emissions; between 15-40% of emitted carbon dioxide will remain in the atmosphere for more than 1,000 years.

Any discussion about policies for developing the global economy, including those involving trade or investment, needs to take place in the context of the urgent problem of global warming. The transition to a sustainable, low-carbon economy is no longer merely desirable, but essential, and economic considerations cannot be separated from environmental concerns.



For this transition to be successful, it is necessary to tackle energy supply – the most powerful driver of economic activity and the biggest producer of greenhouse gas emissions. Based on data from the [Emission Database for Global Atmospheric Research \(EDGAR\)](#), fossil fuel combustion now accounts for about 90% of total global carbon dioxide emissions, excluding those from forest fires and the use of wood fuel.

The world invests more than US\$ 1 trillion a year in energy, according to [Sustainable Energy for All](#), an initiative set up by UN Secretary-General Ban Ki-moon; much of this money is invested in outdated and polluting systems. And yet 1.5 billion people globally have no access to modern energy. An additional three billion people use wood, coal, charcoal or animal waste for cooking and heating. Sustainable Energy for All describes this as “a major barrier to eradicating poverty”.

The use of coal, oil and gas for energy continues to grow. The 2012 report [Trends in Global CO₂-Emissions](#) – produced by the

Netherlands Environmental Assessment Agency – reports that in 2011, coal consumption increased globally by 5.4% and accounted for over 30% of global energy consumption, the highest share since 1969.

Investment in renewable energy production has been growing for years. According to the [Global Trends in Renewable Energy Investment 2013](#) report, US\$ 244 billion was invested in renewable energy in 2012, a fall of 12% compared to the previous year and the first time since 2006 that investment failed to grow year on year.

There were several reasons for this drop, including weakened US and European markets, the drastically falling price of solar products, overproduction, trade tensions and instability in the policy regime for renewable energy in important developed economy markets.

Meanwhile, the extraction of unconventional gas and oil reserves, through such processes as fracking (hydraulic fracturing) has greatly increased.

Fossil fuel subsidies: A key barrier to scaling up renewables

It is clear that a rapid scale up of renewable or sustainable sources of energy is urgently needed to reduce dependence on fossil fuels. Lower carbon transport fuels and more efficiency in energy use can both play a part. What is essential, though, is that the use of green energy is vastly expanded.

Currently, however, the market is grossly distorted and full of barriers for scaling up renewable energy technologies, and, crucially, at the international level, there are no rules that are specifically designed for trade in energy or in those technologies specifically designed for energy supply.

Fossil fuel prices do not reflect the externalities of social and environmental costs. In addition, fossil fuels receive huge subsidies at the

consumption and production ends of the value chain in many parts of the world. This combination gives fossil fuels a hugely distorted advantage in the market.

Green energy technologies also receive financial assistance, such as tax breaks that lower equipment costs. Such incentives include tariff feed-in schemes, whereby consumers who use renewable or low-carbon, electricity-generating technologies are paid for any power they generate surplus to their needs. However, such policies often attempt to pursue multiple objectives at the same time, thereby undermining their environmental effectiveness.

The playing field is still wildly uneven. Estimates of subsidies to fossil fuels vary because there is no international monitoring framework. But the [Global](#)

[Subsidies Initiative](#) believes the figure to be as high as US\$ 600 billion a year – around three times the amount provided to clean energy technologies. The [Organisation for Economic Co-operation and Development](#) (OECD) estimates that merely removing these subsidies by 2020 could lead to a reduction of 10% in greenhouse gas emissions by 2050.

Despite the barriers, the [International Energy Agency](#) (IEA) forecasts that renewables will become the second-biggest source of power generation by 2015, and will vie with coal as the primary source by 2035. To reach this position, however, the IEA estimates that renewables will need subsidies totalling US\$ 4.8 trillion up to that date. In the meantime, it warns that fossil fuels will remain dominant in the global energy mix, supported by subsidies.



SETA: Changing the renewable energy landscape

To address this historic challenge, in 2011, three institutes – the International Centre for Trade and Sustainable Development (ICTSD), the Peterson Institute for International Economics (PIIE) and the Global Green Growth Institute (GGGI) – launched the Sustainable Energy Trade Initiative (SETI). The aim of the initiative is to boost global trade in ways that also increase the supply and use of sustainable energy goods and services. In particular, those behind the initiative seek to establish a sustainable energy trade agreement (SETA).

Ricardo Meléndez-Ortiz, Chief Executive of the International Centre for Trade and Sustainable Development (ICTSD), explained that this is a highly complicated area, but there is one clear imperative – the need to cut down on fossil fuel subsidies in order to give renewables a fair and competitive chance in the market.

Trade in renewable technologies is highly complex. If you think in old terms, you would do policy analysis to move a wind tower, for example, from Denmark to Australia, as if it were one good being moved across borders and tariffs and other measures applied to it. But in today's globalized economy, policies affect this renewable energy equipment in multiple jurisdictions as the wind tower is disaggregated into at least 157 goods – all its component parts – in addition to the services that go with it, plus the technology's intellectual property and licencing arrangements, as well as the investment involved. All this attracts tariffs, taxes, standards and myriad other measures.

"To be effective, policy analysis and solutions must capture a picture that represents what is really happening in international production networks and value chains in the 21st century," said Meléndez-Ortiz.

Concerns about energy security and energy access are other areas that a trade agreement needs to address because low-carbon technologies are not yet able to take over energy needs at scale.



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It's very important to appreciate that when you look at trade policies for fossil fuels, the fuel itself, whether it's oil, coal or gas, is the object of the policy.... But when we consider renewables, we're not considering the source of the energy, which is free, but the technologies that capture it. This is a fundamental difference.

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Ricardo Meléndez-Ortiz Chief Executive, International Centre for Trade and Sustainable Development (ICTSD), Switzerland

"It is something of a Catch-22 situation," Meléndez-Ortiz explained. "You're not able to supply the technologies to take over from fossil fuels because fossil fuels are making the technologies uncompetitive. The biggest reason for this is that fossil fuels don't internalize the cost of emissions. If they did so, they would be outcompeted by renewables. And, on top of this, fossil fuels are subsidized.

"But now we see a trend and a momentum generated in several markets of big subsidisers and I think we are now moving towards a reduction of subsidies for fossil fuels."

The up-front costs of renewables can be high and the returns long term: for wind, depending on the market, financial returns can take as long as 15

to 20 years. This lengthy timeframe introduces a political dimension to policy decisions and the need for policy-makers to justify such long-term investment, perhaps at the expense of what seems to be more immediate investment needs.

"It's no longer simply a commercial equation," noted Meléndez-Ortiz. "The problem is that you start to get all these mercantilist arguments and it's a difficult discussion because it can come down to such things as the Indians making this or that more cheaply and putting US companies out of business and so on."

Subsidies for renewables will need to continue for some time, but that the aim would be for these, too, to disappear. Indeed, there are technologies and regions where such support is already redundant and should be removed.

"We have to move away from these subsidies, but we can only do that when we can bring down barriers to trade. This is the rationale for the push for more efficient markets," concluded Meléndez-Ortiz.

"It's a simple equation: if we eliminate or phase out subsidies for fossil fuels and eliminate barriers to the production and trading in renewable technologies, then we'll be doing something very important to level the playing field and make renewable technologies much more competitive. We would also, over time, reduce the need for subsidies to clean energy technologies, thereby freeing up government resources for other uses."

At the moment, with climate change action imperatives and G20 commitments heading in the right direction, there is a definite momentum towards this.

"We are trying to accelerate it by working with governments and other stakeholders to put in place the regulatory framework to increase that acceleration," he said

Opportunity: Bringing together trade, energy and climate change

In June 2013, US President Barack Obama made [a major policy announcement aimed at tackling climate change](#). The speech was as detailed as it was emotive. In particular, the president outlined a vision of a “cleaner, safer, more stable world”. He spoke of the urgent need to dramatically reduce carbon emissions and other greenhouse gases, and he made clear his desire that the world’s biggest economy should be at the forefront of a global transition from fossil fuels to renewable energy. Crucially, however, the speech also laid out the business case for tackling climate change. Obama stressed that a low-carbon clean energy economy can be an engine of growth for decades to come.

For those who have led the work building the necessary momentum for a global SETA, the speech was a catalyst, a key piece in a constellation of events that seemed to put such an accord within reach. Within the details of the president’s Climate Action Plan was an announcement that the US would work with trading partners to launch negotiations at the World Trade Organization (WTO) towards global free trade in environmental goods, including clean energy technologies such as solar, wind, hydro and geothermal.

This policy, it was announced, would build on the consensus already forged among the 21 Asia-Pacific Economic Cooperation (APEC) economies in this area. In 2011, APEC economies agreed to reduce tariffs to 5% or less by 2015 on a list of 54 environmental goods.

“The agreement between APEC members was significant,” said Ricardo Meléndez-Ortiz. “But it was only a small first step because, although it involved a market worth about US\$ 600 billion, it was a shallow agreement. Of the 54 tariffs, 19 are critical for clean energy technologies and of these only

50% had tariffs in excess of 5% and of the other 50%, 90% are tariff free.”

What the agreement has done is create excitement and momentum as it involved bringing together the US, Russia, China and Japan in addition to the other less developed economies of the highly dynamic Asia-Pacific region.

“But it is the Obama Climate Action Plan that is critical in really helping us drive forward what we were already working towards,” said Meléndez-Ortiz. “It brings together climate change and energy trade and there is a firm political will there.”

There is another dimension that points to a positive outcome for a SETA. For 12 years or more, most WTO members – particularly China – have been reluctant to move away from the single undertaking of the so-called Doha round of negotiations within the WTO and explore different possible negotiating approaches, including initiating plurilateral agreements, where like-minded countries seek to advance negotiations on elements such as environmental goods and services.

This has changed in the last two years, noted Meléndez-Ortiz, but it has significantly changed in the past two months. China has formally requested to join ongoing plurilateral talks on services – the Trade in International

Services Agreement (TISA) – in which services on clean energy can be expected to be included, and a few weeks ago they agreed to support extension of the Information Technology Agreement. China has also informally indicated their interest in joining talks towards the launch of negotiations on environmental goods, which brings critical mass to move things forward.

“Now we believe there is real impetus – from the US, within the EU, APEC and many critical middle-income economies in Latin America and Asia – to build towards an energy trade agreement in a well-structured manner,” Meléndez-Ortiz said. “Our purpose now is to support substantive advances in this respect in Bali (at the WTO’s Ministerial Conference in December 2013), along the lines called for by President Obama.”

Meléndez-Ortiz added that the ideal outcome would be to bring the tracks on trade and energy and climate change to a convergence in order to deliver an agreement by 2015. This is the year countries aim to reach a global climate agreement through the United Nations Framework Convention on Climate Change (UNFCCC). It is desirable and within grasp that a SETA-type arrangement also gains momentum at the UN’s Special Climate Summit in September next year.



The route to success: The mechanics of a SETA

A key element in bringing about a move to low-carbon energy policies is a commitment by governments to phase out consumption and production subsidies for fossil fuels. These are highest, according to OECD figures, in Russia, other non-EU eastern European countries, and a number of large developing countries, including India and China.

“The other question,” said Meléndez-Ortiz, “is what we do with subsidies for renewable energy technologies. Countries adopt these subsidies usually for industrial and other macroeconomic policy reasons.”

For example, a country may decide it wants to develop wind energy manufacturing capacity, so they use a number of policies – subsidies and local content requirements, where locally produced goods and services are favoured, or its firms engage in dumping, where goods are exported at lower than production costs. These three are probably the most difficult areas to deal with.

With subsidies for renewables, the WTO subsidies agreement may be used to assist in making these renewable technologies more competitive, but in ways that do not give countries advantages above others. Local requirements are against WTO rules and there have all sorts of schemes cropping up in the past few years, especially in the US, Canada, and Asian countries, as well as the UK, France, Germany, Spain, Italy and Greece.

Dumping is particularly disturbing and complicated. The Chinese solar panel industry was accused of dumping following a complaint by a German firm. The EU Commission took up the case, bringing China to negotiations that resulted in a so-called price undertaking, in which minimum prices are pre-set in lieu of anti-dumping duties.

“This is a horrifying measure for markets, as it introduces distortions and high levels of uncertainty, both of which are perverse for a competitive, enabling environment,” said Meléndez-Ortiz.

According to the National Board of Trade in Sweden, anti-dumping measures on clean energies are currently responsible for 75% of the value of all remedy cases in the EU. Of about 800 actions, 75%, are about solar panels, worth somewhere between US\$ 11 billion and US\$ 20 billion in market value. And, there are 850 firms in Europe that deal with solar products, parts and pieces that are negatively affected.

There are currently 12 tit-for-tat dispute settlement cases in the WTO-related to clean-energy technologies, and it takes between three to five years to get any measure corrected through the WTO, even though the WTO is the most effective of all dispute-resolution systems in international law.

“It is simply far better to negotiate comprehensive agreements to avoid tensions and lengthy disputes, and so enable clean energy build up,” concluded Meléndez-Ortiz.



Fast facts: SETA at a glance

The Chairman of the World Economic Forum's Global Agenda Council on Governance for Sustainability, James Bacchus, who spent eight years as a Member and two-term Chairman of the Appellate Body of the WTO, spelled out a number of issues and actions that could be addressed within a SETA. The following points come from a keynote address he gave on the subject at the Peterson Institute for International Economics in 2011:

- The reduction and elimination, over time, of all tariffs and taxes on sustainable energy products could be reduced and eliminated. The price added at the border distorts trade and slows needed economic transition.
 - There is a need to harmonize standards of renewable technologies. There are conflicting standards throughout the world, sometimes taking the form of full-blown technical regulations; sometimes these are justified, sometimes these are merely protectionist. It is far better to harmonize standards than end up in WTO disputes.
 - New intellectual property rules are required to promote faster global dissemination and appropriate legal protection of new green technologies.
 - Domestic content requirements, which distort trade and are almost always protectionist, need to be limited. Usually these are found in government procurement arrangements or provisions made for state-owned enterprises.
 - Limits should be set on fossil fuel subsidies, which will end them incrementally and by a coalition of the willing.
- Green subsidies are causing a proliferation of trade disputes. Without a SETA, there will be more of these divisive and mutually damaging disputes. Thus, examine the possibility of a limited and carefully defined exemption for green energy subsidies should be explored, the aim being to support the environment with subsidies consistent with WTO rules and without unfairly or unduly distorting trade.
 - A SETA should be concluded as a WTO agreement, in part to enable the obligations in it to be upheld and enforced through WTO dispute settlement.



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