Global sustainability tax primer
An overview of environmental and energy taxes, sustainability incentives, and carbon regimes
2016
The first legally binding, universal agreement to address climate change was signed by representatives from 196 countries at the 21st session of the Conference of the Parties (“COP21”) of the UN Framework Convention on Climate Change (“UNFCC”) in Paris on 12 December 2015. The Agreement specifically defines the long-term goal to hold the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C.

Nationally determined contributions

In order to meet these goals, each country is required to prepare, communicate and maintain successive nationally determined contributions that it intends to achieve through domestic mitigation measures. For developed countries these contributions should be through economy-wide absolute emission targets, while developing countries are encouraged to move toward this type of target based on their national circumstances.

Many of these contributions had been agreed upon before COP21. For example, in the weeks leading up to COP21, a new US-China climate deal was announced where China committed to peaking its emissions before 2030, and the US announced a new target to cut emissions 26% to 28% below 2005 levels by 2025. Additionally, the business sector, which has historically opposed strong measures on climate change, has voiced support for a global climate agreement at COP21. Over 1,000 global businesses had voiced their support at the U.N. Climate Leadership Summit in 2014, calling for carbon pricing as a cost-effective way to control emissions.

Technology development and capacity building

The COP identified technological innovation as a critical component in ensuring mitigation and adaptation actions are undertaken at an accelerated pace in developing countries. The Agreement requires collaboration on research and development, facilitating access to technological developments and also requires developed nations to provide support for the implementation of such actions.

Under the Agreement, developed countries should also support actions and steps toward increasing the ability of the other nations to adapt to and mitigate climate change. This could be in the form of climate change education, training, public awareness, access to climate finance or other appropriate mechanisms.

Transparency and accounting

In order to build mutual trust among parties and promote effective implementation, the Agreement requires the implementation of a transparency framework. The aim of this framework is to provide an ongoing update on national contributions including good practices, priorities and gaps as well as financial support provided and received. Each party is therefore required to regularly provide a national inventory report on greenhouse gas (GHG) emissions as well as the information necessary to track progress made in achieving national contribution.

Next steps

With the Agreement reached, it now requires ratification, acceptance, approval or accession by at least 55 nations accounting for at least an estimated 55 percent of total GHG emissions. Upon going into force, the COP will periodically review progress against the stated commitments, the results of which will allow countries to take the needed actions to help achieve stated objectives.

Impact on Global Sustainability Tax Policy

Regardless of its outstanding ratification by the participating nations, the Agreement shows the new joint political consent to reduce emissions and limit the impact of climate change. In order to meet its emission reduction commitments, raise revenues to provide financial resources, or develop technologies to help mitigate and adapt to climate change, individual countries will look to implement or strengthen existing sustainability tax policies, including:
Carbon regimes: under either an emission trading scheme or a carbon tax, a country or region can set limits or put a price on carbon.

Energy and environmental taxes: while not as direct as carbon regimes, energy and environmental taxes can encourage businesses to reduce activities which have a negative impact on the environment and that may impact climate change.

Sustainability incentives: through tax credits, subsidies and other business incentives, governments can encourage companies to engage in behaviors and develop technologies that can reduce GHG emissions.

In light of the recent developments at COP21, this primer on global sustainability taxes provides an overview of each of these three policy mechanisms, as well as their current state. A Global Sustainability Tax Guide will be published by EY in the first half of 2016 which will detail the carbon regimes, environmental and energy taxes, and sustainability incentives for each of the world's major economies.
Increasing importance of environmental taxes, sustainability incentives and carbon regimes

From the European Union to the United States to China, environmental taxes, sustainability incentives and carbon regimes continue to develop and increase in importance.

In Japan alone, environmental tax revenues reached US$93 billion in 2012, a 40% increase from 2002. Over the same period, revenues from these taxes in Italy increased by 20% to US$60 billion.

Carbon regimes such as carbon taxes and cap-and-trade systems are also on the rise as a regulatory instrument to reduce greenhouse gas (GHG) emissions. The state of California, for instance, implemented a cap-and-trade system in 2012 that established mandatory emission caps and subsequently executed several successful auctions of emissions allowances. In China, the government plans to introduce a national market for carbon trading in 2016 after several pilot programs in major cities and provinces.

In order to offset the impact from these taxes and carbon regimes, countries often offer extensive relief opportunities against environmental taxes, including those associated with alternative fuel vehicles and renewable electricity production. The United States, for example, continues to offer substantial tax incentives for both energy efficiency and renewable energy. The US Government recently passed an extension of a deduction for energy-efficient commercial buildings, offering up to US$1.80 per square foot of a qualifying building, and an investment tax credit of up to 30% remains in effect for certain renewable energy property. The European Commission also recently announced a new round of funding for the Programme for the Environment and Climate Action (LIFE), offering €3.4 billion for environmental and climate action projects between 2014 and 2020.

Most companies have incorporated sustainability strategies into their business planning for several years now due to drivers such as energy risks and resiliency, cost reduction, government regulations and stakeholder expectations. This changing business climate will also impact the day-to-day responsibilities and corporate profile of the tax department. Tax departments should adapt to this evolving climate by understanding the risks and opportunities presented by environmental tax policies, carbon regimes and sustainability incentives on a global basis, planning accordingly to reduce costs and risks and ensuring compliance is completed accurately and effectively.

This Global sustainability tax primer serves to provide an overview of three integrated areas of tax policy that can help CFOs, tax directors, and facilities and energy managers navigate through the sea of change surrounding environmental and sustainability issues.

1. Sustainability-related tax and business incentives: countries and local jurisdictions are increasingly offering incentives to encourage organizations to invest in projects and technologies that will help reduce the carbon intensity of their operations. Identifying and securing tax and other business incentives can often help companies meet or improve the return on investment (ROI) thresholds that are required for these projects.

2. Environmental and energy taxes: governments across the globe are continuing to develop their environmental policies and are concurrently looking for new sources of revenue. This has led to an increase in environmental and energy taxes in recent years, including new legislation and the development of regulations for existing taxes. These taxes cover activities including emissions, manufacturing of certain products, transportation, energy generation, resource use and other negative environmental externalities.

3. Emission trading schemes and carbon taxes: as the global economy continues to rely on fossil fuels, concern over limiting the release of carbon dioxide emissions associated with the combustion of these fuels has intensified. Governments are increasingly turning to carbon regimes such as carbon taxes and cap-and-trade systems as an effective way to limit these emissions. Such carbon regimes are not only growing geographically, but are beginning to cover more industries as they progress.

The above issues, which are discussed in greater detail in the following sections, are concerns that will be on the tax landscape in the years ahead. This guide is offered to highlight the issues and provide information about the current policies.

Why should the tax department be involved?

Global environmental and energy taxes (EETs) are becoming increasingly relevant as more businesses establish sophisticated energy management and sustainability strategies and as respective tax regimes are continuously developed by governments. Companies will need to factor the growing role of environmental taxes, resource efficiency and low-carbon activity incentives into their thinking and modeling when making investment decisions.

Several fundamental factors are driving worldwide transformation in the way resources, including energy and water, are produced, distributed, stored, managed and consumed. This transformation to a more resource-efficient and lower carbon economy is expected to have the magnitude of a new industrial and technological revolution. Alongside this transformation, there has been a rapid increase in policy and legislative change to address both the encouragement of sustainability-related expenditure as well as the imposition of higher levies on business activities that are seen as contributing to negative climate change effects.
While business strategy is adapting rapidly to the continuing development of environmental taxes, sustainability incentives and carbon regimes, the tax department is often not at the table during these discussions. For example, environmental taxes are often incurred at the facility level as a simple cost on the profit and loss statement; sustainability incentives are often not identified, resulting in situations where projects either do not move forward or cash is left on the table. In addition, carbon regimes are relatively new and may not be seen as a tax function. So why should the tax department be involved and how can the tax department help to drive corporate value?

1. **Cost reduction**: businesses in all sectors are focusing on cost reduction more than ever before. Incentives can have a direct impact on the up-front capital cost of sustainability-related projects and help improve the overall ROI. In addition, EETs have a substantial impact on production and energy procurement costs. These taxes add cost to a wide range of operational activities, from energy and resource consumption to manufacturing and transportation. The available incentives and specific impact of these taxes depend on the operations of the business and its footprint.

2. **Revenue generation**: in addition to reducing the cost of environmental taxes, the tax department can also help drive revenue through the identification and implementation of tax and other business incentives related to investments and processes around environmental and sustainability strategies. Tax can be a driver to reduce the up-front cost of projects and improve the ROI by ensuring that all available incentives are realized and complied with in a timely manner.

3. **Coordination**: as companies evolve their energy sourcing strategies for energy security and economic reasons, many companies are turning to self-generation solutions. Tax reliefs and tax incentives are the most obvious and economically beneficial aspect for businesses from investments in self-generation. However, a change in energy sourcing may also result in further EET consequences as it may technically turn companies into energy suppliers subject to energy tax obligations.

4. **Administration and compliance**: even though EETs have a substantial and growing impact on production and energy procurement costs, the administration of these taxes is often left to the facility level while the role of the indirect tax function remains unclear. The tax department can help identify EET relief opportunities, leading to substantial cost reductions, as well as manage compliance processes in the context of changes to the business operating model.

5. **Planning and management**: the increased focus on sustainability and energy strategy requires businesses to also assess and manage EET consequences. Based on their energy strategies, businesses implement centralized energy procurement approaches and revert to self-generation solutions, in particular, those based on efficient cogeneration solutions or renewable energy technologies. As part of their sustainability strategy, businesses should develop strategic approaches to reduce GHG emissions and/or increase energy efficiency and any respective tax reliefs that might be available for each facility.

6. **Multidisciplinary management approach**: the management of all of these energy tax impacts is challenging for an indirect tax function, especially for multinational companies. This is not only due to the very specific tax regulations but also to the required level of interaction with related technical and environmental aspects. To effectively manage this, a joint multidisciplinary management approach (MDMA) with the related business functions is advisable. This MDMA not only helps the tax function understand relevant technical and regulatory backgrounds, but can also help other functions understand energy tax impacts and help optimize the energy tax position of the business moving forward.

7. **Overlap with existing tax functions**: management of EETs creates considerable challenges and opportunities for businesses. The indirect tax function can be a feasible stakeholder for this as both systematical issues and underlying transactions are often closely connected to value-added tax (VAT)/goods and services tax (GST) challenges.

It is imperative for corporate management and boards to ensure that the tax department is fully engaged in the organization’s agenda of operational efficiency and low-carbon activity. How well a company navigates in this evolving tax landscape can make a big difference in relative competitive performance.

As the tax department becomes more involved with energy and environmental taxes, sustainability incentives and carbon regimes, they should be aware of the role they play throughout the life cycle of these taxes. The diagram below demonstrates the issues that the tax function should be considering through the planning, accounting, compliance and controversy stages of the tax life cycle.
Sustainability, carbon and environmental tax life cycle

- Carbon regime risk analysis
- Carbon regime planning/internal price of carbon
- Environmental tax planning
- Incentives related to sustainability strategies
- Risk management
- Audit-ready documentation
- Apply for tax relief/exemptions from environmental taxes

- Tax and accounting treatment of carbon offsets and allowances
- Environmental tax analysis
- ROI calculations for sustainability initiatives to include tax implications

- Minimize cost of compliance imposed by carbon regimes
- Environmental tax compliance

Operations
Finance/tax
Sustainability
Government
Economic
Stakeholders
Environmental taxes

Within the overall taxation framework, environmental taxes are meant to function not only as a source of revenue, but also as an instrument of environmental policy. As a result, there has been an increase in environmental and energy taxes in recent years, including new legislation and the development of regulations for existing taxes. In fact, the Organisation for Economic Co-operation and Development (OECD) identifies more than 5,600 environmental and energy taxes across the major global economies. The chart above demonstrates the size of these taxes by country, with the largest revenues from environmental taxes occurring in Japan, Italy and the United States.

These taxes cover activities such as emissions, manufacturing of certain products, transportation, energy generation, resource use and other negative environmental externalities.

EETs have a substantial impact on production and energy procurement costs. These taxes add costs to a wide range of operational activities, from energy and resource consumption, to manufacturing certain products and transportation. Although the liability for many of these taxes lies with the emitter, effectively they are passed on to the end user, in that any additional taxes or rate increases result in price increases. The specific impact of these taxes depends on the operations of the business and its footprint.

Associated with many of these EETs are potential reliefs, exemptions and tax management strategies. Opportunities to reduce EETs are not only significant for energy producers and traders, but should be a concern for all industries. The OECD identifies more than 1,600 exemptions from EETs across the major global economies. Some of these reliefs are triggered by obvious strategies such as switching to renewable energy, recycling, manufacturing low-carbon products, using alternative fuels and reducing emissions. Other tax reliefs may come through approaches for safeguarding international competition of severely affected industries due to missing border adjustment regimes.

Businesses often face challenges in identifying and calculating preferred consumption amounts that are subject to the reliefs or exemptions. Very often, these exemptions are linked to a very specific industrial process, which, in turn, is integrated into the overall business activity at a specific site. Thus, these consumptions are not per se metered and invoiced separately.

Without due care, the business can be affected by the tax burden in the form of increased energy bills. Energy tax reclams are utilized either by a reduced energy tax rate on the invoice of the supplier or by filing a separate claim with the authorities for a refund of the energy tax paid to the supplier. These cases often are not recognized as a tax filing obligation and, thus, are not considered in the wider tax compliance management process. Instead, reclaim processes are managed at a facility level by the local finance function or another business stakeholder without sufficient input or supervision of the tax function.

Global carbon regimes

Closely related to energy taxation are taxes on carbon emissions, as well as trading schemes covering GHG emissions. As the expanding global economy continues to be reliant on fossil fuels, concern over limiting the release of carbon dioxide (CO2) emissions associated with the combustion of these fuels has intensified. Carbon regimes, such as carbon taxes and cap-and-trade systems, are becoming more prevalent regulatory instruments to control GHG emissions.
Overview of current carbon regimes
Current and proposed carbon regimes
The value of carbon trading increased by 15% in 2014 and is expected
to grow by over 50% in 2015. Some of the major finalized and
proposed carbon regimes include:

- The European Union Emission Trading Scheme (EU ETS), which
  was launched in 2005, is the world's first international, mandatory,
  company-level cap-and-trade system of allowances for CO₂ and
  other GHGs. The EU ETS currently includes 28 member countries
  and covers around 45% of the EU's CO₂ emissions.

- The California Cap-and-Trade Program was launched in California
  in January 2013 as part of an effort to reduce greenhouse gases
  under Assembly Bill 32. The program currently encompasses
  approximately 350 businesses representing 600 facilities.

- South Korea's national cap-and-trade scheme, which was launched
  in January 2015, is expected to be the most ambitious emissions
  reduction program to date, covering 70% of South Korea's GHG
  emissions.

- China launched seven regional pilot cap-and-trade schemes in
  2014 and has proposed developing a national market for emissions
  trading under its next five-year plan.

Business and tax implications of carbon regimes
As the need for, and effectiveness of, carbon regimes in reducing
GHG emissions are realized, it will become increasingly important
for businesses to understand these carbon markets and prepare to
operate in a low-carbon economy.

A key consideration for companies subject to carbon regimes will be
the need to develop processes and controls to accurately measure,
monitor and report GHG emissions to governing authorities. In
addition, companies are increasingly required to report additional
information on their financial returns for accounting and tax
purposes. It will be important for businesses to ensure compliance
with these reporting requirements to avoid fines and penalties.

Companies may also have an opportunity to manage and reduce
their cost of compliance through the advance purchase of offsets
and allowances for future years at lower costs. Proactive approaches
could also include financial modeling to evaluate and prioritize
sustainability investments and the timing of purchasing offsets and
allowances. Organizations should also consider including the price
of CO₂ allowances in economic analyses to accurately estimate the
return on planned capital expenditures for energy efficiency and
renewable energy projects.

A major concern for the tax department in particular is the treatment
of offsets and allowances for accounting and tax purposes. Some of
the key considerations for taxpayers include:

- How should allowances/offsets be characterized in terms of tax
  basis recovery? Should allowances/offsets be considered inventory,
supplies, business expenses or intangible property?

- Can a taxpayer “amortize” the tax basis in an allowance over the
  compliance period if that period is longer than one year? When
  should the tax basis of an offset/allowance be expensed?

- How will the gain/loss on the sale or exchange of allowances and
  offsets be treated for tax purposes?

- What are the tax implications of transferring offsets/allowances
  from one jurisdiction to another?

- Must a taxpayer allocate a portion (or all) of the costs of an offset
  project to the tax basis in the offset credit?

- Are gains or losses associated with the trading of emission
  allowances considered capital or ordinary?

- How and when should allocated emission allowances be taxed?

- Is an entity subject to tax on the gains or losses realized from
  the sale of offset credits generated from projects by an entity in
  another country?

- What are the indirect tax implications of allowances and offsets?
  Are the emission allowances subject to property tax? Are the
  allowances subject to use tax if consumed in the trade or business
  Are the allowances subject to sales tax if sold?

A carbon tax is a form of carbon pricing where a tax is levied
on the GHG emissions associated with the combustion of
fossil fuels. For businesses, carbon taxes offer an increased
predictability over a cap-and-trade system, as the price of GHG
emissions is set and is not subject to market volatility. However,
carbon taxes might not result in the most efficient mechanism
for reducing GHG emissions, and the introduction of a new tax
can often face heavy political resistance.

A carbon cap-and-trade system or emission trading scheme
(ETS) is a market-based approach where a governing body
sets a limit or “cap” on the amount of emissions that can be
released. Participants may either be issued or must purchase
emission allowances, which represent the right to release a
certain amount of emissions. These allowances may then be
transferred or “traded” in the open market. A cap-and-trade
system is often considered an efficient way to reduce GHG
emissions since it is a market-based mechanism, where the
price of emissions is decided by the participants rather than the
governing authority.
Currently, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) have not released final standards for the tax treatment of offsets or allowances, and organizations may have an opportunity to create strategies to minimize the impact of carbon legislations.

**Global sustainability incentives**

On the flip side to environmental taxes and carbon regimes, governments are also encouraging sustainability-related investments through the use of specific tax incentives for targeting activities such as measures to reduce emissions, produce renewable energy and increase energy efficiency, or developing low-carbon products and manufacturing techniques.

Although the use of incentives as an agent of behavioral change is not a new phenomenon, their application is relatively new when the objective is to encourage the transformation to a more resource-efficient and low-carbon economy. Recent years have seen an increase in the use of tax and other business incentives introduced to encourage investment in the assets and new business practices and processes required by more efficient and low-carbon-based models. Incentives vary greatly from country to country in terms of the type of sustainability initiatives they encourage, as well as the type of incentives that are available.

**Categories of sustainability initiatives**

In general, sustainability initiatives can be broadly categorized in three categories:

- **“Reduce”** natural resource consumption: energy efficiency projects present an immediate and cost-effective opportunity to reduce the energy usage of a business and provide a direct impact on its associated carbon footprint. Organizations should continuously assess their operations and identify strategies that could lead to significant reductions in energy use.

- **“Switch”** to renewable energy: increased use of energy from renewable sources could also help reduce the carbon footprint associated with a business. Installation of renewable energy systems is an attractive strategy to reduce emissions, control energy costs and provide increased reliability in energy supply while capitalizing on available incentives.

- **“Innovate”** low-carbon products and manufacturing techniques: investments in research and development (R&D) to produce innovative solutions to lower the amount of resources and energy used in products are a priority for many companies. In addition, companies are looking at innovative manufacturing techniques to help further reduce energy costs.

**Sample tax and business incentives for sustainability initiatives**

- **European Union**
  - Germany: Interest rate reductions and grants for energy efficiency projects
  - UK: Feed-in tariffs for renewable energy production
  - France: Asset depreciation incentives for equipment used to produce renewable energy

- **USA**
  - California: 30% tax credit for renewable energy investments

- **South Africa**: Tax deductions for manufacturing projects that result in energy savings

- **Turkey**: Feed-in tariffs with additional incentives for facilities using domestically manufactured equipment in renewable energy production

- **Russia**: Accelerated tax depreciation and deferred tax payments for energy-efficient assets

- **China**: Corporate income tax exemptions for up to six years for income derived from qualified energy efficiency and renewable energy projects

- **Australia**: Incentives for renewable energy projects
Types of sustainability incentives
Incentives are offered in a broad variety of forms, depending on jurisdiction:

- Tax credits for investments in, or production from, renewable and alternative energy assets
- Tax deductions in the form of accelerated depreciation for energy-efficient and renewable energy property
- Property tax abatements from subnational jurisdictions for renewable energy property and infrastructure
- Reduced excise taxes on alternative fuels and fueling infrastructure
- Grants and rebates from government entities to encourage sustainability investments
- Renewable Energy Credits (RECs) purchased by companies and energy providers to comply with government regulations requiring certain levels of renewable energy production
- Utility incentives from energy providers to encourage energy efficiency as mandated by government regulations
- Feed-in tariffs (FITs), which offer production-based incentives for renewable energy producers
- Low-interest loans from governments allowing organizations to finance renewable energy and energy efficiency projects

Incentives offered by different authorities can often be “stacked” to reduce the cost of the sustainability initiatives and improve the ROI for a project. Organizations should implement procedures to research and identify all available incentives for a project and factor them into the evaluation of energy efficiency and renewable energy projects on a regional, national and global scope.

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