IFA 2026 MELBOURNE CONGRESS
Subject 2: Tax and The Energy Transition

Directive for branch reports

General Reporters: Prof. Miranda Stewart / Prof. Edoardo Traversa

ABOUT THE SUBJECT

This main subject on *Tax and the Energy Transition* encompasses the now fully-linked topics of taxation of energy, environmental and resource taxation, including taxation of fossil fuels and renewables, carbon, vehicle and other environmental taxes and related tax incentives, together with the international implications of these tax rules. This subject has a fitting connection with Australia as the location of the Melbourne 2026 Congress on **18-22 October 2026**, harking "back to 1978" when the Sydney Congress addressed the topic of Taxation of Extractive Industries (Subject 1). Today, Australia is a resource-rich country that is one of the world's largest exporters of coal and gas, but also with bountiful renewable energy resources which are being rapidly exploited. Australia is also working with Pacific nations in a bid to host the COP31 conference on climate change in November 2026.

The subject *Tax and the Energy Transition* builds on a series of seminars in previous Congresses on related topics, including in Cape Town (2024) Seminar D (Taxation Issues for the Oil & Gas Industry and Taxing the Energy Transition); Cancun (2023) Seminar B on the use of tax systems to execute non-fiscal policy goals**;** Berlin (2022) Seminar D on carbon climate change taxation; and Copenhagen (2013) Seminar on Climate change and international taxation.

It is proposed that special reports will be obtained from experts in relation to key topics of broad relevance. This includes:

- The European Union carbon emissions trading scheme (ETS) including the Carbon Border Adjustment Mechanism and its tax aspects and effects on trading partners with the EU.
- Potential for UN/COP special report on environmental and energy policy and taxes
- Potential for OECD special report on energy policy and taxes.
- Environmental tax incentives on energy production and products

Given the scope of this topic across tax and energy/environmental policy, we would recommend that branches consider appointing two branch reporters to coauthor the country report, perhaps including one practitioner and one academic; one tax law expert and one climate/environmental law expert; or one private sector and one government representative. This can help to ensure full coverage of all the relevant issues for that country.

GENERAL INFORMATION

General reporters' contact information

The general reporters are Prof. Miranda Stewart and Prof. Edoardo Traversa. Branch reporters who wish to contact the general reporters are invited to do so using the following email address:

Miranda Stewart, Melbourne Law School, The University of Melbourne
m.stewart@unimelb.edu.au

Professor Edoardo Traversa, Dean, Law Faculty of the University of Louvain edoardo.traversa@uclouvain.be.

We are pleased to be assisted by Dr Sébastien Wolff (sebastien.wolff@uclouvain.be) in the report.

We also propose to establish a steering committee to support the report including ensuring sufficient representation of country reports from around the world.

What is expected from the branch reporters

Two specific tasks should be completed by each branch reporter:

- First, as set out in Annex 1, and most importantly, branch reporters need to draft a branch report for the jurisdiction that they represent. The report should be prepared on the basis of the present directives and, as explained below, should focus on the relevant legislation, tax treaty provisions and guidance produced, in that jurisdiction, by courts, administrative organs and tax administrations as regards the application of the rules on the taxation of energy, environmental and resource taxation, including taxation of fossil fuels and renewables, carbon, vehicle and other environmental taxes and related tax incentives, together with the international implications of these tax rules. The report should be preceded by a **1,000** words "Summary and conclusions" section that will constitute a short “executive summary” of the report.

- Second, as indicated in Annex 2, branch reporters are invited to provide to the general reporters a copy of the relevant legislation, court decisions and administrative pronouncements that are referred to in their branch report. Preferably, such guidance should be available in English and in electronic form. Where, however, the information is not available in English, it should be provided in its original language.

Language and format of the branch reports

While IFA rules allow the branch reports to be submitted in English, French or German, it is clear that branch reports that are in English will reach a much larger audience as branch reports in French and German will not be translated. Also, if a report is submitted in either French or German, summaries/conclusions in English will need to be provided by the branch reporters. It is not permitted to use automated text, artificial intelligence and data mining to produce the branch report.

Each branch report should be readable independently without reference to these directives, which will not be reproduced in the Cahiers. Therefore, even when the directives formulate questions, please do not just directly reply to them, but include an articulated and self-standing answer. The branch reports should not attempt to address all the issues included in these directives since these issues are merely illustrative of issues that may be covered under each subsection. In order to facilitate comparison and to make sure that the same topics are covered, branch reports should, however, follow the general structure of these directives as per the format of the Table of Contents attached hereto as Annex 1.

The maximum length for a branch report is **10,000** words (including footnotes, appendices and bibliography). This, however, does not include the Summary and conclusions section and the text of court decisions and administrative pronouncements that branch reporters are also invited to provide (as indicated

above). Branch reporters should allocate that overall limit based on the guidance that is available, in their jurisdiction, on the various topics covered in these directives since it is unlikely that, in any jurisdiction, there will be guidance on all the issues raised in these directives.

In order to facilitate the comparison between the different jurisdictions, branch reporters should follow the various headings and the section numbering found in the Table of Contents attached to these directives as Annex 1. Headings under which a branch reporter has little to contribute should still appear in the branch report, if only to report that there is no guidance on the topic in that jurisdiction.

The branch report should not contain references to page numbers of the report itself.

Relationship between Description of the Subject and Annex 1: The Description of the Subject that follows the general information part of these directives provides branch reporters with an overview of the Subject. Annex 1 contains the table of contents and the text in italics that follows each heading in Annex 1 purports to give specific guidelines with respect to the information that the branch reporters are requested to give under that heading, all within the context of the subject as described in the description of the subject.

Timetable

By 30th of September 2025, branch reporters are strongly encouraged to send to the general reporters a close-to-final or final draft of the branch report. The final deadline for submission of the branch reports to the general reporters and the IFA General Secretariat is the **15th of November 2025**. This deadline date must be strictly adhered to, in view of editing and publication schedules. The Cahiers must be made available electronically well in time before the start of the congress. Furthermore, the deadline is important to the general reporters to allow him/her sufficient time to write their General Report for submission by the **15th of April 2026**. In the case of delays, a branch report may not be considered for drafting the General Report and may not be published.

Addendum

If a branch reporter expects radical changes in his domestic legislation relating to the subject between the date of submission of the report and the publication date thereof, he may, following prior consultation with the General Secretariat, supply an additional one-page Addendum to the report, for publication in the Cahiers, explaining such changes in legislation, but not after the **1st of February 2026**.

Reporters' biographies

The branch reporters are requested to include an abstract with a maximum of 400 words together with a half page biography with a maximum of 300 words and a color photo in portrait style and high resolution which shall be included in the digital publication of the Cahiers. Full personal biographies will not be printed, but shortened at IFA's discretion.

Publication of the Cahiers

The printed publication of the Cahiers consists of the General Reports of both Subject 1 and Subject 2, the topical and special reports (if existing), and the summary and conclusions of all branch reports. The digital publication consists of the General Reports, the topical and special reports (if existing), and all branch reports, including biographies, abstracts, and directives. The digital publication will be made available through the secured section of the website of IFA, and the website of its sister organisation, the IBFD. The digital publication will contain easy access to all reports, making it more available for its audience. It will be featured with a user-friendly search function, and all reports can be downloaded for offline consultation.

Meetings with the general reporters

The following preparatory meetings will be hosted online and onsite:

- Online meetings to be arranged by the general reporters
- Sunday 5 October 2025, 11-13hrs (Portugal time) – onsite meeting at the venue of the IFA 2025 Lisbon Congress. Please note that this meeting will not be streamed online.

A summary of the discussion during each preparatory meeting will be distributed to all branch reporters via email.

DESCRIPTION OF THE SUBJECT

The branch reports will focus on the taxation of energy producers and energy products, and the impact of environmental transition in the energy sector. They may address direct taxes such income taxes, in particular on businesses, and indirect taxes, such as excises or measures in the Value-Added Tax or Goods and Services Tax, and land and resource taxes. These directives include headings and questions for to be answered by branch reporters, based on a framework of direct and indirect taxation.

It is recognised that not all topics are relevant for all countries. If any Parts or Questions are not applicable (e.g. your country does not produce oil, gas or coal), branch reporters should please indicate "not applicable". Branch reporters are requested as far as possible to use the set headings, but can include their own headings and parts if they consider this necessary to explain the approach of their country. It is also noted that depending on the legal structure of the country, some taxes or incentives will be levied at federal, State/provincial or local levels and branch reporters are asked to identify and describe the relevant taxes at all levels.

These directives address the subject in four main Parts

Part I – Direct Taxation

Part II – Indirect Taxation

Part III – International Tax Aspects

Part IV – Directions for Reform and Other Matters

The general reporters recognise that the topic, and hence branch reports, are necessarily descriptive and that a concise answer is needed to many questions, as the topic is quite broad. This is intentional because this main subject offers the opportunity, for the first time, to compare across a wide range of countries their various taxes and incentives relevant to the energy transition. However, branch reporters are encouraged also to provide their views about the unique features and policies of the country laws they are describing, including the effectiveness of the law or policies, their advantages or disadvantages, or their revenue or other policy implications relevant to the energy transition.

A useful resource for background for the general reporters and for branch reporters is the long-running Series on Critical Issues in Environmental Taxation (Edward Elgar), co-edited by Janet E. Milne, Vermont Law School, US, Mikael Skou Andersen, Professor of Environmental Policy Analysis, Aarhus University, Denmark and Hope Ashiabor, UNSW, Australia.[1]

A summary outline of key international environmental law context, policy and key terms relating to tax and the energy transition is in Annex 3 for the assistance of the branch reporters.

[1] See https://www.e-elgar.com/shop/gbp/book-series/environment/critical-issues-in-environmental-taxation-series.html?srsltid=AfmBOorvA7s47E8yZ6M1y6zbpcJtXHfsdZeWn6ninlPhcE9mcl1-IKvp . Thanks to Hope Ashiabor for providing comments on this draft outline.

ANNEX 1

CONTENTS OF THE BRANCH REPORTS

Summary and conclusions

The report should be preceded by a "Summary and conclusions" section that will constitute a short "executive summary" of the report. This summary should not exceed 1.000 words and should logically be prepared after the report has been completed. The Summary and conclusions section shall be printed in the Cahiers.

I. DIRECT TAXATION

Part I will address direct taxes on energy undertakings, which would not themselves qualify as 'environmental taxes', such corporate income taxes. It will first address domestic rules and then international rules.

I.A. Domestic rules for direct income taxation of energy production including renewables and fossil fuels

Part I.A will address the domestic income taxation rules for investment in energy production and distribution. The focus is taxation of investment in renewable energy production and infrastructure projects (including battery and transmission systems). This will also include taxation rules for so-called critical minerals of relevance to the energy transition. Second, branch reporters will be asked about direct taxation of fossil fuels including oil, gas and coal.

It is noted that taxation of fossil fuel and mineral resource extraction is very important for some countries, but less so for other countries. However, most countries will have income tax rules relevant for investment in energy infrastructure, transmission and renewables including corporate and international income tax rules of relevance to these investments. Relevant tax rules will include capital allowances, depreciation or incentives for physical investment in these sectors. This Part will also address the tax treatment of costs in mitigation, abatement, clean-up, rehabilitation or closing down of fossil fuel industries.

Where relevant, Part IA. may address taxation rules for other energy sources such as geothermal or nuclear investment. For example, this will include tax incentives to encourage new energy approaches (such as hydrogen) or for extraction of critical minerals that are necessary for the energy transition. Where relevant, branch reporters will also be asked to provide information on tax policy for nuclear energy.

IA.1 Briefly describe the domestic corporate income taxation (CIT) regime for companies dealing with energy production and distribution in your country. Is there a specific tax regime, or are they subject to ordinary CIT rules?

IA.2 Do special rules apply to investments in renewable energy production, such as establishing a wind farm, solar farm, geothermal or hydropower project or other energy production alternative to fossil fuels, like hydrogen or nuclear? Describe any income tax incentives, entity or other tax rules (for example, treatment of losses, or a special entity structure) for renewable energy projects.

IA.3 Do special rules apply to investment in fossil fuel energy extraction, production and distribution in your country, with a particular focus on rules specific to fossil fuels, including:

a. The tax treatment of costs incurred for exploration, mining and production of fossil fuels
b. Describe any income tax incentives or other special income tax rules for fossil fuel resource

projects, or for the use of fossil fuels.

c. Describe the tax treatment of costs in mitigation, abatement, clean-up, rehabilitation or closing down of fossil fuel extraction, processing or transport industries (mines, refineries, pipelines, etc.).

IA.4 Have there been in your country specific adjustments to existing tax incentives in order to permit them to remain outside the scope of Pillar 2 or GloBE rules?"

IA.5 What legal entity structure is usually applied for these kinds of investments and briefly outline its tax treatment (e.g. company income tax; investment fund)?

IA.6 Are you aware of tax structures or planning for domestic renewable energy investment? For example, what entity structure is used (e.g. a special purpose vehicle, unit trust, or flow-through entity)? What tax rate applies? Is there a difference between public or widely held investment, or private/corporate investment?

IA.7 Please reference any topical or important cases or administrative guidance relevant to the above tax rules or incentives.

I.B. Specific resource taxes or taxes on renewable energy production

Part I.B asks branch reporters to identify and describe resource taxes applicable to oil (and derivatives), gas, or coal, and to explain the interaction of these taxes with the corporate income tax. It also seeks to identify whether any specific taxes are applied (or tax incentives exist) in relation to renewable energy, outside the income tax.

IB.1 Describe any resource taxes applicable to oil, gas or coal, such as resource super-profits taxes or royalties.

IB.2 Describe any other specific direct taxes applicable to energy production (not levied with an environmental objective, as that would be covered in Part II); for example, Belgium applies a special levy on nuclear power plants.

IB.3 Describe any special tax incentives, subsidies or other tax rules relevant to mining or energy production of oil, gas or coal, nuclear energy, hydrogen or renewable energy that are in these specific resource or other taxes.

IB.4 Explain the interaction of these specific resource or renewable energy taxes with the income tax, e.g. are they deductible for corporate income tax purposes?

II. INDIRECT TAXATION

II.A Carbon Taxes, Environmental and Energy Taxes

We define environmental taxes to include all taxes:

- whose tax base is a physical unit (or a proxy of a physical unit) of something that has a proven, specific negative impact on the environment;
- internalising externalities on the environment;
- where the revenue is directly allocated to protect and restore the environment; and

- designed in a way to influence behaviours towards more environmental protection.

This also includes energy taxes that are designed to address the environment in one of the above ways.

II.A.i Carbon tax or emissions trading scheme

Part II.A.i will ask branch reporters to address whether their country has a carbon tax based on the quantity of emissions or a compliance or mandatory carbon market such as a greenhouse gas emissions trading scheme. Compliance carbon markets are briefly described in Annex 3 . Examples include a Cap-and-Trade mechanism (e.g. the EU Emissions Trading System (ETS) or The California Global Warming Solutions Act), or a Baseline-and-Credit mechanism (e.g. the China National ETS).

II.A.1 Does your country implement a carbon tax? What is the rate, base and revenue for the tax?

II.A.2 Does your country implement an emissions trading regime? Describe how the regime operates and the extent to which it achieves greenhouse gas emissions reduction goals or obligations of your country.

a. Is the scheme based on a national market or set at business level?
b. What emissions of greenhouses gases are considered for the carbon tax or carbon market?
c. Is the carbon tax or price introduced in response to obligations under the Kyoto Protocol and Paris Agreement?
d. Is there empirical evidence of a change in consumption of energy products since the introduction of the tax or scheme?
e. Does your country implement any other energy taxes that have the implicit effect or purpose of a carbon tax or reducing greenhouse gas emissions, such as a fuel tax? How important is this tax from a GHG emissions reduction and revenue perspective?
f. Is the carbon tax or other fuel tax considered to be compatible with the country's trade or investment obligations, or (in the EU) with state aid or other EU rules?
g. Are there any tax treaty issues identified with these taxes?
h. Are there any specific regime applicable to imported goods, namely to avoid carbon leakage or curb environmental tax competition?

II.A.ii Other environmental taxes or subsidies including on energy

Part II.A.ii asks about other specific taxes relevant to reducing carbon emissions or with energy transition goals.

II.A.3 Describe any sur-taxes or other taxes that aim to increase taxation on the use of polluting energy products, implicitly encouraging people to shift to other energy sources. For example, does a country levy a fuel tax or other taxes to reduce the use of polluting energy, including transport taxes ?

II.A.4 Describe the base and definitions for application of any excises or other specific taxes; what is the rate and does the rate take account of energy content, for example, is it a science-based framework or based on other criteria?

II.A.5 Does your country have law or policy aimed at addressing the transition from fossil fuels for these specific taxes, for example to address revenue lost as fuel taxes decline when vehicles move away from fuel vehicle taxes to electric taxes in the future?

II.A.6 Are there any broader legal or Constitutional issues that are raised by these types of taxes or incentives?

II.B Interaction of carbon tax or other environmental or energy taxes with income tax

Part II.B will ask about interaction of the carbon tax or energy taxes with the income tax, including any income tax measures relating to the carbon tax or ETS, or other energy taxes, and how the income tax law addresses carbon credits.

II.B.1 Does the income tax law apply a regime to deal with the carbon tax or carbon market?

II.B.2 How are carbon credits or carbon offsets relating to a carbon tax or emissions trading scheme treated for income tax purposes?

II.C Other specific climate or energy taxes

Finally, Part II.C will ask about any other taxes or levies that have environmental implications to the extent that the branch reporters consider these are relevant for environmental tax policy or taxing the energy transition.

II.C.1 Does your country apply any other environmental taxes or levies that are relevant for the report?

III: INTERNATIONAL TAX ASPECTS

Part III will address the international tax aspects of both direct and indirect taxes relating to the energy transition, climate tax and resource investment, and of specific carbon or energy taxes, including in the international tax rules of countries and in tax treaties.

A particular focus of this main subject is the taxation of investment in renewable energy or resources, especially by foreign investors. This Part will address the international tax rules of specific relevance for inbound and outbound investment in renewable energy production, transmission or other infrastructure. This includes how profits or capital gains are taxed for foreign investors in these investments. It will then inquire whether there are any tax treaty issues of relevance to inbound or outbound renewable energy investment or otherwise relevant to the energy transition. These investments generally involve the use of land and therefore treaty rules relating to immovable property, for example, will be relevant.

It is understood that these international tax questions are broad, and branch reporters should aim to focus only on aspects that are relevant to taxing the energy transition.

III.1 How does the income tax apply to inbound renewable energy investment in your country for foreign investors? In what way, if any, does this differ compared to domestic investment, or to other resources investment?

III.2 Are there special tax rules applicable to cross-border investment in renewables such as solar or wind projects, or in investments in the electricity grid, or other infrastructure, such as terminals, hydrogen distribution networks or pipelines that are relevant to the energy transition?

III.3 Is a specific entity structure used for foreign investment in renewable energy, compared to domestic investment? (eg a special purpose vehicle, unit trust, managed fund or flow-through entity)?

III.4 How are profits or gains on sale of renewable energy investments treated for foreign investors? What tax rate applies? Is there a difference between public or widely held investment, or private/corporate

investment?

III.5 How are renewable energy investments, such a solar panels or wind turbines, characterised for international tax purposes, for example, are they treated as investments in equipment or land?

III.6 Do specific withholding tax rates or other international tax rules in relation to foreign renewable energy investment?

III.7 Are there any specific tax subsidies applicable to foreign investment in renewable energy, in the tax law or elsewhere? For example, are there subsidies in foreign investment laws relating to renewable energy?

III.8 Similarly to Questions 1 to 7, describe any specific international tax rules relating to outbound investment in renewable energy projects by resident investors?

III.9 Bilateral tax treaties may affect the taxation of renewable energy investment. Provide information about any tax treaty issues that are specific to renewable energy investment. For example:

a. Do tax treaties reduce withholding tax on returns to renewable energy investment?
b. How is source taxation achieved for renewable energy investment, for example, how does the definition of a permanent establishment apply for these projects?
c. How do the attribution of profit rules including the specific application of transfer pricing rules relate to renewable energy.
d. How are gains on the sale of renewable energy assets or investments characterised for tax treaty purposes? For example, are renewable energy assets such as solar panels or wind turbines on land or offshore treated as immoveable or moveable assets for the purpose of Articles 6, 13 of tax treaties? Similarly, are shares or units in an entity that holds such assets treated as immovable or movable for international tax purposes?
e. Is there variation between your country's bilateral tax treaties insofar as they deal with these issues?

III.10 Are there any other international income tax issues of relevance for taxing the energy transition in your country?

IV. DIRECTION FOR REFORM AND OTHER MATTERS

Part IV will provide an opportunity for branch reporters to discuss reforms or future directions of tax policy relating to the energy transition, climate or the environment, and to discuss how the law or policy has changed over the last two decades.

Some additional questions of relevance that branch reporters may wish to address are:

IV.1 Has your country implemented sustainability reporting obligations for corporations or taxpayers, such as Environmental, Social and Governance (ESG) reporting, or the European Sustainability Reporting Standards (ESRS), or International Financial Reports Standards S1 and S2, and what is the impact of this on taxation, from a reporting or substantive perspective, if any?

IV.2 Does the country have a specific climate fund or other budgetary measure relating to climate change or renewable energy?

We welcome the views or conclusions of branch reporters on other issues of importance on tax and the

energy transition in your country, and on the direction of tax law or policy relating to the energy transition and how it relates to tax policies, and other other policies of the government, or that of other countries.

ANNEX 2

DOCUMENTS TO BE PROVIDED

Branch reporters are invited to provide to the general reporters a copy of any of the following documents which are referred to in their branch report, in an editable format, preferably in MS Word (.docx).

- interpretative provisions found in a treaty itself, in a protocol to a treaty, in a memorandum or letter of understanding between the Contracting States or in any other instrument prepared in connection with a treaty, including an instrument prepared by one Contracting State and endorsed by another Contracting State;
- court decisions, indicating whether the decisions are final or not;
- publicly available mutual agreements;
- publicly available decisions by any administrative review board that may be part of or independent from a tax administration (e.g. assessment board or appeal board that would not constitute a court);
- legislative texts, such as an interpretative provision found in a statute, regulation or decree;
- circulars, rulings or other official administrative pronouncements by the tax authorities;
- any other similar document that can be considered to be an official statement with respect to the subject of this report originating from that jurisdiction;
- where relevant, policy or academic materials such as reports on a carbon tax or energy transition.

Preferably, these documents should be provided in English and in electronic form as the objective is to make such information available on the IFA website. Where, however, the information is not available in English, it should be provided in its original language.

The documents provided should not exceed 200 pages (in print form). Branch reporters of jurisdictions where documents referred to in the branch report would greatly exceed that limit are invited to exercise discretion in choosing which documents to provide and to send what they consider as likely to be the most useful and influential documents for other countries (e.g. for judicial decisions, those that are most recent or rendered by the highest courts).

ANNEX 3

CONTEXT AND KEY TERMS FOR TAX AND THE ENERGY TRANSITION

To provide the environmental, climate and energy international law and policy context for branch reporters who specialise in taxation, we set out here some key concepts and developments that may be relevant to the branch report. This will support branch reporters to bridge the gap between national taxation rules e.g. in the corporate income tax or value-added tax, and the relevant international framework for climate change, renewable energy, resources and energy transition, and environmental taxation.

Environmental taxes

The concept of an environmental tax is not consistently defined among jurisdictions although common ground seems to have emerged recently. In 1999, the OECD defined environmental taxes as "taxes introduced with the aim to achieve a specific environmental objective, which were labelled explicitly as environmental taxes."[2] This also encompasses taxes not explicitly identified as environmental but which serve the purpose of environmental protection.[3] The European Energy Agency stated that:

> "An environmental tax tries to bring [...] external cost into prices (the 'internalisation' of externalities) so both social and private costs are brought closer together." *and*
>
> "An environmental tax provides an incentive to avoid the tax by using, or generating less of, the substance being tax."[4]

This definition was refined in a coordination document on environmental taxation from **the OECD, the International Energy Agency (IEA) and the European Commission (EC)**, which states that environmentally related taxes should be defined as any compulsory, unrequited payment to general government levied on tax bases deemed to be of environmental relevance.[5] The **EC** (Eurostat) defines an environmental tax in its statistical manual as follows:

> "A tax whose tax base is a physical unit (or a proxy of a physical unit) of something that has a proven, specific negative impact on the environment, and which is identified in ESA as a tax."[6]

This highlights two key aspects of tax design concerning environmental levies: the tax's potential impact and the significance of the tax base.

> (1) Tax Impact: The effectiveness of an environmental tax is measured by its influence on the costs of activities and the prices of products that harm the environment. Its environmental effect primarily stems from altering the relative prices of goods and services and influencing activity levels, combined with the relevant price elasticities.

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[2] OECD (1996), Implementation of Strategies for Environmental Taxes, Paris: OECD publishing, pp. 9-10.
[3] Ibid.
[4] EEA (1996), "Environmental taxes Implementation and Environmental Effectiveness", *EEA Environmental issues series no. 1*, available here, pp. 15 and 18.
[5] OECD (2011), *Taxation, Innovation and the Environment: A Policy brief*, Paris: OECD, available here, p. 33.
[6] European Commission (Eurostat) (2013), *Manual: Statistics on Environmental taxes*, accessible here, p. 9. In line with Regulation (EU) 691/2011 of the European Parliament and of the Council of 6 July 2011on European environmental economic accounts, *OJ* L 192 of 22 July 2011, pp. 1-16. Article 2 includes the definition: "'environmentally related tax' means a tax whose tax base is a physical unit (or a proxy of a physical unit) of something that has a proven, specific negative impact on the environment, and which is identified in ESA 95 as a tax".

(2) Tax Base Significance: The importance of the tax base lies in its clear linkage to environmental harm. According to the EC, an environmental tax is imposed on a tax base explicitly identified as having a negative environmental impact. This tax base serves as an objective criterion for identifying environmental taxes in international comparisons. While other potential criteria, such as legislative intent, tax nomenclature, or revenue earmarking, exist, they are less practical and less suitable for environmental objectives.

The **United Nations (UN) and the International Monetary Fund (IMF)** Central Framework System of Environmental-Economic Accounting (2014) recommends "looking at all of the various taxes levied in a country and making an assessment regarding whether the tax base in each circumstance is something that has a negative environmental impact."[7] This is based on the following definition:

> "[A]n environmental tax is a tax whose tax base is a physical unit (or a proxy of it) of something that has a proven, specific, negative impact on the environment."[8]

The **IMF** publishes guidelines to collect 'green' data, including some advice on environmental taxes.[9] It observes that:

> "Most environmental taxes are established on goods and services, typically taking the form of excise taxes, taxes on specific services, and taxes on the use of goods and on permission to use goods or perform activities."[10]

The IMF excludes taxes on income, profits and capital gains, payroll, and property and general taxes on goods and services. It lists four areas where typical environmental taxes can be found: energy,[11] transport,[12] pollution,[13] and resources.[14]

Energy tax

Delimiting a clear boundary for energy taxes is no simpler than doing so for environmental taxes. At a fundamental level, an energy tax may be defined as a levy imposed on an energy product or generator of energy (such as oil, gas, coal, or electricity or heat generation derived from these or other sources). Energy taxation could be conceptualized therefore as the taxation of energy products understood in their conventional sense without regard to other factors. Energy taxation does not always aim to achieve environmental outcomes and in some cases, they may be imposed solely for revenue generation, with no

[7] United Nations, European Union, Food and Agriculture Organization of the United Nations, International Monetary Fund, Organisation for Economic Co-operation and Development and The World Bank (2014), *System of Environmental Economic Accounting 2012— Central Framework*, New-York: UN, available here, p. 121.
[8] *Ibid*.
[9] S. Arslanalp, K. Kostial and G. Quiros-Romero (2023) *Data for a Greener World: A Guide for Practitioners and Policymakers*, Washington: IMF, available here, p. 44.
[10] *Ibidem.*
[11] Three subcategories of tax bases are suggested for energy: (1) taxes on energy production for transport purposes, (2) on energy products for stationary purposes and (3) on energy-related (GHG) emissions.
[12] Four subcategories of tax bases are suggested for transport: (1) tax on the ownership of a motor vehicle, (2) road usage charge, (3) congestion charge and (4) other transport taxes.
[13] Eight subcategories of tax bases are suggested for pollution: levies on (1) non-energy-related GHG emissions, (2) pollutant emissions to air, (3) ozone-depleting substances, (4) effluents to water, (5) nonpoint sources of water pollution, (6) waste management, (7) noise and (8) radiation.
[14] Four subcategories of tax bases are suggested for resources: taxes on (1) extracting activities, (2) freshwater abstraction, (3) harvesting and (4) landscape change.

consideration given to their impact on consumption or production of energy.

The OECD uses a classification of energy taxes for its reports based on three primary uses: (1) transportation, (2) heating and generation processes, and (3) electricity.[15] Without delving further into the specifics of the OECD study, this approach to energy taxation may be based on either the quantity of the product or its energy (calorific) value, without considering environmental metrics such as carbon content or carbon dioxide emissions.

A **carbon tax** is a specific type of energy tax that is aimed at reducing carbon emissions and mitigating climate change by decreasing the amount of carbon dioxide and other greenhouse gases released into the atmosphere. A carbon tax can take various forms. It may be applied to goods or services in proportion to the CO2 emissions generated during their production or consumption. The **World Bank** highlights the incentive for behavioural change as a key feature of a carbon tax:

> "While they vary in approach, a typical carbon tax establishes a direct link between the GHG emissions (measured in metric tons of carbon dioxide equivalent or tCO_2e) of a product or process and the tax that must be paid on it. This provides a financial incentive for taxpayers to lower their emissions in order to reduce their tax obligations, whether through switching to more efficient practices, choosing cleaner fuels or, in the case of consumers, changing their lifestyle habits."[16]

The **International Bureau of Fiscal Documentation (IBFD)** defines a carbon tax as a tax "levied on fossil fuels with the aim of reducing carbon dioxide emissions and other greenhouse gases."[17] We define fossil fuels to include coal, oil and gas (hydrocarbons) that can be burned for energy.[18]

The **OECD** recommends distinguishing between 'carbon taxes' and 'fuel excise taxes.'[19] It states that carbon taxes are levied:

> "By imposing a charge on the carbon content of fossil fuel supply, carbon taxes are a straightforward carbon pricing instrument from an administrative perspective. They can be comprehensively applied, for example, at the point of processing or refining for coal, petroleum products, and natural gas. In addition, carbon taxes can provide certainty over the future trajectory of emissions prices and raise revenues."[20]

Fuel excise taxes are considering by the OECD as "implicit carbon taxes" that may "create economic incentives similar to those of carbon taxes and emission permit prices, even if their primary objective may be to raise revenue. The strength of price-based incentives to reduce emissions depends on the rate and the base of the incentive, and on fuel price responsiveness, not on the stated policy intention. Fuel excise taxes are similar to carbon taxes in that the tax liability for a given fuel increases proportionally to the use of the taxed fuel."[21]

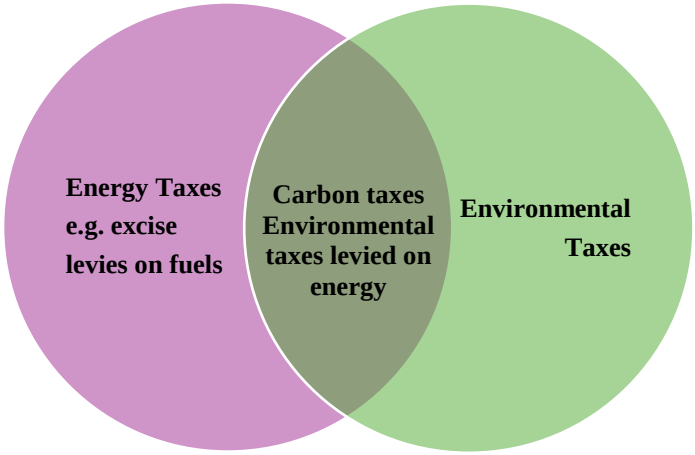
However, the OECD points out that as fuel excise rates are not linked to a carbon price, they do not provide a consistent carbon price across fuels with different carbon intensities. In addition, they typically only apply

[15] OECD (2013), *Taxing energy use: A Graphical Analysis*, Paris: OECD, available here, p. 13.
[16] The World Bank (2017), *Carbon Tax Guide – A Handbook for Policy Makers*, Washington: The World Bank, available here, p. 10.
[17] IBFD, "Online International Tax Glossary", ibfd.org (accessed on 27 June 2021).
[18] See Encyclopedia Britannica, https://www.britannica.com/science/fossil-fuel
[19] OECD (2021), *Carbon Pricing in Times of COVID-19*, Paris: OECD, available here, p. 7.
[20] *Ibid*, p. 7.
[21] *Ibid*, p. 8.

narrowly to certain fuels, e.g. diesel and gasoline used for road transport.

Policy measures such as taxes or incentives related to new types of energy production e.g. hydrogen may be classified into "grey" (production or mining with energy from oil or coal); "blue" (production or mining based on natural gas), neither of which is sustainable, or "green" (production based on renewable energy).[22] This is useful for identifying the contribution, and costs, of the new energy production in the energy transition and emissions reduction.

Figure 1: Energy, carbon and environmental taxes



International law framework for environmental and energy tax

There are many international law instruments that provide a relevant framework for considering taxation and the energy transition. The main focus of branch reports should be on country developments, but branch reporters will be asked to indicate if their country is party to the relevant conventions or the tax law or policy is directly linked to international conventions or other international developments.

Applicable conventions include the UN Framework Convention on Climate Change (UNFCC) of 1994, ratified by 198 countries;[23] the Kyoto Protocol of 1997, with 192 parties, which entered into force in 2005;[24] and subsequent developments including Doha, where the Kyoto Protocol was extended to 2020, and Paris, where 194[25] parties have pledged to limit climate change well below 2°C.[26] It is noteworthy that Australia with Pacific Islands has sought to host the UNFCC Conference of the Parties (COP31) in October 2026, while another bid is submitted by Turkey (the decision will be made by June 2025). There are many other international environmental or anti-pollution conventions that may be relevant. Branch reporters are requested to focus on international law to the extent it is relevant to taxing the energy transition.

Another recent development is the case currently underway at the International Court of Justice (ICJ) in which the United Nations General Assembly has asked the ICJ for an Advisory Opinion on the obligations

[22] A. Ajanovic, M. Sayer, R. Haas, 'The economics and the environmental benignity of different colors of hydrogen', International Journal of Hydrogen Energy 47(57), 5 July 2022, Pages 24136-24154.

[23] https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change
[24] https://unfccc.int/kyoto_protocol
[25] Iran has not ratified the Treaty, resulting in the commitment of 195 countries.
[26] https://unfccc.int/process-and-meetings/the-paris-agreement

of states regarding climate change (an initiative led by Vanuatu).[27] An important development regarding the energy transition or carbon emissions that may affect many countries is the EU Carbon Border Adjustment Mechanism,[28] which is to apply from 2026. It is proposed that the EU approach would be the subject of its own report.

We note the policy and political uncertainty that prevails in this field. Branch reporters are asked to comment on the stability, and viability, of tax rules relating to the energy transition, in relation to specific aspects and the future and potential reform directions for their country. For example, President Trump has withdrawn the United States from the Paris Agreement,[29] as he did during his first Presidency. He has also promised to repeal the Inflation Reduction Act, enacted during the Biden Administration and has threatened to impose retaliatory tariffs on any country that imposes a tariff on US exports, which could have implications for the Carbon Border Adjustment Mechanism (CBAM) of the European Union. The US Senate has confirmed climate sceptic Mr Lee Zeldin to head the US Environment Protection Agency.[30] However, attention of many governments remains on critical minerals, including those of relevance to the energy transition, and scientific and technological research continues, for example in the field of hydrogen energy and even nuclear fusion.

Carbon markets

A carbon market is a useful tool for governments and private sector institutions to achieve climate change goals. The aim is to mitigate climate change by pricing carbon emissions, encouraging carbon emissions reduction, or allowing emissions compensation through mitigation projects. There are various types of carbon market which we summarise here.[31]

- **Compliance Carbon Markets**, also known as "Emission Trading Systems" (ETS), are created and regulated by national, regional, or international carbon reduction rules. There are two main mechanisms which both involving tradable allowances that permit companies to emit one ton of CO2.

  (a) Cap-and-Trade Mechanism: The most common compliance market is "cap-and-trade", where governmental authorities set a limit (cap) on the total greenhouse gas emissions of a sector and the cap is gradually reduced over time. Allowances are issued to companies, allowing them to emit a specific amount of greenhouse gases, which allowances are tradeable in a secondary market based on supply and demand. A company exceeding its allowance might purchase additional allowances from another company with excess emissions rights. **Examples** include the EU, UK, New Zealand, South Korea, California (US), Quebec (Canada), and Mexico.

  (b) Baseline-and-Credit System: Government sets baseline emission levels, and companies that reduce emissions below these levels are rewarded with carbon credits. These credits can then be sold to other entities trying to meet their targets. Companies that exceed their baseline emissions don't

[27] https://www.icj-cij.org/case/187; and see https://www.vanuatuicj.com/.
[28] https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en
[29] https://www.whitehouse.gov/presidential-actions/2025/01/putting-america-first-in-international-environmental-agreements/ . This is in addition to other executive orders to pause or reverse energy transition goals, including withdrawing offshore areas from windfarm licensing (https://www.whitehouse.gov/presidential-actions/2025/01/temporary-withdrawal-of-all-areas-on-the-outer-continental-shelf-from-offshore-wind-leasing-and-review-of-the-federal-governments-leasing-and-permitting-practices-for-wind-projects/) and declaring a "National Energy Emergency" (https://www.whitehouse.gov/presidential-actions/2025/01/declaring-a-national-energy-emergency/).
[30] https://www.reuters.com/world/us/majority-us-senate-votes-confirm-zeldin-epa-head-2025-01-29/
[31] The classification is borrowed from IOSCO (2023), "Final report on compliance carbon markets", https://www.iosco.org/library/pubdocs/pdf/IOSCOPD740.pdf.

necessarily face penalties but do not earn credits. **Examples:** China; Australia (emission reduction fund initiative). The Australian system, while voluntary, involves registering carbon emission reductions and obtaining Australian Carbon Credit Units (ACCU) for qualifying projects[32].

- **Voluntary Carbon Markets** allow entities to buy credits from projects that avoid CO2 emissions, reduce emissions, or remove emissions permanently from the atmosphere. These credits help buying entities offset their own emissions. The projects generating these credits are verified by standard setters who issue the credits once verified.

- **Article 6.4 of the Paris Agreement** introduces a mechanism for countries to cooperate in meeting their emission reduction targets. This allows a company in one country to reduce emissions, get them credited, and then sell these credits to a company in another country. This helps the buying company meet its emission reduction obligations or pursue net-zero goals. The details of the operation of this mechanism are still being determined, with the UN acting as the supervisory authority.

For this country report, the main focus of branch reporters should be on the description of compliance carbon markets operated within the country.

[32]https://www.cleanenergyregulator.gov.au/Infohub/Markets/Pages/About-CarbonMarkets.aspx#:%7E:text=National%20carbon%20markets&text=the%20Emissions%20Reduction%20Fund%2C%20which,scale%20technology%20certificates%20(STCs)