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ENVIRONMENTAL FISCAL REFORM
– ILLUSTRATIVE POTENTIAL IN ITALY

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Environmental fiscal reform: illustrative potential in Italy

- based on established practices across Europe

Italy faces a fiscal challenge the addressing of which will require a combination of cuts in government expenditure and increases in taxation over the next several years. Italy with its current level of taxation, measured as a share of GDP, ranks 4th in the European Union. With regard to the implicit taxation of labour it ranks according to Eurostat 1st, with such taxes (incl. social contributions) amounting in 2009 to 42.6 per cent of reported labour earnings. To address this challenge, the government is preparing a new budget. There are many interesting ideas as to how the budgetary gap can be bridged, but so far no analysis as to how a broadening of the tax base with environmental taxes, levies and charges – referred to here as ‘environmentally-related taxes’ and defined as those which encourage us to use environment and resources parsimoniously - might contribute.

1. Summary

Environmental fiscal reform (EFR) involves policy measures that shift revenue-raising instruments from labour and capital to resource use and pollution. These measures mainly include environmentally-related taxes, but may also involve introducing full-cost user-charges, auctioned permits in emissions trading schemes and the phasing out of environmentally harmful subsidies.

Environmental fiscal reform has in those countries which implemented such tax policies in the past (for example Sweden, Denmark, Finland, Netherlands, Slovenia, Germany and UK) been designed to be fully revenue neutral (i.e. increasing revenues from environmentally-related taxes in order to reduce revenues from labour and capital taxes), or partially so, thus relieving the pressure on labour as a tax base.

Under the current circumstances of fiscal consolidation needs, a more dynamic perspective on revenue-neutrality focuses on the opportunities for broadening the tax base, whereby labour taxation can be relieved.

Environmental fiscal reform can deliver five dividends: increased resource productivity and eco-innovation; increased employment; improved health of environments and people; a more efficient tax system; and a better sharing of the financial burdens of an ageing population.

This paper demonstrates that the potential for environmental fiscal reform in Italy, even if restricted only to established practices across Europe, could be to raise environmentally-related taxes to about 10-11% of total tax revenues by 2015, from 6% today.

However, there are various opportunities available as to how the **revenues** generated as a result of EFR could be used:

- Reduce the budget deficit directly by using the EFR revenues; and indirectly via the reduced cost of raising overall taxes via taxes on labour and capital. This benefit arises from the generally lower administrative costs of environmental taxes and from the more economically damaging costs of taxes on labour and capital¹.

¹ “...simulations .. indicate that a shift from the most distortionary taxes (on labour and capital) to the least distortionary taxes (on consumption, housing) could mitigate the output losses associated with fiscal consolidation in the short run and have a positive impact on GDP in the long run.” (EC, 2010, p.69).

- Reduce taxes on economic “goods” like labour and capital
- Compensate the poorer and pensioner households for negative impacts on equity from environmentally-related taxes.
- Recycle revenues to industry to offset any negative competitiveness impacts caused by higher prices and costs.
- Provide investment incentives aimed at stimulating innovations in resource productivity.

EFR can help better share the financial burden of an ageing population by reducing income taxes on the shrinking working population with revenues from the expanding tax base of the lifetime consumption of the whole population.

2. The knowledge base for Environmental Fiscal Reform

Between 1996 and 2006 the European Environment Agency (EEA) published four reports (EEA, 1996, 2000, 2005 and 2006) on market based instruments and the potential for environmentally-related taxation in the EU. More recently it has commissioned research into the impacts of Environmental Tax Reform (ETR) on eco-innovation, on equity, and on the political feasibility of reform (Bassi et al., 2009, EEA, 2011a; EEA, 2011b).

Other bodies such as the OECD (OECD, 2001, 2006 and 2010) and Green Budget Europe, plus a wide range of EU and national research activities (for example, Clinch and Dunne, 2006, Wissema and Dellink, 2007, Convery et al., 2007, Andersen and Ekins, 2009, Green Fiscal Commission, 2010, and Ekins and Speck, 2011) have focused on answering questions around the purpose, validity and effectiveness of many ETR instruments. Castellucci & Markandya (2009) and Mazzanti and Montini (2010) have addressed the potential and implications in Italy, where also distributional issues have surfaced in the debate, cf. Martini, 2009. Important and early contributions to the debate in Italy include an Italian EU Presidency paper by Majocchi, Convery and Pearce (1996) and Tremonti (1994). Most recently Bank of Italy has analysed environmental aspects of fiscal reform (Ceriani and Franco, 2011). Whilst this considerable research into the multiple benefits of ETR has helped to stimulate reforms in some member states, it is now recognised that the main barriers are largely institutional, requiring common understanding between many stakeholders and appreciation of the different national contexts within which EFR and ETR can work.

An important aspect when considering the introduction of environmentally related taxes and charges is that when they are effective, the base on which they are charged will shrink. Having some understanding of the relationship between the increase in a tax and its environmental impact is necessary to make credible estimates of revenue. However, environmentally related taxes and charges can improve energy, water and other resource efficiencies as well as spur innovation (OECD, 2010).

Experience also shows that as resource efficiencies improve some of the gains in income that then arise are spent on more consumption, e.g. driving further in more fuel efficient cars, so that the total consumption of energy and resources can increase following improvements in eco-efficiency. This is the “rebound effect”; see for example: Sorrell, 2007, Polimeni et al, 2008, and Barker et al., 2009.

Both a shrinking environmental tax base and the rebound effect can be offset by gradually raising the tax in line with the eco-efficiency gains. Such gradual environmental tax increases are justified by

It is recognised that any new taxes and charges will have an impact on economic activity and affect different interest groups; the question today is whether a mix of increased environmental taxes will be less damaging in this regard than the alternative mixes of other tax increases and/or cuts in expenditure

the increasing knowledge about the real harm, (as with tobacco and now from other forms of pollution), and by continuing resource depletion and scarcities.

3. Why Environmental Fiscal Reform?

Climate change, biodiversity loss, ecosystem degradation, the human health impacts of chemical pollution, growing material resource scarcity, concerns about food, energy and water security, as well as national budget deficits and an increasingly ageing population are current challenges facing the European Union. At the same time, there is increased understanding of the inter-linkages between many environmental, economic and social problems, pointing to the cost-effectiveness of integrated packages of policy measures (EEA, 2010).

A policy that shifts part of the tax base to environmentally damaging consumption activities can be a vital part of an overall policy package that aims to tackle these multiple challenges, as recommended in “Europe 2020”, the EU’s growth strategy for the coming decade.

Experiences gained in several EU member states, which have implemented environmentally-related taxes under tax reforms in the 1990s and early 2000s, show broadly positive results.

Environmental Fiscal Reform extends the tax reform idea to include the reduction of environmentally harmful subsidies, so as to free up scarce financial resources for more efficient use elsewhere.

Another consideration when discussing the rationale of an EFR is that the burden of much existing environmental pollution and degradation often falls more onto the poorer parts of a population, who also frequently have less access to green environments. Therefore, the expected environmental improvements from environmental taxes, as well as the effect of reducing labour taxes (perhaps targeted on the young or unskilled workers) as part of an EFR, can help redress the greater impacts of some environmental taxes on poorer households, such as taxes on domestic energy (see EEA, 2011a).

This paper briefly presents illustrative potential for environmental fiscal reform in Italy by examining the Italian tax system and how it stands within the EU, and the scope for reform, building on established practices in other EU countries.

4. The economy and tax system in Italy: some key facts

- The high economic growth rates seen in Italy during the post-WWII decades came to an end at the turn of the century; during the most recent decade there has been limited growth in annual GDP, partly a result of the absence of productivity improvements²
- Budgetary deficits led to additional increases in national debt, and has become a major policy issue, following the escalation of interest rates
- Italy has since 2008 been seriously affected by the financial crisis: a decline in government revenues, and budget deficits leading to a further rise in government debt.
- Italy relies on revenues from labour taxes to a higher extent than any other member state, in particular social security contributions paid by employers and employees, which puts a brake on the creation of new permanent jobs and entails risks for a shadow economy
- The share of revenues from environmentally-related taxes declined during the last decade. In 2008 and 2009, the ratio of environmentally-related tax revenue to total tax revenues

² Between 2001 and 2007, average real GDP growth was around 1 %, i.e. only half the euro-area average. Source: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:215:0004:0007:EN:PDF>

(including social security contribution (SSC)) was close to 6%, but 20 years ago Italy was one of the pioneers in environmentally-related taxation, among others with a significant petrol tax. In 2009 20 member states have a ratio of environmentally-related taxes higher than Italy's. Still, Italy ranks somewhat higher than France and Germany.

5. Where does Italy's tax system stand within the EU?

- The EU is a high tax area and Italy ranks 4th in 2009, following Denmark, Sweden and Belgium, while followed by Finland and Austria (tax-to-GDP-ratio).
- Italy's tax structure is ranked 9th for the contribution of direct tax revenues to total tax revenues, while only 22nd for indirect tax revenues (such as environmentally-related taxes), while social security contributions are relatively mid-range, ranking 16th in the EU in 2009. It is recognised that taxes in Italy were increased in 2010 and 2011 which may alter the rankings, but it is also the case that other member states have recently increased taxes, and are considering further changes, so the ranking is unlikely to be significantly different.
- There are several environmentally-related taxes in place in Italy within energy and transport and such taxes have been recently revised and extended. Italy ranks 11th in EU-27 when considering environmentally-related taxes as a share of GDP. It is energy taxes (incl. petrol and diesel taxation) that make up for the greater part – about 80% - whereas taxes on transport account for 19%. Italy has introduced taxes on air pollution and waste, partly at regional level, but revenues from taxes related to pollution and resources account for only 1%. Italy's environmentally-related taxes declined from 3.4% of GDP in 1999 to 2.6% in 2009.
- The base for transport taxes (vehicle registration tax and annual motor tax) has been recently changed. While Italy has the highest motorisation rate in EU-27, only exceeded by Luxembourg, its level of taxation for motor vehicles is relatively modest – the combined effect of the various taxes is about 300 € per vehicle per year, half the EU average. While non-auto manufacturing countries in Europe levy from 900 € and up to 2300 € on an annualised basis, there are also car producing member states, such as Sweden, that have significantly higher tax levels than Italy.
- No air travel tax exists in Italy. The noise tax for flight departures and landings was transferred from the State to the Regions, but implementation seems to have faded out.
- Energy prices to consumers are generally high compared to EU averages. Taxes levied on energy products (transport fuels) have been considerably increased during the last two years.
- Italy introduced a tax on carbon in 1999, but the tax was abandoned soon afterwards, and unlike some other member states with a high tax-to-GDP ratio, Italy is not making use of this tax base. Ireland is one of several EU member states to recently have introduced a carbon tax and also to tax windfall profits emerging under the EU ETS scheme, even if Ireland has a low tax-to-GDP ratio.
- Although Italy is included on the global top-10 list of OECD-countries with water scarcity (OECD, 2011), water remains a relatively low-priced commodity in Italy. Full-cost water pricing has been introduced in principle, yet actual water tariffs are towards the lower end of the scale in EU member states, perhaps the result of contributions from EU structural funds to water supply and waste water treatment. As a result there is scope for considering the effectiveness of local taxes on water abstraction and/or supply; raising these would support demand management and reduce leakage losses from water pipe systems.
- There are user charges for sewerage and waste water treatment in place, but no taxes on final end-of-pipe waste water discharges to aquatic bodies, despite the importance of

tourism in Italy. Agriculture is also largely freed of any taxes regarding pesticides and mineral fertilisers. Experiences in EU member states illustrates that the use of taxes, possibly with full revenue recycling, can help improve the management of water quality.

- Tourism is subject to a local tax, but rates have neither been set to match actual burdens on public infra-structure (peak-load demand for instance on water supply, waste disposal and road infrastructure) nor do they factor in aspects of land-use and land-use impacts (urbanisation of coastal areas, loss of landscape values and biodiversity)

6. The illustrative potential for Environmental Fiscal Reform in Italy

The base year of this analysis is 2009 when environmentally-related tax revenue was 39.9 billion Euro and total tax revenue (including social security contributions) was 656 billion Euro (Eurostat and European Commission, 2011).

Policies in place but not included in the revenue figures include increases of petrol and diesel taxes as well as an adjustment of the provincial registration tax (IPT) from 2011. The revenues of these policies amount to an estimated 2.3 billion Euro and would increase the environmental tax ratio to approximately 6.5% from 6.1% in 2009. Policies in pipeline include the auctioning of ETS certificates, which will begin in the next commitment period (starting from 2013), and which will generate revenues for EU member states.

Additional revenues from environmentally-related taxes could be obtained by measures introduced gradually over several years:

- Taxes on petrol and diesel have declined in real terms over many years in Italy, and despite the recent increase are not restored at their 1990-level in real terms. The petrol tax is now above rates in Italy's neighbouring countries and so offers limited potential for further increases, although Italy's peninsula status and mountainous border regions help limit tank-tourism. The tax rate for diesel is per liter considerably below the rate for petrol, and if **UK's** model of imposing a similar tax rate per liter on both propellants is introduced, then there is some revenue potential. (The proposed revision for the Energy Taxation Directive would increase the diesel tax rate even further, to reflect energy content per liter relative to petrol together with CO₂).
- There is currently a loss of revenues from the electricity tax on households due to the exemption for the initial 1800 kWh consumed per year, and as a result of the 10% lower VAT rate that applies (IEA, 2010)
- There is a comparable loss of revenues from the taxation of gas consumed by households for the same reasons; a broad reduction below a fixed threshold for all income categories and a reduced VAT rate (IEA, 2010)
- If the electricity tax for households and businesses is gradually aligned to levels that have been prevailing in **Netherlands, Germany and Denmark** for quite some time, there would be potential for a more significant revenue stream, even if some of the revenues are used to compensate deprived households with a 'green check'
- There has been over the past decade in Italy **a switch from mineral oils to gas**, with the latter becoming an energy carrier of major significance. While mineral oils traditionally have been subject to taxation, gas on the other hand has been very mildly treated, and the dash from oil to gas seems to explain partly the erosion in environmentally-related taxes over the past decade. **Restoring energy taxation** by increasing the taxes on gas offers a significant revenue potential.

- According to the EU's Energy Taxation Directive a minimum rate of 2.6 € per GJ applies for gas used as propellants. It seems not yet to have been introduced in Italy. Other member states have opted to tax all gas, regardless of purpose, with rates higher than the Energy Taxation Directive (ETD)³ minimum rate. **Netherlands and Germany** have for business rates 50-80% higher than the 2,6€/GJ, while **Denmark's** tax rate is 3-4 times higher. Italy already has a higher tax rate for household consumption of gas, but with regard to business aiming for the 2,6 € per GJ would be a possible option, while further steps could include moving towards the rates proposed for the ETD-revision. Gas used as a propellant for vehicles could furthermore be taxed at the same levels as petrol and diesel.
- In the present situation coal appears to be taxed only when used for heating purposes in Italy, and the tax base could be extended while excluding electricity production and dual purposes. Introducing a tax on coal, coke and lignite at the same level as per GJ for gas (2,6) could be a measure associated with the above mentioned increases. **Slovenia and Austria** are EU member state that currently have taxes on coal at about 1,5 € per GJ, while **Finland** has a rate about 5 €/GJ.
- Mineral oils used in the business sector are taxed at only 50 per cent of the rate prevailing for the household sector in Italy. Presumably this reduction is meant to protect the immediate competitiveness of Italian businesses, but the reduced rate favours all businesses, also those many services and SME's that are not energy- and trade intensive. Aligning the business tax rate for mineral oils with household tax rates could bring the tax rates to the same level as in **UK** (125 € per ktoe). For mineral oils **UK** does not differentiate between household use and business use. Presumably special arrangements would be useful for certain energy-intensive industries, who could be afforded a deduction against commitments towards energy savings, as is the approach favoured under EU state aid rules for energy tax exemptions. At the same time the distinction between high and low-sulphur fuels could be exchanged for a reinforcement of the more precise tax on SO₂ emissions, see below.
- Taxation of waste (beyond waste disposal user fees) exists at regional level in Italy. Increasing the tax rates to the level introduced for instance in **Ireland** (50 € per tonne) and extending the tax basis also to waste destined for incineration would support at the same time waste recycling and waste minimisation, as well as fiscal consolidation.
- Packaging taxation: under the EU's Packaging and packaging waste directive there is a take-back obligation for 55% of the packaging marketed and a system of fees to finance the operational schemes required. In Italy these are operated by CONAI and are efficient in terms of recollection, but such schemes do not provide strong incentives to minimise on packaging and shift to less burdensome materials (paper is preferable to plastics and metals, in particular). A separate tax on packaging to complement the scheme can provide such incentives, in particular if the tax rates are differentiated according to environmental burdens of different materials. As seen in **Denmark** and **Netherlands** there can be a significant revenue potential under a packaging tax, even if only for major product categories.
- Water abstraction tax: there would be a significant revenue potential from introducing a general tax for all utilities abstracting water. Some amount of leakage and spills is inevitable for all water supply, but if the tax applies to 90% of abstracted

³ Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:283:0051:0070:EN:PDF>

volumes, then there will be a strong incentive for utilities to reinforce their capacity to react quickly against spills, which may bring leakage rates down from rates of 30-40 per cent prevalent in many areas, cf. experience in **Denmark**. This would in turn be helpful for local landscapes and for biodiversity, in particular in areas affected by droughts.

- Waste water tax: urban waste water plants are not always complying with the standards for effluent discharges all year round, this is because full compliance can be technically demanding and require additional equipment. Introducing taxes for end-of-pipe discharges on each of the relevant emissions (N, P and COD), balanced against the estimated benefits of clean water, would provide incentives to improve on compliance. Similar taxes could be applied to major industrial emitters, where relevant. The **Netherlands** has been the pioneer with taxes for emissions to surface waters. Considering the importance of tourism in Italy, a clear measure to secure water quality will be likely to yield economic returns.
- Air pollution taxes on SO₂ and NO_x have been introduced in Italy for stationary emitters, but more significant incentives towards abatement and control, as well as more substantial revenues, could be obtained by increasing them to levels seen for instance in **Norway** and **Denmark**. In Norway the shipping sector also is liable to the NO_x tax, as it is a very important factor for local air quality. Taxes on air pollution furthermore improve on the relative advantages of renewables in the electricity market, and provide relief to the need for subsidies and feed-in tariffs.
- HGV-Eurovignette: The EU agreed last year the so-called Eurovignette directive, which requires that **social costs of air pollution** are reflected in the charging structure for infrastructure use by heavy-goods vehicles (HGV). This can be done by introducing a separate external-cost charge, which would allow for extra revenues. It will be charged on top of the tolls currently due. It will support HGV fleet renewal and apply to both foreign and domestic vehicles. HGV's account for 1/3 of the transport sector's emissions, the Eurovignette tax rates could be aligned with tax rates for stationary emitters, cf. previous paragraph.
- Motor vehicles are taxed according to a complex system in Italy, comprising several different elements at national and regional level. Still, the total tax burden is – despite a recent adjustment of the registration tax - with about 300 € per vehicle on an annualised basis modest in a European comparison, **only half the average EU-15 level**, and could be increased, while taking into consideration environmental impacts, cf. below.
- Introducing a CO₂ bonus-malus scheme for vehicles (according to the model in **France**) would help support the transition even further towards less carbon emitting cars. Still, to establish a basis for providing an advantage to electric and other non-GHG emitting cars in the coming years, it might be useful to consider to maintain a basic, general registration tax for vehicles. Furthermore, if the annual tax is linked to environmental characteristics related to noise and air pollution, it would complement a bonus-malus scheme. It will then be possible to waive the noise/air pollution component tax for electric cars, whereby they can be granted an advantage without the state having to finance subsidies. Such a tax would also bolster a bonus-malus scheme against revenue losses, should less CO₂-emitting cars prove more popular than anticipated.
- Italy introduced a carbon tax in 1999, where it amounted to 32 ITL per liter unleaded petrol (1.7 cent), which is the equivalent of 7,28 € per tonne of CO₂ – in 2010 prices 9,31 €/tCO₂. By coincidence this old tax rate is fairly close to the reduced price at

which emissions allowances under the European Trading System (ETS) is traded today. Within the ETS allowances are handed out for free up to an agreed level. Nevertheless they can be sold subsequently and especially the electricity producers are able to pass over the value of certificates in the electricity price. For this reason one member state, **Ireland**, has introduced a tax on ETS-windfall profits, while several member states, besides **Ireland** also **Slovenia**, **Netherlands** and four **Nordic** countries, have taxes on CO₂ for the non-ETS sector. From 2013 there will be auctioning introduced of ETS-allowances. In Slovenia revenues from CO₂-taxation for non-ETS amount to 0,1 per cent of GDP. For Italy taxing non-ETS emissions of CO₂ separately at 10€ per tCO₂ would imply an annual revenue of about 2 billion €; in comparison the 1999 tax stipulated revenues of 1,5 billion €₂₀₁₀. Even if a CO₂-component is added to the petrol tax, it would remain well below the 1990-level in real terms. The CO₂-tax could escalate gradually to for instance 17.5€ (so to match in any case the future levels of the ETS-price for CO₂).

- Greenhouse gases are emitted not only from fossil fuels, but also from farming activities. Methane emitted from husbandry can be reduced by changing fodder compositions. Nitrous fertilisers emitting N₂O can be reduced, if substituting mineral fertilisers with use of organic fertilisers from animals (manure). At a CO₂-price of 9-10 € per ton CO₂, the equivalent GHG-cost of N in fertiliser is 4-6 cents per kg N. A tax on nitrogen would generate a revenue of about 40-60 million €, and might contribute to improving the perception of fairness if a carbon tax is reintroduced. There would be positive side-effects from reduced run-off, reducing eutrophication of surface waters and the contamination of drinking water in wells and groundwater aquifers.
- Pesticide taxation: current approval systems reflect human health concerns, whereas impacts on biodiversity can not always be ruled out, hence it is desirable to be efficient in the use of pesticides. Several countries apply taxes to curb overtly generous use of pesticides and reinvest some of the proceeds in research and development related to pesticide use, while there are also examples that revenues can be generated that contribute to the general budget too.
- There would be further scope for measures by learning from experience with taxes on tourism, for instance in the Balearic Islands (Spain).

Table 1 provides a concise overview of the potentials for environmentally-related taxes and/or environmentally harmful subsidies as mentioned above. Estimates are provided for potential revenues. These are only indicative and will require more careful calculations on basis of energy and transport sector modelling in particular. Nevertheless they serve to illustrate the relative significance of the different options available. Taxes that are already in place can be raised soon, whereas new tax instruments will require a phase of legislative and technical preparation. Due consideration has been given to this aspect with the phased implementation illustrated. The line with the grand total indicates the sum of all measures under the unlikely circumstances of tapping all potentials simultaneously.

Table 1. Illustrative Potential for Environmentally-related Taxes and Removal of Environmentally Harmful Subsidies in Italy, 2012-2015, Million €⁴

Environmentally-related taxes

Energy taxes	2012	2013	2014	2015	Comment
Petrol and diesel excises		821	1,642	2,463 841	Increase diesel tax rate to petrol tax level (British approach) Proposed minimum levels in consequence of revised ETD
Electricity tax		541 1,375	1,081 2,750	1,081 2,750	Households: align to level in Germany/NL/DK/Austria etc. Business: align to levels in Germany/NL/DK
Gas	62	1,098 62	1,098 62	1,098 62 200	Align to gas propellant ETD minimum rate (2/3 of Germany) Gas propellants; ETD minimum rate Align propellant rate to excise for petrol
Coal	173	173	173	173	Align to same rate as for gas, cf. above – 2.6€/GJ
Mineral oil	556	556	556	556	Align business use to households tax – British approach
CO2 tax	2,000	2,500	3,000	3,500	Carbon tax introduced at 10 €/tCO2 non-ETS, but rising over time (Ireland's approach)
Sum	2,791	6,577	10,362	12,724	

Transport taxes	2012	2013	2014	2015	Comment
Air travel tax	500	500	500	500	differentiated rates, for instance for longer flights 14€; short flights 3 € per passenger (e.g. UK; Germany)
HGV vignette scheme	500	1,000	1,000	1,000	Harmonised EU approach of Directive 2011/76 – based on costs of air pollution and noise
Annual tax		600	1,200	1,800	Noise and air pollution duty similar to HGV
Registration fee		600	1,200	1,800	Increase to average burden in EU-15
Sum	1,000	2,700	3,900	5,100	

Pollution and resource taxes	2012	2013	2014	2015	Comment
Water abstraction levy	460	920	1,380	1,840	Applying Danish rates and system, whereby pipe leakage could be reduced from 30-40% to 10%
Waste and incineration tax	163	325	488	650	Apply rate from Ireland – 50 € per ton – supporting reuse and recycling industry
Tax on packaging		400	800	1,250	Applying rates according to environmental burdens as applicable in Netherlands and Denmark
Waste water effluent		327	653	980	Applying rates applicable in Netherlands to support compliance
SO ₂ and NOx	1,000	1,000	1,500	2,000	Applying rates applicable in Norway and Denmark to reduce health costs of air pollution
GHG-nitrogen			50	50	Same rate as carbon tax per ton CO ₂ -eq for N ₂ O of fertilizers
Pesticide tax			600	600	Applying rates applicable in Denmark, support biodiversity
Sum	1,623	2,972	5,471	7,370	

Sum of all environmentally-related taxes	5,414	12,248	19,733	23,694	
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VAT (21 %)	442	1,191	1,941	2,807	for non-business-related taxes
Total incl. VAT	5,855	13,440	21,674	28,001	

Removal of environmentally harmful subsidies

Charge Category	2012	2013	2014	2015	Comment
Shipping		164	328	492	fuel tax exemption
Agriculture		272	545	817	energy tax break
Trucking		32	63	95	tax relief
Gas & electricity	2,130	2,130	2,130	2,130	align reduced VAT rates to standard
Gas & electricity	500	500	500	500	align reduced tax rates to standard
Company cars		767	1,533	2,300	total subsidy estimated to be 8.2 billion €
Total	2,630	3,865	5,099	6,334	

Grand total

	2012	2013	2014	2015	Comment
All sources	8,485	17,304	26,773	34,335	

⁴ Based on experiences gained in other European countries - with a gradual implementation over a period of four years. ETD is the EU's Energy Taxation Directive.

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