

Subsidies to fossil energy consumption in Italy

Interaction with the electricity market & policy recommendations



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Agenda

- The Polluter Pays Principle in the International, European and Italian Law
- Environmental taxation in Italy
 - Environmental harmful subsidies
- Impact of a carbon tax in Italy
 - Impacts on the electricity spot market
 - Policy recommendations

The Polluter Pays Principle (PPP) 1/4

International and European Law



OECD



European Union

- Internalization of costs for pollution prevention
- Whole internalization of environmental costs (damage costs)
- Use of market tools (e.g. environmental taxation, tradable permits)
- Ban of **Environmental Harmful Subsidies (EHS)**



International
Declarations on
sustainable
development*
support PPP

Current EC
proposals**

No EHS by 2020
CO2 tax on
energy products

* Rio Declaration (1992); Agenda 21 (1992); Kyoto Protocol (1998); Implementation Plan of Johannesburg (2002); «Rio + 20» Declaration (2012)



** Europe 2020: A strategy for smart, sustainable and inclusive growth, COM(2010)2020/Final

** Revision of the Energy Taxation Directive, COM(2011)571/Final

The Polluters Pays Principle (PPP) 2/4

Italian implementation

OECD recommendations to Italy (2013)*

- Remove all environmentally harmful subsidies (EHS) 
- Restructure energy and vehicle taxes to internalize environmental costs 

Italian policy initiatives

- Assessment of all EHS (proposed by Ministry of Economy, still not approved**)
- Introduction of a carbon tax on energy products (Law 23/2014):
 - In accordance with EC Energy Taxation Directive revision
 - Income to be used to reduce labor taxes, finance clean industries and **renewable energy**


(*) OECD: Environmental Performance Reviews – Italy 2013 – Assessment and recommendations

(**) Art. 24 bill C/2093 by the Ministry of the Environment

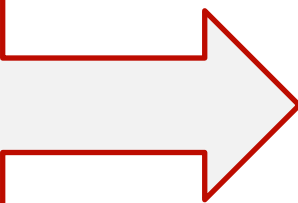
The Polluters Pays Principle (PPP) 3/4

Italian implementation

EHS classification: first step toward an overall removal?



Do we really need using carbon tax revenues to support renewables?



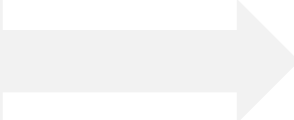
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The Polluters Pays Principle (PPP) 4/4

Italian implementation


EHS classification: first step toward an overall removal?



EHS still huge in:

- fuels' excises exemptions
- cross subsidies in the energy bills

Do we really need using carbon tax revenues to support renewables?



A carbon tax provides additional incentives to energy from renewables -> no need to use it to feed RES subsidies

Environmental harmful subsidies 1/2

In the Italian tax system (estimates 2014)

Industry	Tax discounts (M€)	Of which on fossil fuels (M€)
Transport	3943.3	3757.7
Agriculture	1016.5	975.8
Manufacturing industries	71.5	71.5
Others	828.4	586.6
Total	5859.7	5391.6

[Source: State revenue forecast 2014-2016](#)

Exemption/reduction of excise duties on fossil energy → **EHS !**

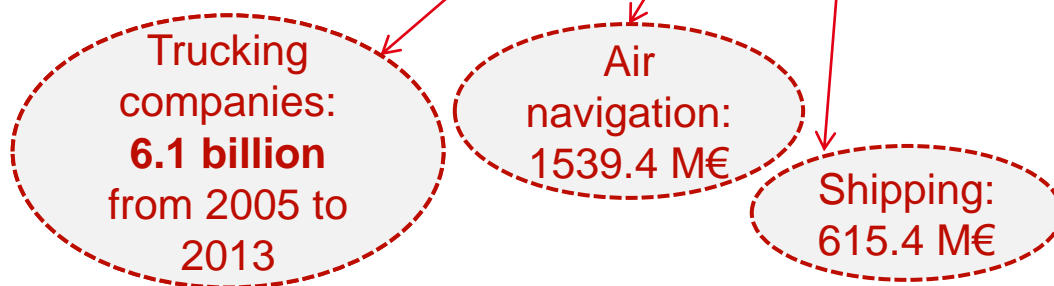
Environmental harmful subsidies 2/2

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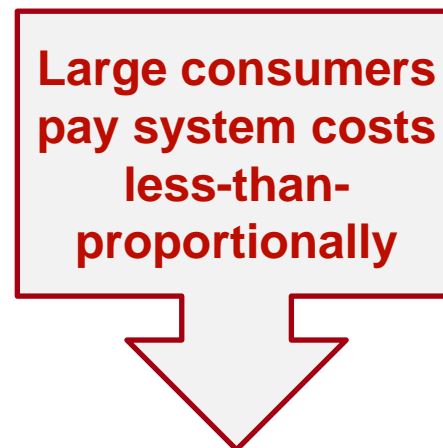
Environmental harmful subsidies

In the Italian electricity bills

Energy intensive consumers largely incentivized through the electricity bill...



840 M€* in 2014



About **500 M€/y****

...medium size **non intensive consumers pay** for them!

* Source: Italian Energy Authority

** Source: our estimation on Italian Energy Authority data

Impacts of a carbon tax in the Italian electricity market

The functioning of electricity market

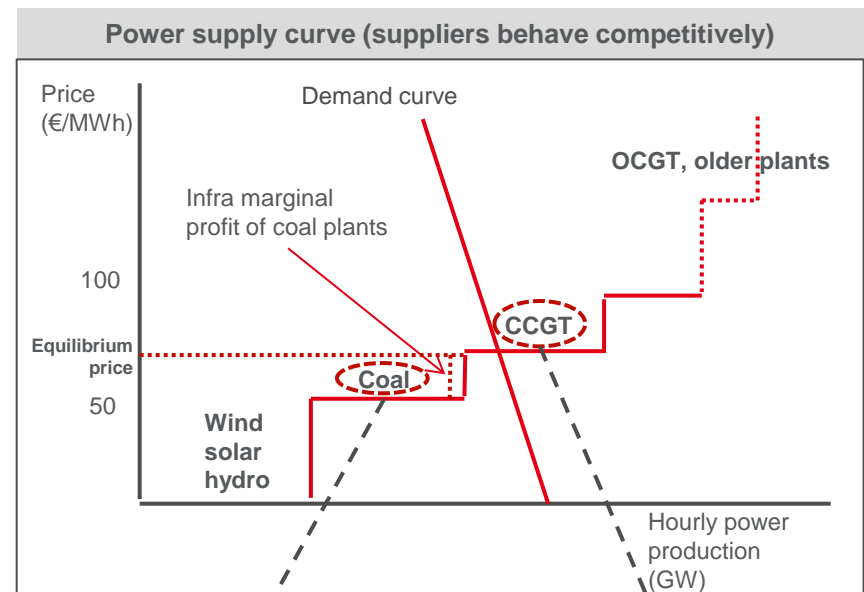
- Competitive electricity day-ahead market:
 - reserve price of plants = marginal cost
 - “clean spread” of the marginal technology close to zero



Italian market behaves pretty competitively

(Time considered: July 2013 – June 2014)

Coal plants often get an infra-marginal profit and more...

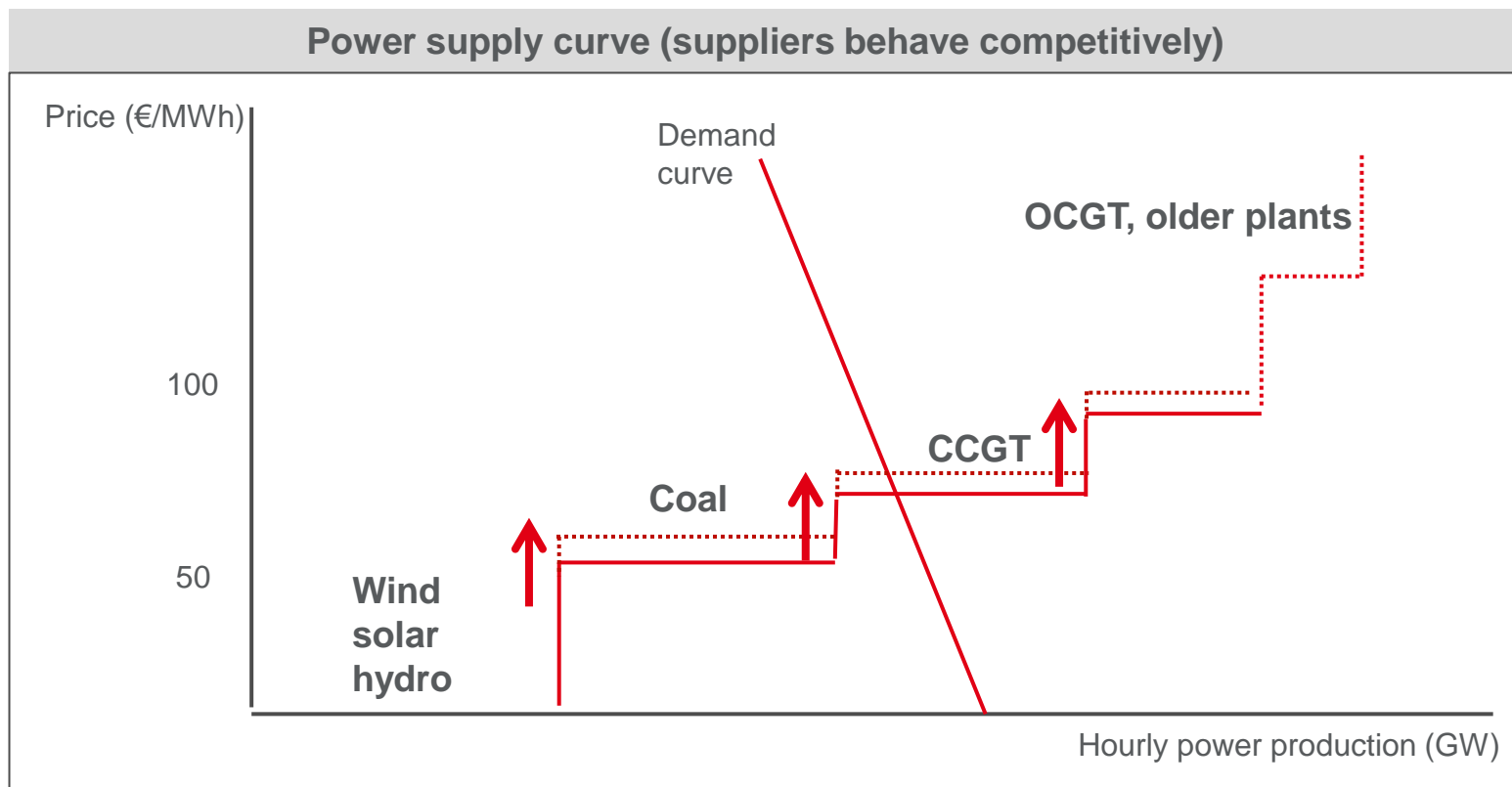


Net margin on variable costs for coal plants 30 €/MWh

Net margin on variable costs for gas plants on average = almost 0

Impact of a carbon tax in the Italian electricity market

Supply curve shifts up after a (higher) carbon tax



Impacts of a carbon tax in the Italian electricity market

Effect on margins

Effect on margin	(Spot electricity price)	Coal fired power producers	Feed-in Tariff (FIT)= not market based support		Feed-in Premium (FIP)= market based support	
			CCGT (gas) power producers	RES power producers with FIT	RES power producers with FIP	
Plain CT	↑	↓	=	=	↑	
CT with reduction of FIP support to RES	↑	↓	=	=	=	

Coal and CCGT producers with FIT → higher margins with higher electricity price
 RES producers with FIP → no change in margins with higher electricity price

For a real implementation of the PPP in Italy...

Policy recommendations

1. EHS reduction

- Banning tax discounts on fossil energy



large amount of money (5400 million in 2014) would then be available to reduce income tax

- Stopping energy bill discounts to large/intensive users



about 1300 million back to moderate consumers

2. Carbon tax on energy products

- Consistent with ppp
- Allows harmless reduction of support to some renewable energy sources

Thank you

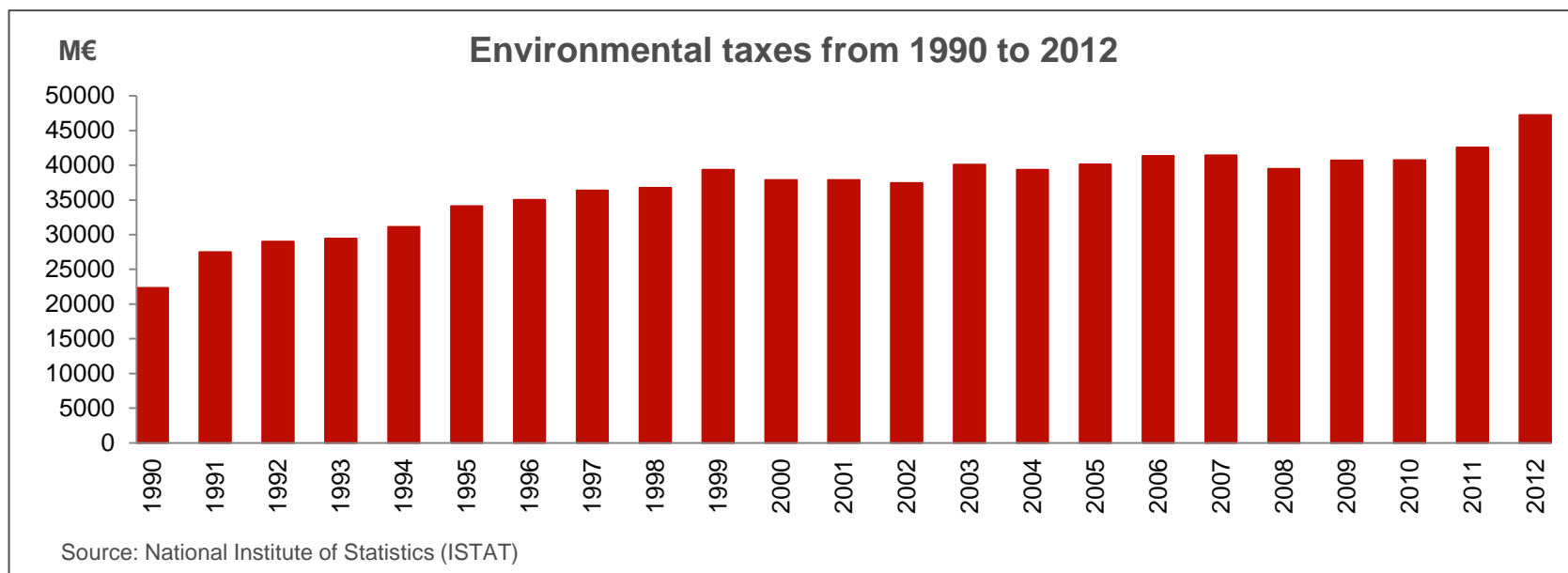
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Focus

Figures of environmental taxation in Italy



- Environmental taxation up by 11 % over the last two years
- Energy taxes: 77.4% of all environmental taxes (in line with EU average)
- 1% of taxation revenue allocated to environmental protection activities

Impacts of a carbon tax in the Italian electricity market

Types of renewable energy support

Feed-in tariff:
all-inclusive remuneration (doesn't depend on electricity market price)

Feed-in Premium:
Regulated premium on top of market price

Green Certificates:
Market-based premium

Carbon tax effects on RES power producers depend on the support mechanism...