




Results of ExternE (Figures of the National Implementation phase)

Please note: The figures in the following table have been produced within the so-called *ExternE national implementation project*. The figures are for specific existing technologies (state of technology about 1990 to 1995), at specific sites in the different countries, calculated with the methodology version *1995-national implementation*.

If you need external cost data for other (newer) technologies, you should either calculate new figures with the tools provided here:

	<p>The software system developed within the ExternE project: EcoSense - the integrated environmental impact assessment model The so-called 'single source' version of EcoSense can be obtained for a small handling fee after signing a licence agreement (please contact bert.droste-franke@ier.uni-stuttgart.de). It allows to calculate location specific marginal external costs of a stationary source (e.g. a power plant) due to emissions of air pollutants. The user can modify all relevant input parameters. Other versions of EcoSense ('transport' for calculating external costs of transport, 'multi-source' to calculate external costs for all sources of a sector and/or country or for the whole EU, 'WATSON' for water and soil pathways) can currently only be operated at the site of the developer, so you have to approach IER (bert.droste-franke@ier.uni-stuttgart.de) if you need results for these applications.</p>
	<p>EcoSenseLE - a simplified online version of the EcoSense model EcoSenseLE is an online tool for estimating costs due to emissions of a typical source (e.g. power plant, industry,</p>



transport) or all sources of a sector in an EU country or group of EU countries. It is a parameterised version of EcoSense, based on European data for receptor (population, crops, building materials) distribution, background emissions (amount and spatial distribution), and meteorology. The input required is annual emissions of NO_x, SO₂, PM₁₀, NMVOC, CO₂, N₂O, CH₄; the pollutants considered are O₃, SO₂, PM₁₀, sulfates, nitrates and greenhouse gases. The cost calculation is based on ExternE exposure-response function and monetary values, user defined valuation of mortality and greenhouse gas emissions is possible.



RiskPoll - a software implementation of the Uniform World Model to obtain approximative estimates

RiskPoll is a 32-bit application for installation on a Windows computer, that can be downloaded. It allows to calculate approximations of impacts (and optionally costs) due to emission sources that are characterised by stack height. The minimum input data required are pollutant emission rate and deposition, and population density in an area of 500 to 1000 km around the emission source; if more input data (e.g. meteorology) are known, improved results can be calculated. The pollutants considered are SO₂, NO_x, CO, PM, sulfates, nitrates, and toxic metals. Default values for calculating impacts and costs from ExternE are used, however they can be modified by the user.

or ask members of the [ExternE team](#) to help you:

External costs for electricity production in the EU (in EUR-cent per kWh)**

Country	Coal & lignite	Peat	Oil	Gas	Nuclear	Biomass	Hydro	PV	Wind
AUT				1-3		2-3	0.1		
BE	4-15			1-2	0.5				
DE	3-8		5-8	1-2	0.2	3		0.6	0.05
DK	4-7			2-3		1			0.1
ES	5-8			1-2		3-5*			0.2
FI	2-4	2-5				1			
FR	7-10		8-11	2-4	0.3	1	1		
GR	5-8		3-5	1		0-0.8	1		0.25
IE	6-8	3-4							
IT			3-6	2-3			0.3		
NL	3-4			1-2	0.7	0.5			
NO				1-2		0.2	0.2		0-0.25
PT	4-7			1-2		1-2	0.03		
SE	2-4					0.3	0-0.7		
UK	4-7		3-5	1-2	0.25	1			0.15
* : biomass co-fired with lignites									
** : sub-total of quantifiable externalities (such as global warming, public health, occupational health, material damage)									

New data will be available at this site as soon as the NewExt and ExternE-Pol final reports are published.