

Project 2A - Thermal Power Stations and other combustion installations

Comments: If the fuel is treated by desulphurisation or de NO_x processes, the by-products from treatment processes should be considered under the EIA. Often by-product consists of sludge and water. This is to be further treated or disposed of in acceptable manners. Other by-products can consist of other chemical compounds resulting from the reaction of the unwanted by-product with another agent. The by-product is often a substance that can be used of in other processes.

CATEGORY	FACTOR	COMMENTS
AIR	ammonia (NH ₃)	greenhouse gas, aquatic life, flora, reference 1 & 3
	carbon monoxide (CO)	greenhouse gas, climate change, reference 1 & 3
	carbon dioxide (CO ₂)	greenhouse gas
	heavy metals:	micropollutants, health and ecological problems, persistence, toxicity and bio-accumulation characteristics - reference 2
	lead (Pb)	
	mercury (Hg)	
	cadmium (Cd)	
	nickel (Ni)	
	chromium (Cr)	
	zinc (Zn)	
	arsenic (As)	
	copper (Cu)	
	selenium (Se)	
	methane (CH ₄)	greenhouse gas, reference 1
	non-methane volatile organic compounds (NMVOC)	volatile, climate change, flora, reference 1
	oxides of nitrogen (NO _x) / N _x O	acid rain, human health, flora, fauna, historical sites, reference 1
	oxides of sulphur (SO _x)	
	peroxiacethylnitrates (PAN)	flora
	persistent organic pollutants	reference 4
	poly-aromatic hydrocarbons (PAH)	carcinogenic, hazardous waste, priority toxic pollutant, human health, fauna, aquatic life
	benzo (a) pyrene	
	photochemical oxidants	ozone
	radionuclides	human health, fauna, water, aquatic life
	other hazardous substances	human health, flora, fauna
	particle emissions	climate change, human health, historical sites, soil
	oil vapour	historical sites, human health, flora
	odour	human health
noise		
vibration		
steam		
WATER	heavy metals:	leachates - contamination of ground water and surface water - reference 2
	lead (Pb)	
	mercury (Hg)	
	cadmium (Cd)	
	nickel (Ni)	
	chromium (Cr)	
	zinc (Zn)	
	arsenic (As)	
	vanadium (Vn)	
	nutrients	
	oil products	
	persistent organic pollutants	reference 4
	poly-aromatic hydrocarbons (PAH)	carcinogenic, hazardous waste, priority toxic pollutant, human health, fauna, aquatic life
	benzo (a) pyrene	
	sulphates	water quality, aquatic life

CATEGORY	FACTOR	COMMENTS
	other hazardous substances	water quality, aquatic life, human health
	dissolved solids	water quality, aquatic life
	suspended solids	
	total solids	
	temperature	aquatic life
	change in pH	water quality, aquatic life
CLIMATE	changes in ambient air temperature	
	particle emissions	
	changes in humidity	
	greenhouse gas emissions, ozone	CO, CO2, methane, NOx, NxO, SOx
FLORA	changes in natural vegetation	pollutants, project location
	disturbance of plant habitat	
	disturbance of natural vegetation	
	decrease in biodiversity	pollutants
	impact of threatened species	pollutants, project location
	changes in species population	
	changes in mammal food web	
	impact on protected areas	
FAUNA	disturbance of wildlife habitat	pollutants, project location
	decrease in biodiversity	
	impact on threatened species	
	changes in species population	
	impact on threatened area	
	changes in mammal food web	
SOIL	soil acidification	heavy metals, other pollutants
	soil contamination	
	by-products / wastes	
LANDSCAPE	land use changes	
	visual aspects	
	physical composition	
	impact on sensitive lands	
HISTORICAL MONUMENTS	changes to historical sites	soiling, staining, acid rain
HUMAN HEALTH & SAFETY	changes in ambient noise levels	during project construction, operation
	changes in disease incidence	
	risk of spills	
	risk of surface water contamination	
	risk of ground water contamination	
	increase risk of accidents	
	risk of explosions	
CULTURAL HERITAGE	land use changes	
	way of life	
SOCIO-ECONOMIC	changes to well being of life	
	changes to quality of life	
	present use of natural resources	
	potential use of natural resources	
	employment opportunity	
	economic development - transboundary	

References

1. Proceedings of the EMEP Workshop on Emission Inventory Techniques, Regensburg, Germany, 2-5 July, 1991, EMEP/CCC-Report 1/91
2. Economic Commission for Europe Convention of Long-range Transboundary Air Pollution, Task Force on Heavy Metal Emissions, June 1994
3. Economic Commission for Europe, Convention on the Transboundary Effects of Industrial Accidents
4. Economic Commission for Europe, State of Knowledge Report of the UN ECE Task Force on Persistent Organic Pollutants
5. Recommendations to ECE Governments on the Prevention of Water Pollution from Hazardous Substances