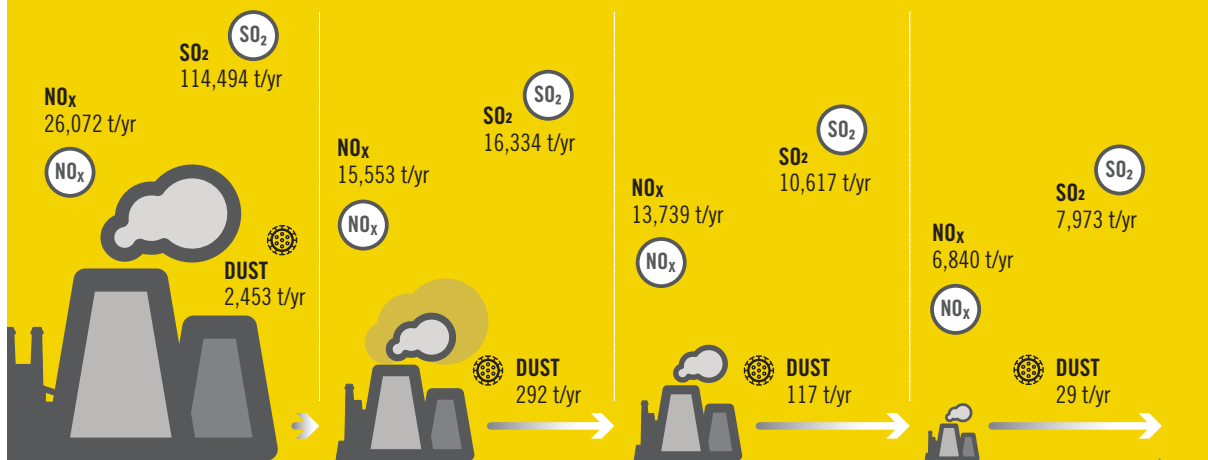


# LIFTING BULGARIA'S DARK CLOUD

HOW CUTTING COAL SAVES LIVES

FIGURE

## IMPACT OF STRICTER LIMITS ON COAL POLLUTION IN BULGARIA



### 2013 EMISSIONS FROM CURRENTLY OPERATING PLANTS

SO<sub>2</sub> 400mg/Nm<sup>3</sup>  
NO<sub>x</sub> 500mg/Nm<sup>3</sup>  
DUST 50mg/Nm<sup>3</sup>

**1,570** **PREMATURE DEATHS**

**800** **CASES OF CHRONIC BRONCHITIS (ADULTS)**

**410,960** **WORK DAYS LOST**

**39,160** **ASTHMA SYMPTOM DAYS (CHILDREN)**

**€4,380m** **TOTAL HEALTH COSTS (MILLION EUROS)**  
(VSL, HIGH VALUE) 2013 PRICES

### 2016 IED LIMITS

SO<sub>2</sub> 200mg/Nm<sup>3</sup>  
NO<sub>x</sub> 200mg/Nm<sup>3</sup>  
DUST 20mg/Nm<sup>3</sup>

**340** **PREMATURE DEATHS**

**170** **CASES OF CHRONIC BRONCHITIS (ADULTS)**

**78,320** **WORK DAYS LOST**

**8,150** **ASTHMA SYMPTOM DAYS (CHILDREN)**

**€930m** **TOTAL HEALTH COSTS (MILLION EUROS)**  
(VSL, HIGH VALUE) 2013 PRICES

### PROPOSED BREF LIMITS

SO<sub>2</sub> 130mg/Nm<sup>3</sup>  
NO<sub>x</sub> 175(L)/150(HC) mg/Nm<sup>3</sup>  
DUST 8mg/Nm<sup>3</sup>

**250** **PREMATURE DEATHS**

**130** **CASES OF CHRONIC BRONCHITIS (ADULTS)**

**56,950** **WORK DAYS LOST**

**6,080** **ASTHMA SYMPTOM DAYS (CHILDREN)**

**€700m** **TOTAL HEALTH COSTS (MILLION EUROS)**  
(VSL, HIGH VALUE) 2013 PRICES

### BEST AVAILABLE TECHNIQUES (BAT)

SO<sub>2</sub> 10mg/Nm<sup>3</sup>  
NO<sub>x</sub> <85(L)/65(HC) mg/Nm<sup>3</sup>  
DUST 2mg/Nm<sup>3</sup>

**160** **PREMATURE DEATHS**

**80** **CASES OF CHRONIC BRONCHITIS (ADULTS)**

**36,980** **WORK DAYS LOST**

**3,800** **ASTHMA SYMPTOM DAYS (CHILDREN)**

**€430m** **TOTAL HEALTH COSTS (MILLION EUROS)**  
(VSL, HIGH VALUE) 2013 PRICES

**TABLE DEROGATIONS OVERVIEW (BULGARIA)**

COUNTRY / Plant name	Coal type	MWel	PREMATURE DEATHS				Derogation
			2013	IED	BREF	BAT	
<b>BULGARIA</b>							
Ruse Iztok	Hard coal	368	18	8	6	1	TNP
Brikel	Lignite	184	17	14	11	9	DR
Plovdiv North	Lignite	46	1	1	1	0	LLD
Sliven	Lignite	28	17	3	2	1	DH
Deven	Hard coal	791	48	24	16	4	LLD
Maritsa 3	Lignite	100	19	10	8	6	DR
<b>TOTAL</b>		<b>1,517</b>	<b>120</b>				

Six out of the 11 Bulgarian coal plants are making use of 'derogations'. This corresponds to **30% of its total coal generation capacity and 120 premature deaths.**

**2013** Currently operating plants  
**IED** 2016 IED limits  
**BREF** Proposed BREF limits  
**BAT** Best Available Techniques

**DH** District Heating  
**DR** Desulphurisation Rate  
**LLD** Limited Lifetime  
**TNP** Transitional National Plan

The **Bulgarian TNP** lists one coal LCP that will delay the implementation of the IED limits until mid-2020. The following extra pollution could be prevented each year if the lignite plant were withdrawn from the TNP:

**TABLE POLLUTION LIMITS (BULGARIA)**

POLLUTANT (in tonnes)	2013 emissions (same plants)	Derogations allow pollution up to	Maximum pollution under 2016 IED limits	Extra pollution allowed each year	<b>TOTAL</b> extra coal pollution allowed due to TNP (2016-Mid 2020)
SO <sub>2</sub>	524	1,187	594	593	<b>2,669</b>
NO <sub>x</sub>	1,180	3,561	594	2,967	<b>13,352</b>
Dust	56	148	59	89	<b>401</b>

### GENERAL ASSESSMENT OF POSITION TAKEN IN LCP BREF REVIEW RELATING TO COAL:

The Bulgarian authorities have not been active in the information exchange. The limited interventions from the Bulgarian representatives were always aimed at defending the polluters. Bulgaria argued in favour of the desulphurization rate for lignite to allow a tripling of SO<sub>x</sub> emissions.

