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EU SUSTAINABLE ENERGY WEEK
SHAPING EUROPE’S ENERGY FUTURE
#EUSEW19
Health economic burden to Europe of status quo of coal power in the Western Balkan

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• CHRONIC COAL POLLUTION
  • 16 Western Balkan coal power plants pollute as much as 250 EU coal plants

• IMPACTS to the EU
  • The EU bears >50% of the health costs, up to 5.8 bil EUR (from total 11.5 bil EUR)

• URGENT actions now
  • Balkans have the energy for the energy transition
Neighbouring EU countries most impacted and it spreads further too

- EU member states already fail to keep air quality standards
- Additional harmful pollution travelling into the EU from five neighbouring Western Balkan countries
- Most impacted EU neighbouring countries, but far away too
EU citizens bear the brunt of health impacts

• Of 3,900 premature deaths, >50% in EU
• The **EU bears >50%** of the health costs, up to **5.8 bil EUR** (from total 11.5 bil EUR)

• Most impacted EU neighbouring countries: Romania, Italy, Hungary
• But far away too: Poland, Germany, Austria
How air pollution from coal power plants may harm your health

**Brain**
- Increased cerebrovascular ischemia
- Dementia

**Blood**
- Altered rheology
- Increased coagulability
- Translocated particles
- Peripheral thrombosis
- Reduced oxygen saturation

**Cells**
- Bladder cancer
- Skin cancer
- Obesity
- Diabetes

**Lungs**
- Inflammation
- Oxidative stress
- Accelerated progression and exacerbation of COPD
- Increased respiratory symptoms
- Ejected pulmonary reflexes
- Reduced lung function
- Higher lung cancer risk

**Heart**
- Altered cardiac autonomic function
- Oxidative stress
- Increased dysrhythmic susceptibility
- Altered cardiac repolarisation
- Increased myocardial ischemia

**Children**
- Pre-eclampsia of the pregnant mother
- Pre-term birth
- Reduced birth weight
- Pollutants can reach the placenta
- Increased asthma risk, and increased frequency of attacks for already asthmatic children
- ADHD

**Vasculature**
- Atherosclerosis, accelerated progression and destabilisation of plaques
- Endothelial dysfunction
- Vasoconstriction and hypertension
Record breakers in pollution

Western Balkan coal power plants emit 20 times more SO2 and PM pollution than EU plants.
## Western Balkan coal harms public health in Europe

### Table 1: Health impacts from Western Balkan coal power plants based on emissions data for 2016

<table>
<thead>
<tr>
<th>Health impacts</th>
<th>EU</th>
<th>Western Balkans</th>
<th>Other countries</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted activity days</td>
<td>2,782,743</td>
<td>1,845,297</td>
<td>1,422,020</td>
<td>6,050,060</td>
</tr>
<tr>
<td>Work days lost in working age population</td>
<td>612,241</td>
<td>355,064</td>
<td>198,852</td>
<td>1,166,157</td>
</tr>
<tr>
<td>Asthma symptom days in asthmatic children</td>
<td>36,467</td>
<td>24,197</td>
<td>25,628</td>
<td>86,292</td>
</tr>
<tr>
<td>Bronchitis in children</td>
<td>3,272</td>
<td>2,419</td>
<td>2,825</td>
<td>8,516</td>
</tr>
<tr>
<td>Hospital admissions due to respiratory or cardiovascular symptoms</td>
<td>1,418</td>
<td>947</td>
<td>682</td>
<td>3,047</td>
</tr>
<tr>
<td>Chronic bronchitis in adults</td>
<td>1,007</td>
<td>634</td>
<td>383</td>
<td></td>
</tr>
</tbody>
</table>

**Total Health Impacts Costs:**

- **5.8** bil €
- **3.6** bil €
- **1.9** bil €
- **11.5** bil €
Europe’s top polluters

Top 10 polluting plants in Europe by SO2 emissions in 2016

- **Kostolac B** Serbia
- **Ugljevik** Bosnia and Herzegovina
- **Nikola Tesla A** Serbia
- **Kakanj** Bosnia and Herzegovina
- **Kostolac A** Serbia
- **Nikola Tesla B** Serbia
- **Tuzla** Bosnia and Herzegovina
- **Bitola** Macedonia
- **Belchatow** Poland
- **Maritsa East 2** Bulgaria
Recommendations for EU

• Demand the same level of climate ambition for all candidate countries.

• Support the Energy Community in promptly enforcing existing pollution control rules

• Pollution control legislation within the EU accession process

• No EU-related financial support to companies planning new coal capacity
Recommendations for Western Balkans

- Urgently enforce the Large Combustion Plants Directive for existing plants

- Cancel all new coal power plants projects & phase out existing plants

- Plan for energy transition in line with EU’s 2050 plans
“Coal phase-out is a crucial ‘no-regret’ public health intervention”

– The Lancet