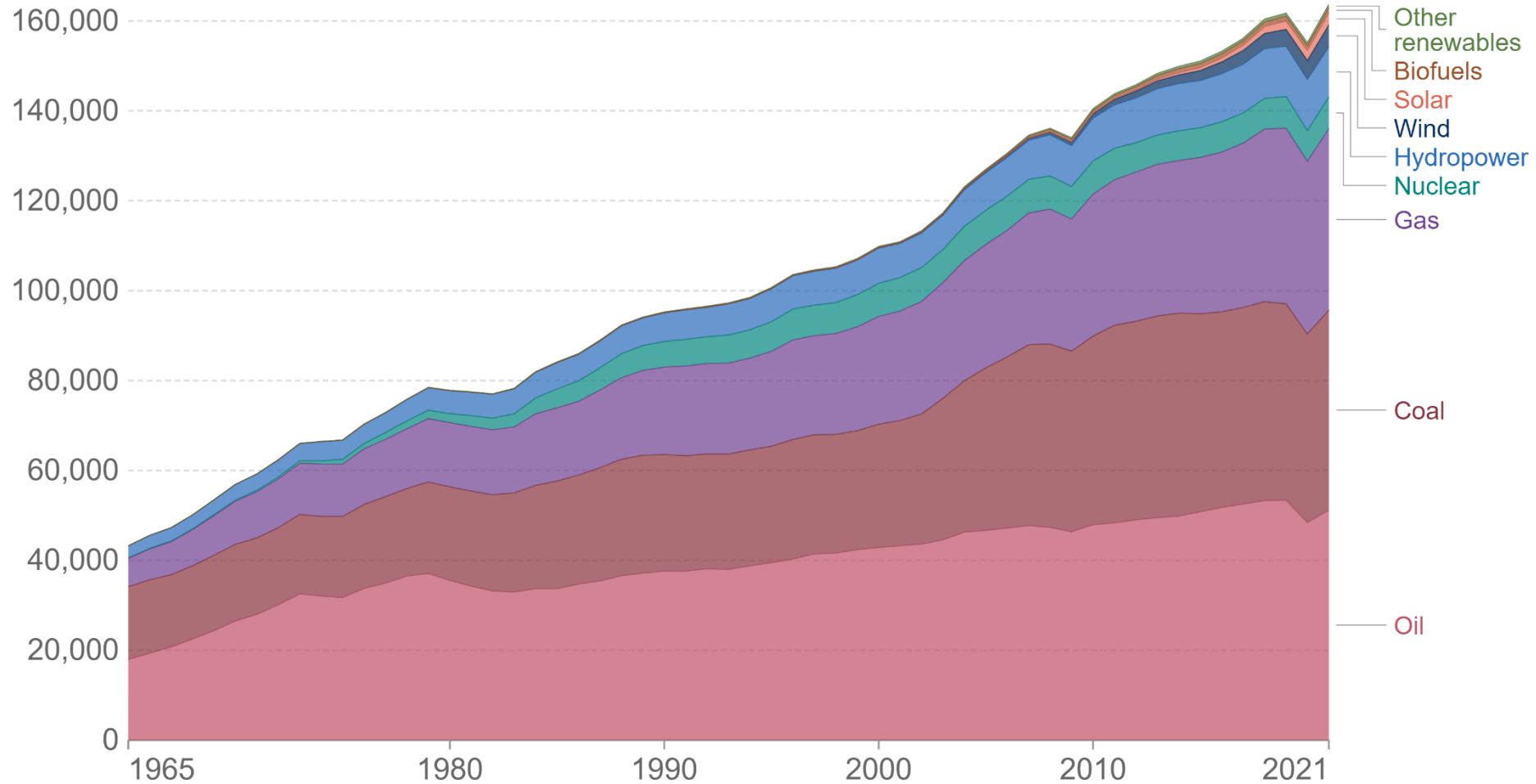


# Coal-phase out and justice

# Energy consumption by source, World

Primary energy consumption is measured in terawatt-hours (TWh). Here an inefficiency factor (the 'substitution' method) has been applied for fossil fuels, meaning the shares by each energy source give a better approximation of final energy consumption.



Source: BP Statistical Review of World Energy

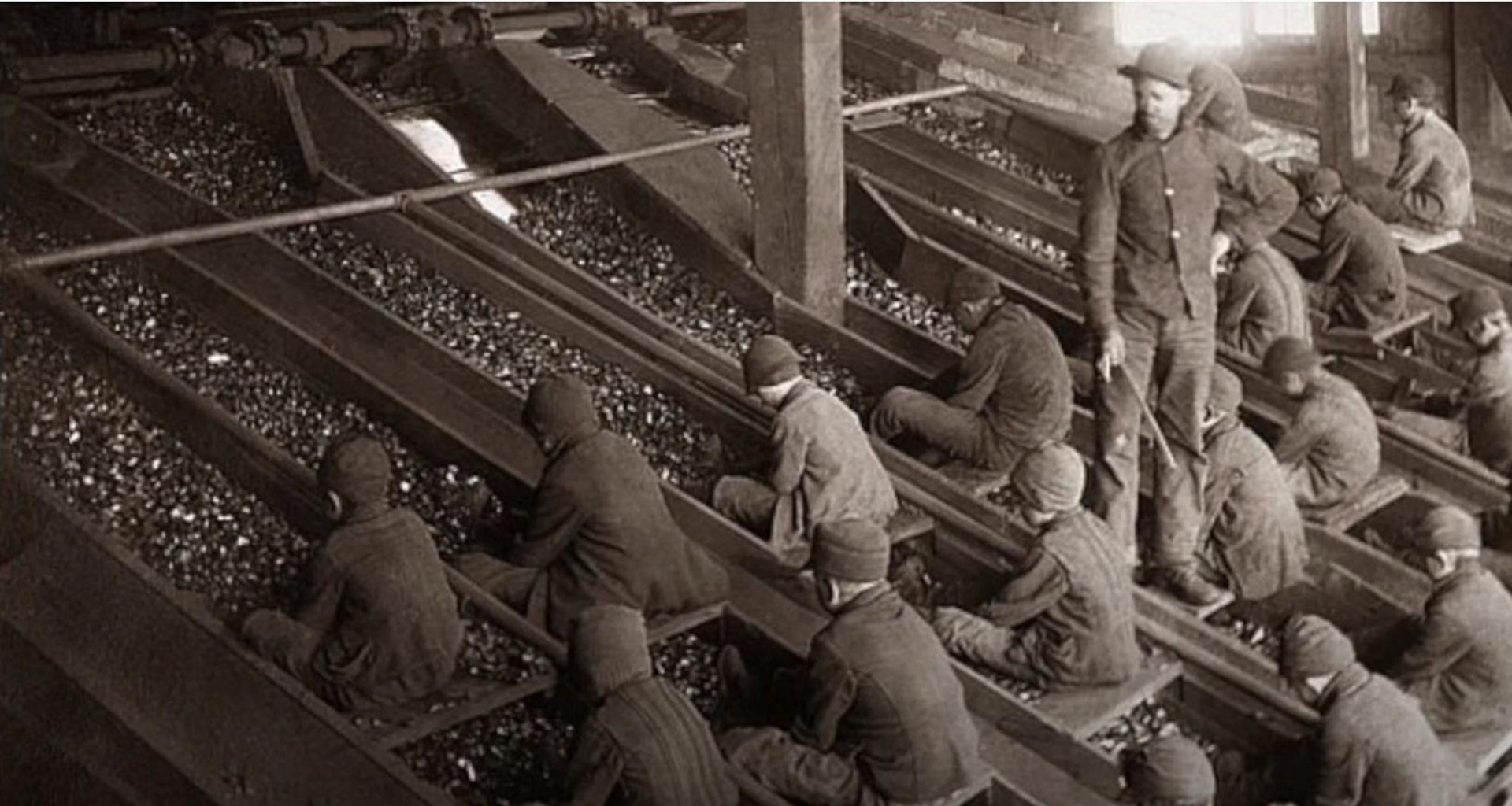
Note: 'Other renewables' includes geothermal, biomass and waste energy.

# Industrial revolution and new working class

- Industrial workers shifted from independent, skilled labor to factory-based wage work.
- Factories introduced strict schedules, repetitive tasks, and specialized roles, contrasting with pre-industrial craftsmanship and flexible rhythms.
- Urban migration created crowded, unsanitary living conditions, replacing rural, community-centered life.
- Workers became reliant on wages, vulnerable to economic cycles and job insecurity.
- The industrial workforce formed a distinct class, fostering solidarity and labor movements.

# Coal miners as pioneers in labour rights

- Coal miners led the charge in organizing labor unions to combat exploitation (see UMWA in the U.S., 1890 or MFGB in the UK, 1888).
- Their push for collective bargaining secured key gains in wages, working hours, and safety standards, setting precedents for other industries.
- Legislation like the Coal Mines Act (UK, 1911) and the Mine Safety and Health Act (U.S., 1977).
- Miners were instrumental in reducing working hours, achieving the 8-hour workday in some regions as early as the 1850s.



# Coal miners as pioneers in labour rights

- Miners' advocacy for health care and pensions shaped social insurance systems in countries like Germany and the UK.
- Their organized strikes inspired broader labor movements and strengthened political efforts, including the formation of the UK Labour Party.
- Despite the decline of coal mining, their fight for union rights, collective bargaining, and safety standards continues to influence labor practices worldwide.

# Ludlow Massacre

- Coal miners, mostly immigrants, were striking against unsafe working conditions, low wages, and eviction from company housing by the Colorado Fuel and Iron Company.
- The miners and their families lived in a tent colony during the months-long strike, demanding better treatment and union recognition.
- On April 20, 1914, coal miners in Ludlow, Colorado, faced an attack by the Colorado National Guard and company guards.
- The assault involved machine guns and setting a tent colony ablaze, killing at least 21 people, including women and children.
- The massacre highlighted corporate violence against labor movements and galvanized public support for labor rights and industrial safety reforms.

# WAR IN COLORADO! WOMEN AND BABIES

## VOLLEYS FIRED IN STREETS

Militiamen, With Machine Guns, Attack Strikers in Mine They Captured.

### 9 KILLED IN BATTLE

Armed Engagements on Today at Several Points in Coal Fields.

TRINIDAD, Colo., April 28.—Two hundred militiamen, with a machine gun mounted on a ridge west of Walsenburg to-day were capturing the Mitchell mine, capturing the mine by means, with a terrific fire.

A number of persons are reported to have been wounded during the capture of the mine.

Local officials of the United Mine Workers of America declared 50 militiamen tried to change the Mitchell mine, but were repulsed.

The mine is owned by the Colorado Fuel and Iron company.

According to authorities here, T. M. Stewart, vice of the district board of the United Mine Workers, and other persons are reported to have been captured during the battle.

The mine is owned by the Colorado Fuel and Iron company.

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The mine is owned by the Colorado Fuel and Iron company.

The mine is owned by the Colorado Fuel and Iron company.

## PROPOSES GOVERNMENT OWNERSHIP OF ROCKEFELLER'S COLORADO MINES

WASHINGTON, April 28.—Government ownership and operation of John D. Rockefeller's Colorado mines was proposed in a bill introduced in the house today by Congressman Bryan of Washington.



A Typical Tent in the Colony at Ludlow.

## MEXICANS CHEER AS U. S. TROOPS ENTER HARBOR

BY BERNARD HOOKER  
VERA CRUZ, April 28.—Mexican troops were ordered to land from their boats to meet the U. S. troops as they disembarked.

Typical Group of Children Housed in the Tent Colony at Ludlow by Rockefeller's Workers.

# SLAUGHTERED

By Edward A. Evans  
CORRESPONDENT OF THE STAFF

TRINIDAD, Colo., April 28.—The strikers started all this trouble in Colorado, the militiamen say. Strikers declare they were peaceable until the militia, recruited from the gutter of the cities, and paid by the mine operators, began to shoot and kill.

But it is conceded by all that it wasn't until the bodies of 11 little children and two women

were taken  
seized with  
Eley  
GUNM

THE  
F  
and  
Paul G.





# Coal miners' strengths in labor advocacy

- Close-knit mining communities fostered solidarity, rooted in shared risks and generational ties to the profession.
- This collective identity, combined with miners' reliance on each other for safety, created a strong foundation for organizing.
- Mining's strategic economic importance amplified their leverage. Coal powered industrial economies, and strikes disrupted entire nations, as seen in the UK miners' strikes of 1972 and 1984–85.
- With centralized operations, halting production at a single mine could have widespread effects.
- The skilled and hard-to-replace workforce added bargaining power.

# Emergence of coal-dependent regions

- Coal deposits are geographically fixed, focusing economic activity in specific regions.
- Mining becomes the dominant employer and investor, leaving little room for diversification.
- Government policies often prioritize coal for energy security and jobs, offering subsidies or lenient regulations.
- Communities develop strong cultural ties to mining, viewing it as part of their identity and livelihood.
- Environmental damage from mining deters other economic activities, such as agriculture or tourism.
- Economies become locked into coal dependency, making transitions difficult when markets decline.

## Coal „cultural identity“

Coal industry embraced as a cornerstone of the collective sense of self.

Importance of coal for livelihood of the community, independence, the very existence of the industrial sector.



**KOHLE·IST·BROT**

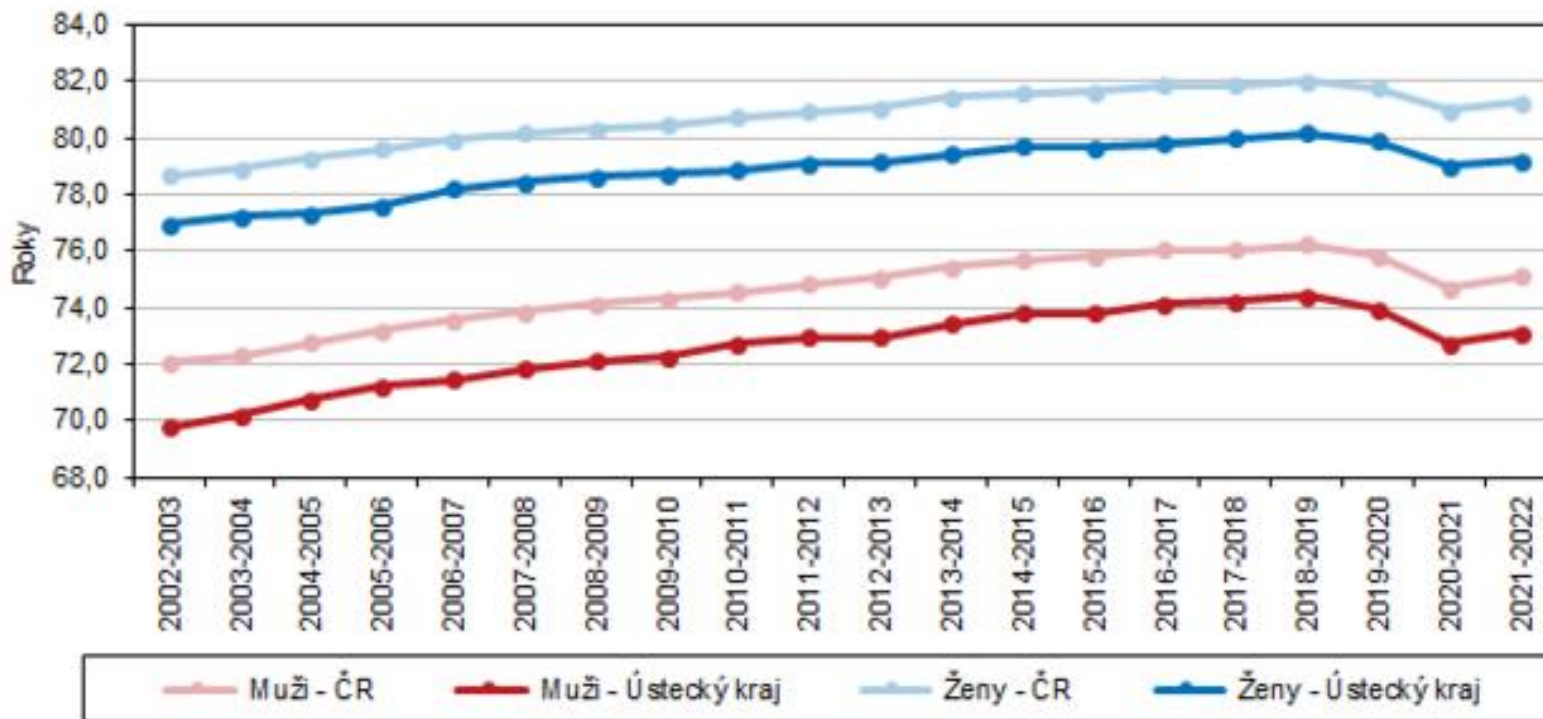


# Sacrificed zones

- Geographical areas heavily exploited for resource extraction, industrial production, or energy generation, resulting in significant environmental degradation and social harm. These zones are "sacrificed" for broader economic or national benefits.
  - Extensive landscape destruction (e.g., strip mining, deforestation).
  - Severe environmental impacts: air and water pollution, biodiversity loss.
  - Marginalized local communities facing health issues and poverty.



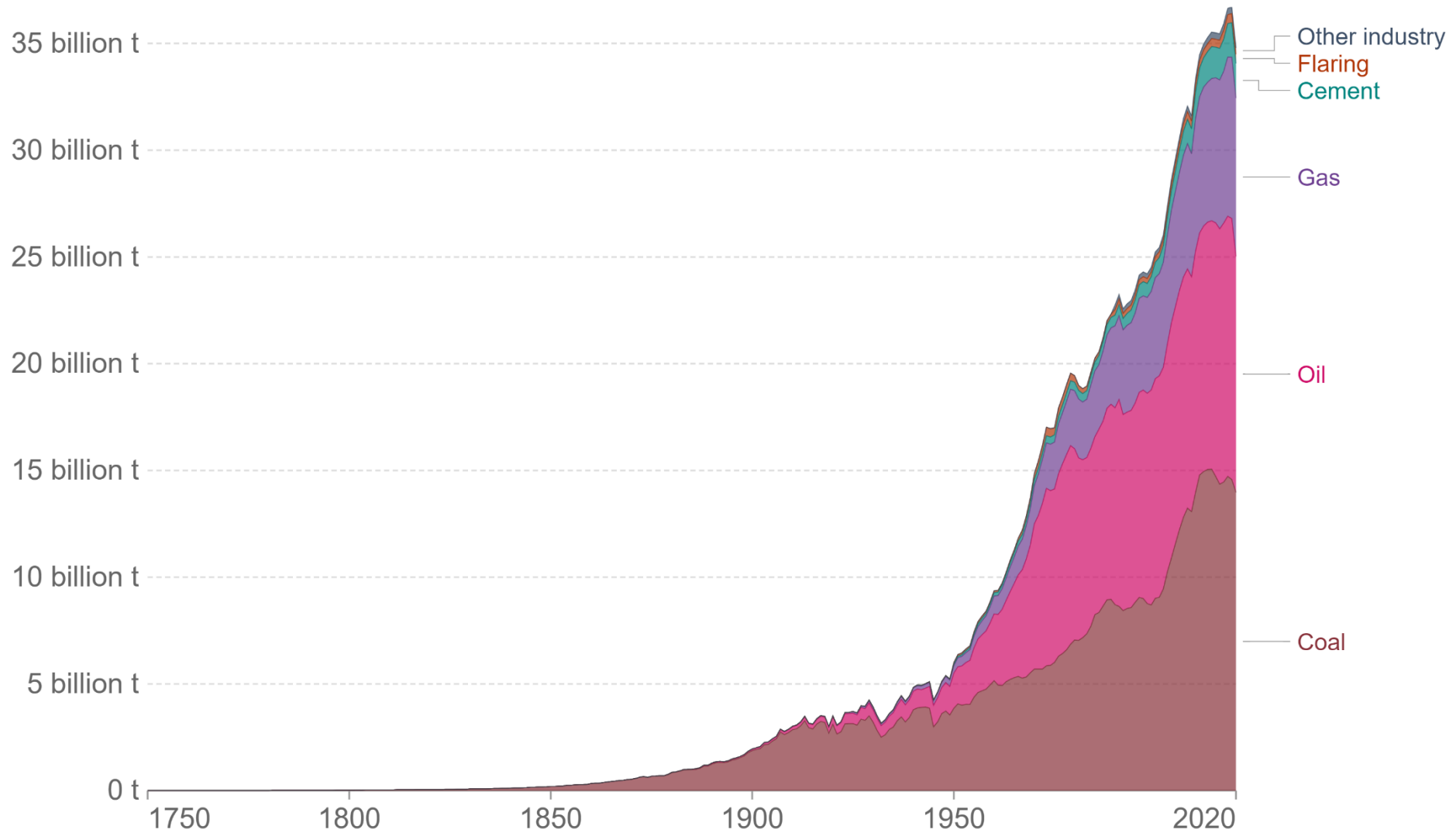
# Life expectancy – Ústí nad Labem Region



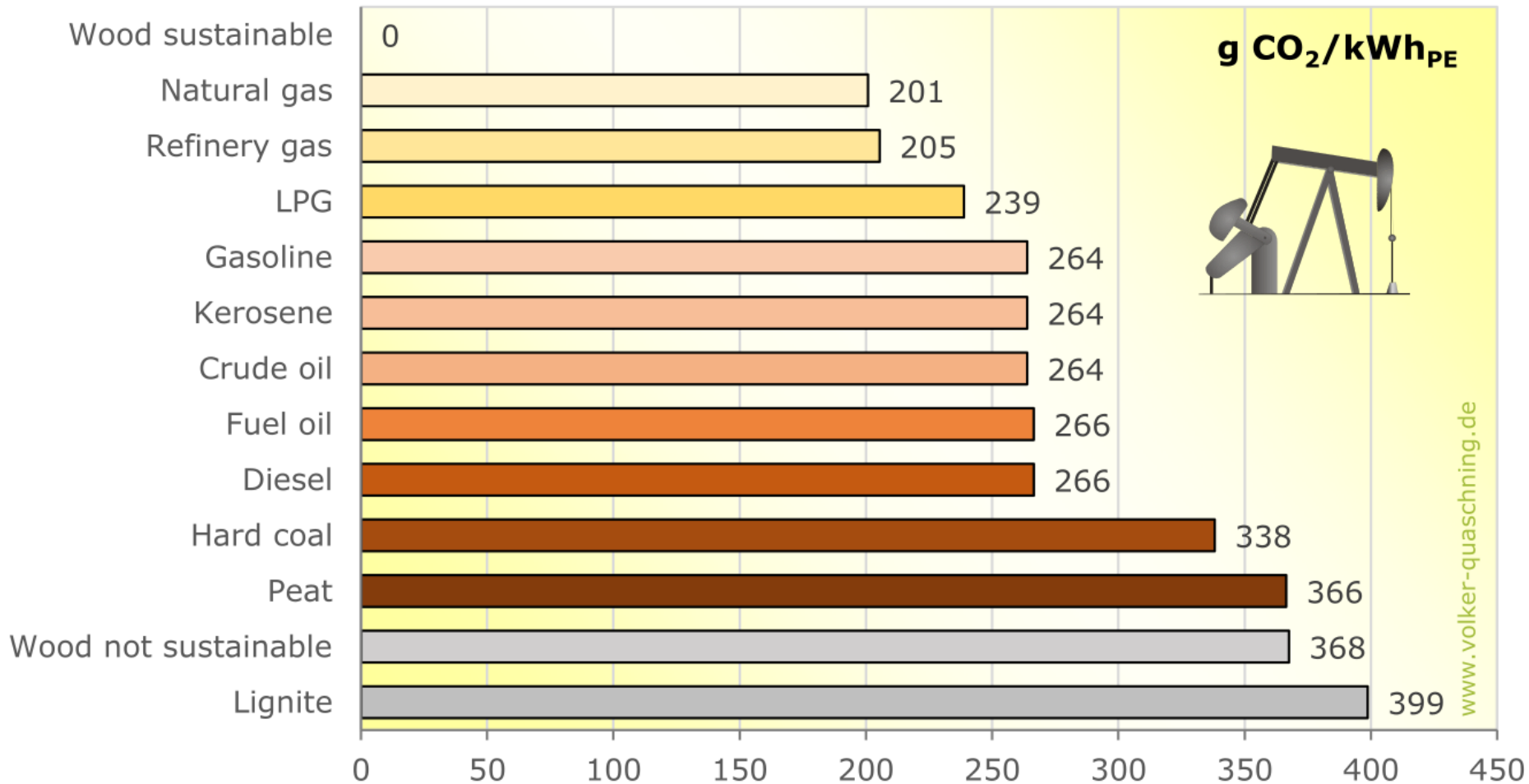
Zdroj: Český statistický úřad

# CO<sub>2</sub> emissions by fuel type, World

Annual carbon dioxide (CO<sub>2</sub>) emissions from different fuel types, measured in tonnes per year.



# CO<sub>2</sub> emissions by fuel





# Coal phase-out (phase-down)

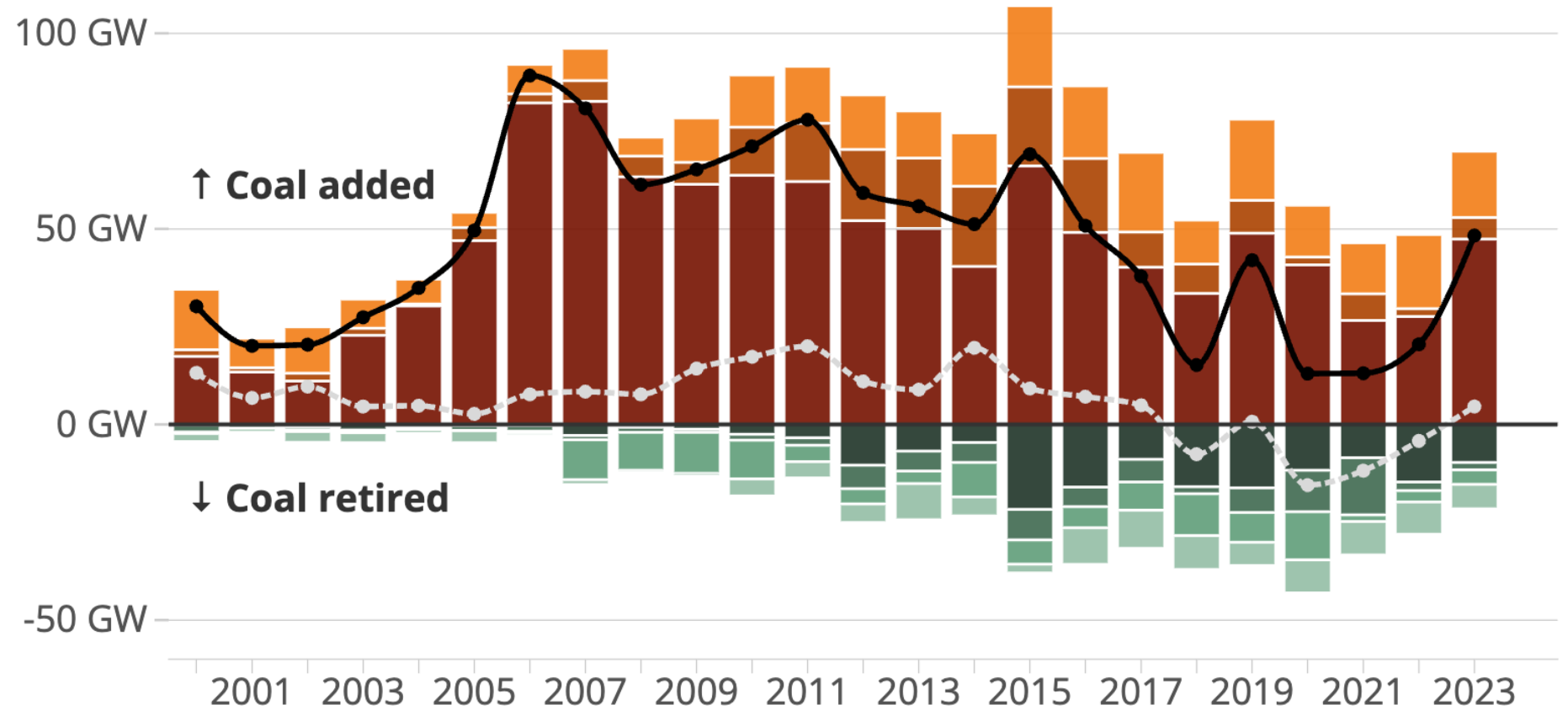
- COP26 in Glasgow – calls for parties to phase-down their use of unabated (*without CCS*) coal power and phase-out subsidies.

## **India Raises Last-Minute Objection (7:40 p.m.)**

In a last-minute move, India proposed weakening fossil fuel language in the pact, shifting from a commitment toward “accelerating efforts towards the phase-out of unabated coal power” to instead supporting a “phase down unabated coal power.”

Switzerland and the European Union expressed strong objections to India’s proposal, but ultimately accepted it, paving the way for the adoption of what EU climate czar Frans Timmermans called a “historic” document.

Net change
  Net change without China
  China additions
  India additions
  Other additions
  U.S. retirements
  EU27 retirements
  China retirements
  Other retirements



Source: Global Coal Plant Tracker, January 2024

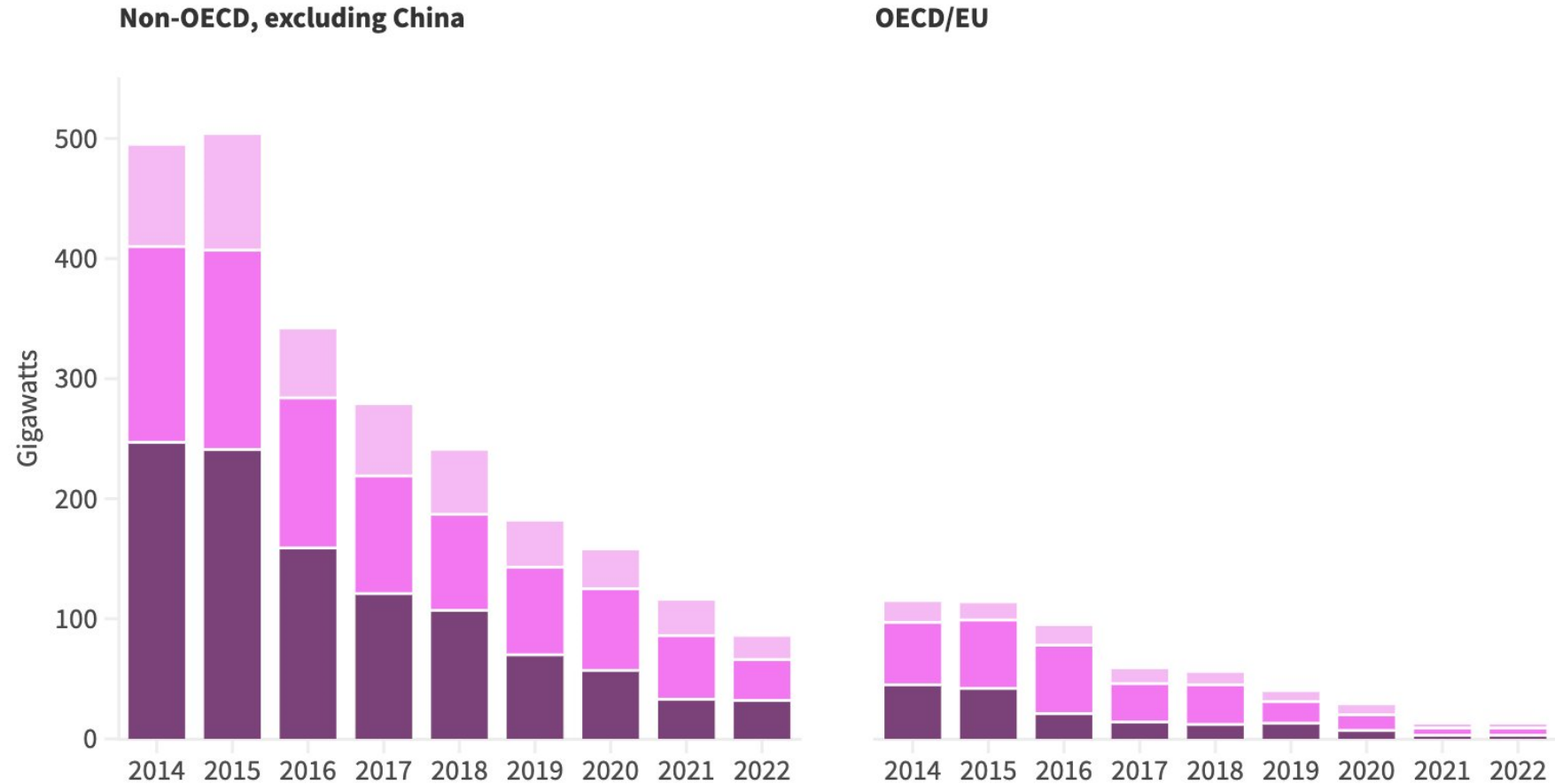


ENERGY STUDIES

# Outside China, the global coal pipeline is drying up

Coal capacity in pre-construction by status in the OECD/EU in non-OECD countries, excluding China, 2014–2022

■ Announced ■ Pre-permitted ■ Permitted



Source: Global Energy Monitor et al. Boom and Bust 2023

# Transition - now what?

- Local communities bear the costs, while the nation benefits from cheap energy.
  - Locals have limited political influence.
  - They have a distinct culture.
  - They feel used and betrayed.
- Transitioning away from coal risks economic collapse.

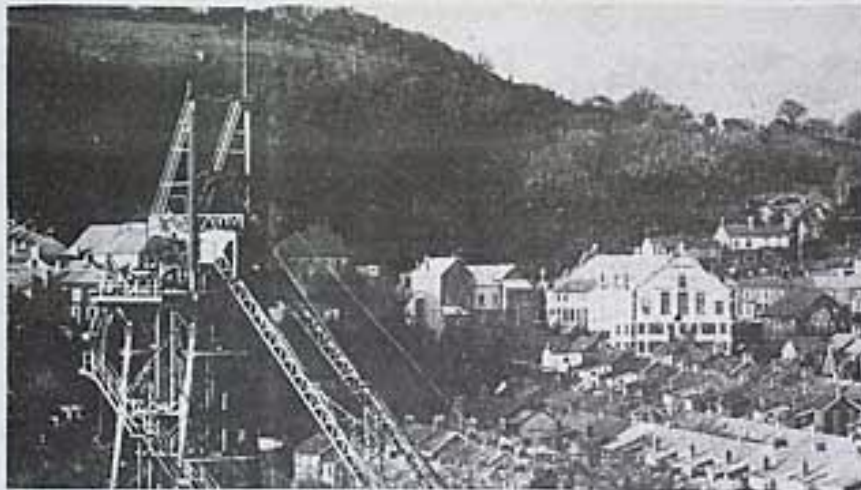
How the transition should be managed?

How costs of the transition should be distributed?

# **WALES CONGRESS**

**in support of Mining Communities**

## **WHEN THEY CLOSE A PIT**




## **THEY KILL A COMMUNITY**


**STOP THEM!  
SUPPORT THE MINERS**

# Wyoming's Powder River Basin example

- Miners view their labor as a service to the nation, rather than a mere commodity transaction.
- They feel unacknowledged and betrayed as society transitions away from coal. They perceive a lack of gratitude from electricity consumers and policymakers.
- The decline in coal mining has disrupted miners' livelihoods and their sense of identity, previously tied to their role as providers of energy.
- The essay comments on how Donald Trump leveraged miners' grievances for political support.



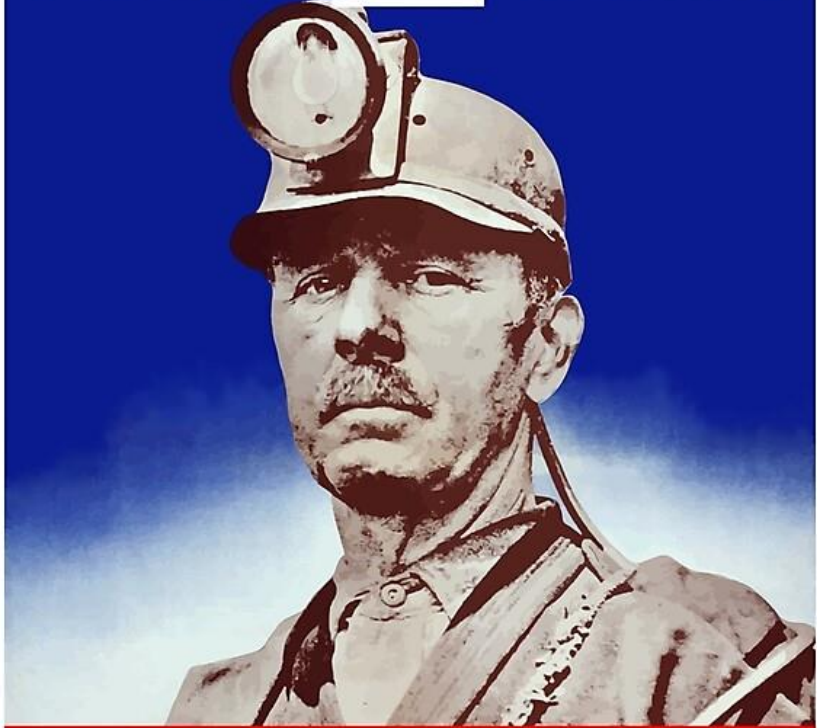
**"Come into Mining –  
the Miner's the skilled  
man the Nation will  
always need"**



**COAL CAN KEEP GREAT BRITAIN GREAT**

THE PHOTO BY JOHN HARRISON FOR THE POSTER AND PHOTOGRAPH BY COLLETTIONARY WITH THE NATIONAL COAL BOARD. MODEL: BOB AND ADRIANIAN PHOTO BY JOHN HARRISON & BOB COLE, LONDON.

**I HAVE A REAL WAR JOB**



- ★ **I work *every* day!**
- ★ **I *know* coal will speed victory !**



Andrzej Grygiet (EPA-EFE)





# Costs of injustice – Social stability

- Yellow Vest Protests in France (2018-2019): Fuel tax increases led to mass protests by rural communities lacking alternatives to car use. Resulted in policy rollback and highlighted inequitable energy policy impacts.



# Costs of injustice – Economic inefficiency

- In Appalachia, USA, reduced coal demand caused economic decline, with poverty persisting due to limited diversification and environmental damage.
- Northern Bohemia in the Czech Republic faces costly revitalization of abandoned mines and plants, which could have been mitigated by better planning.
- Yorkshire, England, experienced unemployment and economic decay after 1980s mine closures, with delayed revitalization proving far more expensive than early intervention.

# Costs of injustice – Delayed energy transition

- In 2021, miners in North Rhine-Westphalia, Germany, opposed the coal phaseout without greater financial support, delaying transition plans.
- In Eastern Europe, Poland and Czechia, heavily reliant on coal, resisted ambitious EU emissions targets without higher compensation, straining EU unity.

# Energy justice/just transition

- EJ: Ensuring the fair distribution of energy costs and benefits, equitable decision-making processes, and recognition of all communities affected by energy systems.
- Distributive justice: who gets the benefits and who bears the costs?
- Procedural justice: who participates in decisions?
- Recognition justice: whose needs and identities are respected?
- Restorative justice: repairs harm through accountability and reconciliation.

# Energy justice/just transition

- Environmental vs. energy justice: Rehabilitation of coal mines (e.g., Northern Bohemia, Czech Republic) prioritizes environmental health but diverts funds from supporting affected communities, fueling resentment.
- Climate vs. energy justice: Rapid coal phaseouts to meet climate targets (e.g., Poland) risk economic stagnation in coal-reliant regions due to insufficient job support, creating local resistance.
- Environmental vs. climate justice: Renewable projects (e.g., solar farms on former coal sites in Germany) may harm ecosystems or marginalize local communities, leading to opposition.

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