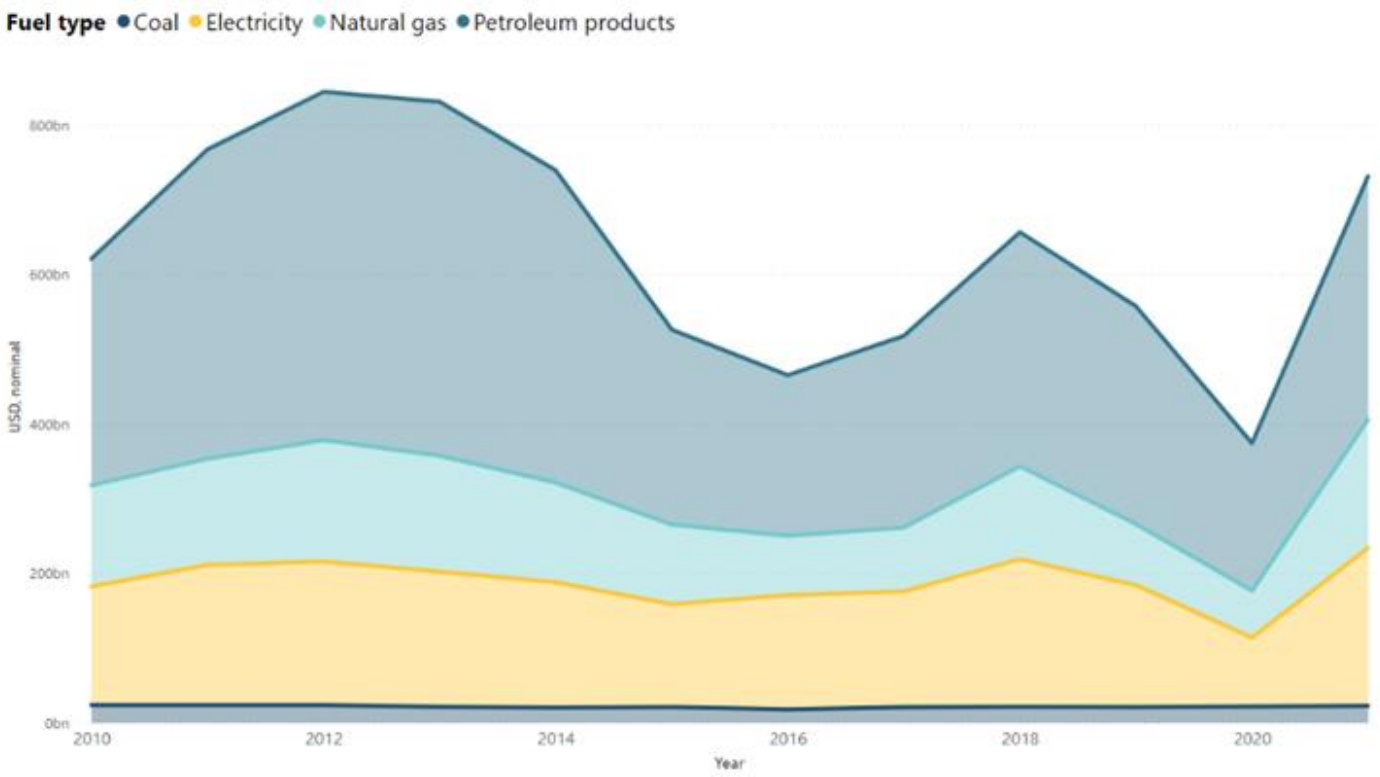
Classification of Fossil Fuel Subsidies Measures

Highlights from Factual Note by the WTO Secretariat

WORLD TRADE ORGANIZATION

Definitions: fossil fuel types

- **Primary fossil fuel commodities**: crude oil, natural gas, bituminous and sub-bituminous coal, and peat – from both conventional and unconventional sources
- **Secondary refined or processed products**: diesel fuel, gasoline, kerosene, liquefied petroleum gas (LPG), liquefied natural gas (LNG), compressed natural gas (CNG), and coal and peat briquettes.
- **Electricity and heat generation** is fuelled with the fossil feedstock



Source: Fossil fuel subsidy tracker 2021

Definitions: subsidy / support

WTO (SCM Agreement) : (i) a financial contribution; (ii) by a government or any public body within the territory of a Member; (iii) which confers a benefit

OECD (inventory approach): a bottom-up method identifying and quantifying individual policy measures → all direct budgetary transfers and tax expenditures that provide a benefit/preference for fossil-fuel production or consumption

IEA (price-gap approach): an international market reference price is compared with the price paid by consumers → subsidy exists when the end-user price is lower than the reference price

IMF (externalities): argues that retail prices should cover not only supply costs but also environmental and pollution costs

Support mechnism

Direct transfers of government funds: payments made by or on behalf of governments to individual recipients. This includes direct spending, e.g. for specific support programmes, and government ownership (fully or through equity shares) of energy-related enterprises

Induced transfers (price support): subsidies conferred by way of market regulation or other mechanisms of price support for lower end-user price relative to the full cost of supply, e.g. change in prices due to direct price regulation, pricing formulas, border controls or taxes

Tax expenditures, revenue foregone, and underpricing of goods and services: tax concessions typically provided through lower rates, exemptions, or rebates of consumption taxes on fossil fuels or measures to reduce the cost of the extraction of fossil fuels

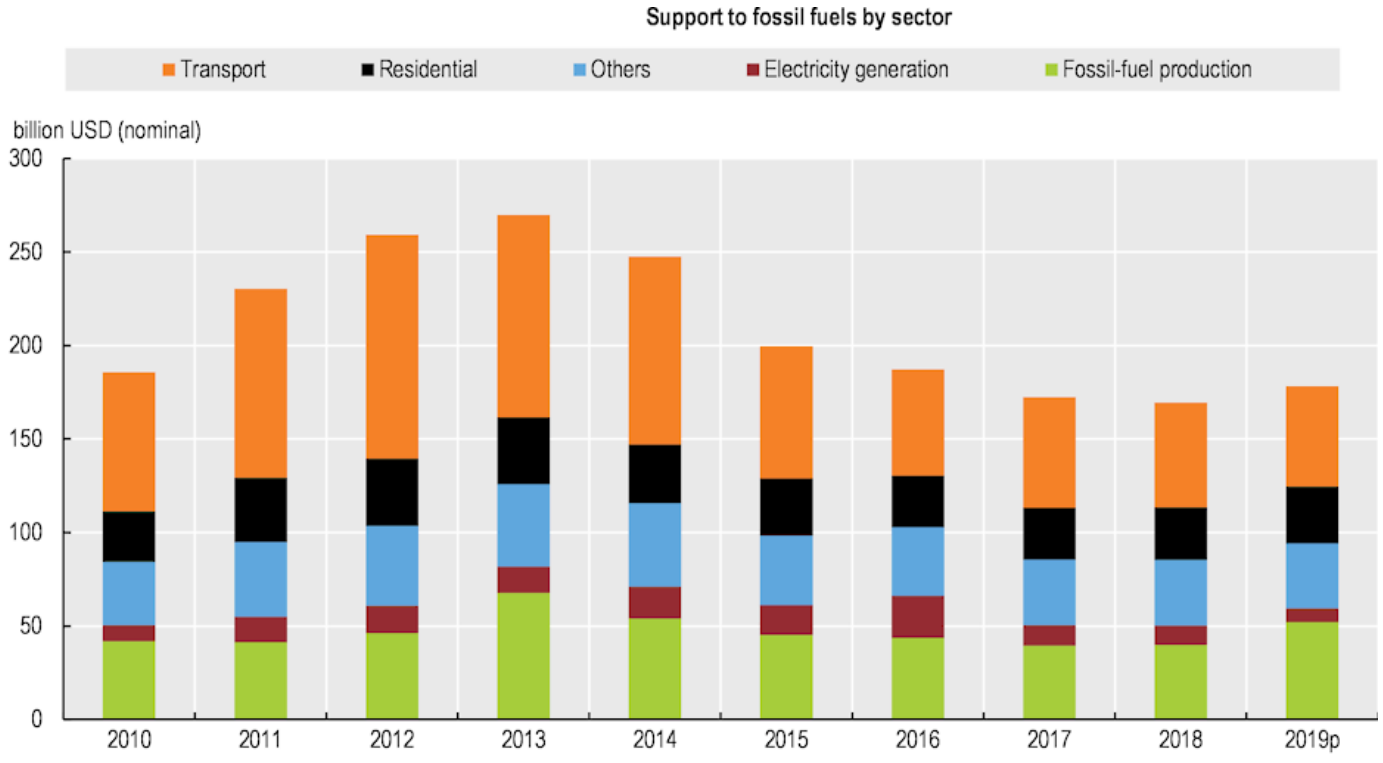
Transfer of risk to government: shifting a portion of the industry's risks (technological, financial, price-related and policy-related) to the government, and ultimately taxpayers, e.g. credit or loan guarantees

Stage of provision

Consumption subsidies	Government support to further the consumption of fossil fuels, lowering their costs for private households or industrial consumers
	Very broad category: activities could range from use of fossil fuels in **power and heat generation** (production of gasoline, diesel, electricity) to **industrial processes and activities outside of the energy sector**, including all other final uses of fossil fuels (in the sectors of transport, agriculture, forestry, fisheries, or the residential sector)
Production subsidies	Government support to the producers of fossil fuels that can occur along all stages of fossil fuel production
	Include activities such as gaining access to reserves, exploration and field development, extraction, transportation and storage, refining and processing, as well as decommissioning of installations

Fossil fuel consumption subsidies by fuel, 2010-2022

- More than 85% of all fossil fuel subsidies are consumption subsidies according to IISD estimates



Source: OECD 2021

Sector:

Production, transportation, residential, electricity generation, others

Upstream markets for crude products

- Impacts are likely significant
- Most important direct trade impact is displacing or impeding competitors' exports of crude fossil fuel products to the market of the subsidizing economy or third-country markets

Energy transformation and industrial activities

- Upstream production subsidies lowering production costs of crude products and therefore input costs of businesses that transform those products
- Subsidies to producers of refined energy carriers give them a competitive advantage both at home and in international markets

Final consumption subsidies

- Economy-wide fossil fuel consumption subsidies may lead to excess demand for and consumption of energy products and energy-intensive products on a global scale

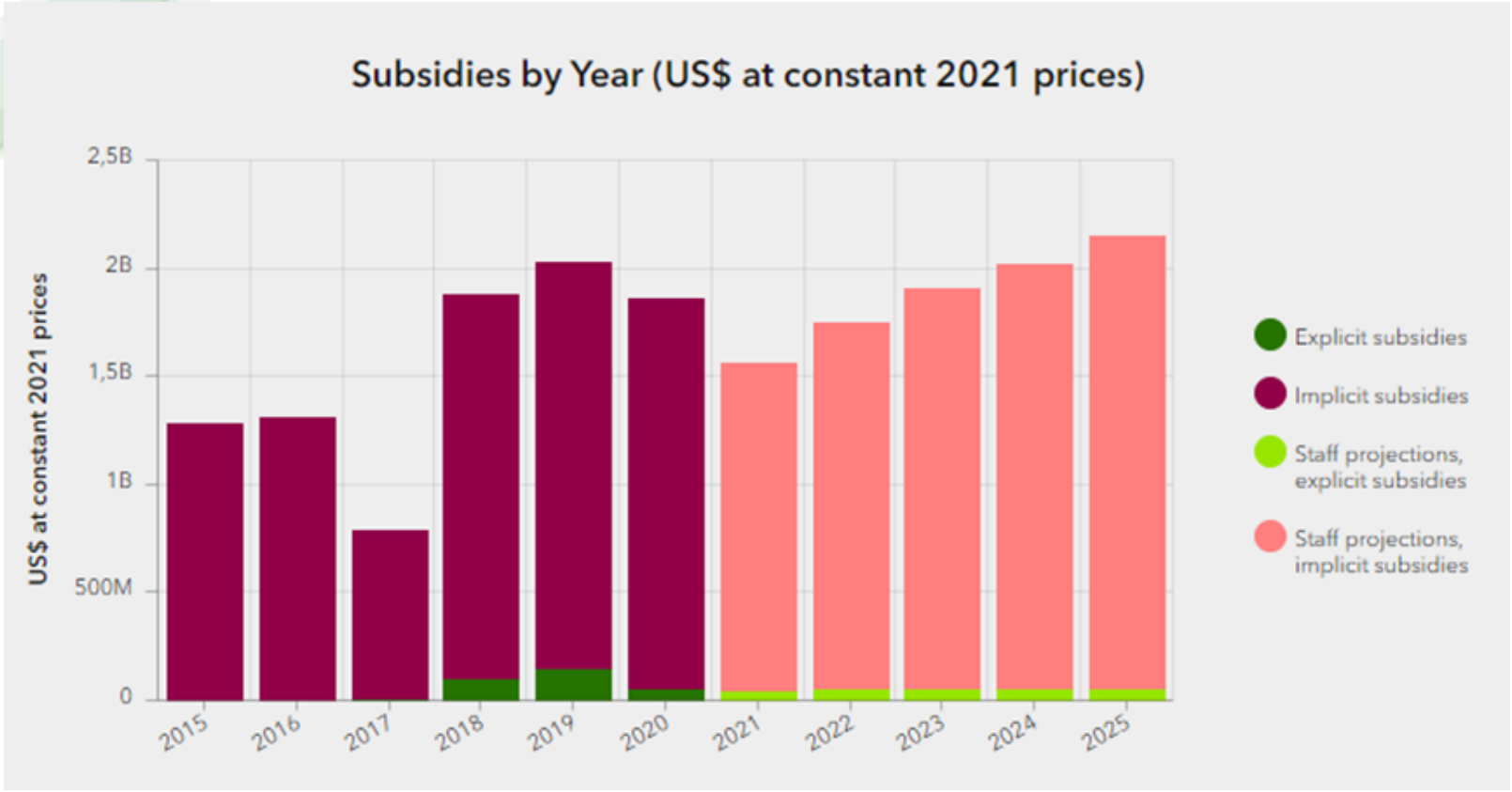
Pathway of benefit

Direct and indirect subsidies

- **Direct subsidies**: provided through targeted (cash-based) payments, such as loans or tax preferences → more obvious adverse effects
- **Indirect subsidies**: received indirectly as a higher market price for output and/or a lower market price for inputs purchased from a subsidized upstream industry able to discount prices → adverse effects accumulate downstream but more difficult to estimate

Explicit and implicit subsidies (*NB: within the IMF terminology*)

- **Explicit subsidies**: the retail price is below a fossil fuel's supply cost
- **Implicit subsidies**: when the retail price fails to include externalities and/or there are preferential consumption tax rates on energy

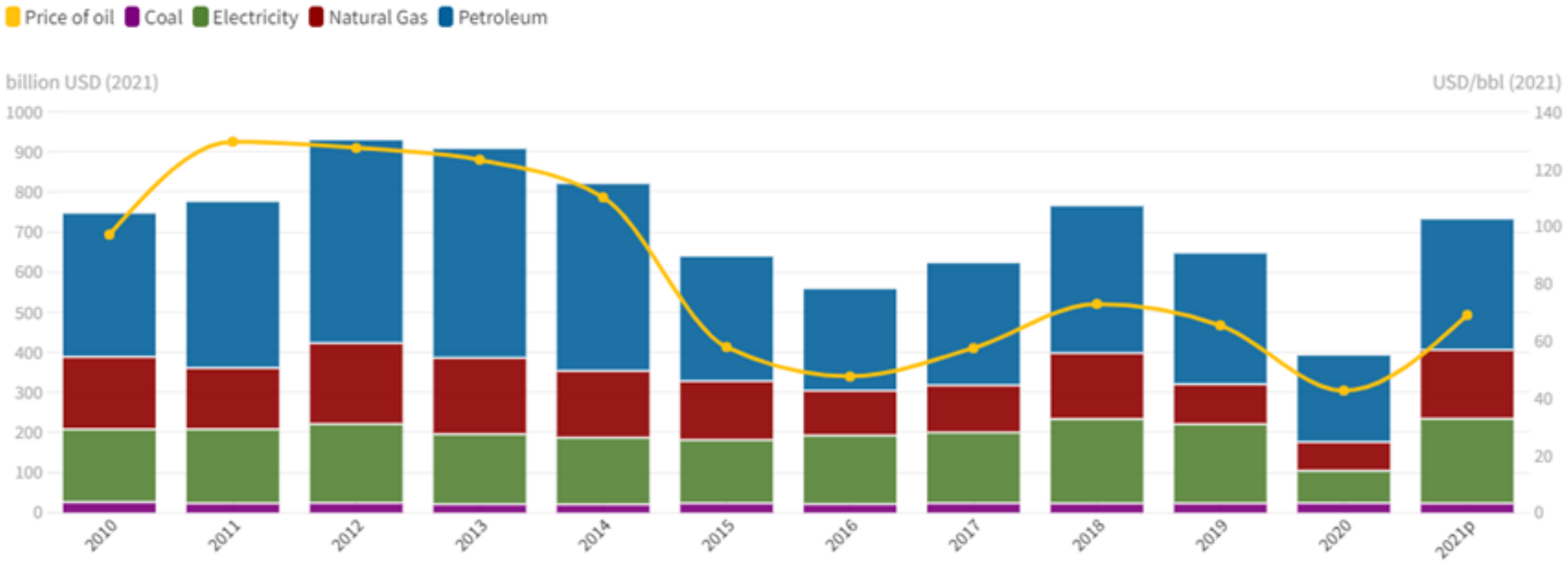


IMF estimations of explicit and implicit subsidies

Impacts of fossil fuel subsidies

Fiscal impacts

- **OECD estimates** (based on budgetary transfers and tax breaks) in G20 economies show total fossil fuel support rose to USD 190 billion in 2021 from USD 147 billion in 2020; with producer support up by almost 50% year-on-year
- **IEA estimates** (comparing prices on international markets and those paid by domestic consumers) in 42 economies show that consumer support increased to USD 531 billion in 2021, more than triple their 2020 level



Source: OECD-IEA combined estimates of 51 major economies

Environmental impacts

Greenhouse gas emissions: an important source of GHG emissions that cause climate change

Air pollution: cause of multiple heath issues, including asthma, cancer, heart disease, and premature death

Land degradation: infrastructure causing fragmentation and destruction of critical wildlife habitat

Water pollution: poses threats to waterways and groundwater

Plastic pollution: source for over 99% of plastics

High-carbon economy lock-in: slows down innovation and investment for renewable energy transition and reaps the benefits of deployment of renewable energy technologies

Trade impacts

Direct trade effects

- Production subsidies affect the markets for energy commodities by reducing producers' costs or consumption subsidies decrease the costs of fossil fuel inputs used by industries

Pass-through trade effects

- Subsidies to upstream fossil fuel producers lead to lower cost of energy products that are then used as input in other production processes downstream (e.g. steel producer benefiting from upstream coal subsidies)

Impact across markets

- A country that subsidizes a certain product uses less of a non-like substitute product (e.g. a country subsidizing coal likely using less renewable technologies)

- 2011 OECD paper finds that a coordinated multilateral removal of fossil-fuel consumption subsidies over the 2013-2020 period would increase global trade volumes by a small amount (0.1%) by 2020. At the same time, there are large disparities across countries and products (trade in natural gas most affected and reallocation of trade flows most prevalent in products of energy-intensive industries).