

ANNUAL REPORT 2022



May 2023

CLINGENDAEL INTERNATIONAL ENERGY PROGRAMME | CIEP 1



CIEP is an independent forum for governments, non-governmental organizations, the private sector, media, politicians, and all other parties interested in changes and developments in the energy sector and energy related climate change issues.

CIEP organizes lectures, seminars, conferences, and roundtable discussions. In addition, CIEP staff members lecture in a variety of courses and training programs. CIEP also contributes to international and European debates on energy by actively participating in numerous international conferences and expert workshops – where research findings are disseminated and inputs for further research are gathered. CIEP's research, training and activities focus on economic and geopolitical dimensions of international energy and energy transition.

In 2022 CIEP is endorsed by The Netherlands Ministry of Economic Affairs and Climate Policy, The Netherlands Ministry of Foreign Affairs, Air Liquide Industrie B.V., BP Europe SE-BP Belgium/ BP Europe SE-BP Nederland, Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A. ('Rabobank'), ENGIE Energie Nederland N.V., Neptune Energy Netherlands B.V., Eneco Holding N.V., EBN B.V., Esso Nederland B.V., Equinor ASA, GasTerra B.V., N.V. Nederlandse Gasunie, ING Wholesale Banking N.V., Nederlandse Aardolie Maatschappij B.V., Vattenfall NL, TenneT TSO B.V., One-Dyas B.V., Havenbedrijf Rotterdam N.V., RWE Generation NL B.V., Shell Nederland B.V., Uniper Benelux N.V., Koninklijke Vopak N.V., Wintershall Dea Nederland B.V.

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From one energy crisis to another in 2022 and no end in sight

The year 2022 started with rising geopolitical tensions between the US and Russia over Ukraine. On 24 February 2022 Russia invaded Ukraine with an attack on Kiev, the east and south of the country. A coalition of western countries responded with a wide array of sanctions, among which on energy imports from Russia. In June 2022 the EU adopted sanctions on seaborne crude oil and oil products from Russia on respectively 5 December 2022 and 5 February 2023, while trade in Russian coal and fuel oil had already been stopped on 10 August 2022.

The war in Ukraine came at the tail-end of the Covid-19 lockdowns, apart from China that opened much later late 2022. These lockdowns impacted international energy markets, starting with the dramatic drop in demand in spring 2020. Natural gas prices increased again in winter 2020/2021, but oil had a slower recovery due to travel restrictions. The war and the subsequent sanctions by western countries caused oil and natural gas prices to increase rapidly in spring 2022. Both the US and some countries in the EU used their strategic reserves of crude oil and/or oil products to calm their markets. Monetary authorities were forced to address rising inflation with interest rate increases and rethink government bond purchasing programmes, adding more uncertainty to international markets.

The price spike in LNG/Asian gas prices in 2021 and in the EU in October 2021 due to substantially lower supply of Russian short term natural gas, should have been a warning that a combination of a rapid recovery in gas demand and lower supplies could seriously test the flexibility of the world energy and resource system. Investments in new oil and gas supply (and other resources) had been depressed already prior to the pandemic. The prolonged buyers' market in the EU had weakened the pursuit of security of supply policies, such as diversification. Early warning signals about the growing precarious security of gas supply situation were not sufficiently understood due to confidence in the EU market design. But the EU market model had never been tested in a situation of tight supplies. At the same time, the EU gas market increasingly preferred shorter term gas contracts and hub trading. Russia was an important supplier of short-term pipeline gas in this market, in addition to long term gas contracts concluded in the mid-2000s. A ruling of 24 May 2018 tied pricing of all gas in the EU to the competitive hub pricing. This was supposed to limit price increases in countries with oil indexed contracts but instead, in 2022, when oil prices were lower per unit of energy than natural gas, natural gas prices soared. The race to fill the natural gas storages to the obligatory levels also added to the upward price pressure.

The swing from shorter-term pipeline and LNG contract to more long-term pipeline and LNG supplies in anticipation of tighter supplies was missed by the EU stakeholders, also because climate change policies foresaw a decline in gas demand within the potential contract period. This contrasted starkly with the growing appetite for long-term LNG contracts of Asian buyers. US LNG, for instance, was mainly contracted by Asian stakeholders. In 2022, with the EU gas supply crisis in full swing, only 2 long term LNG contracts with European companies were concluded, compared to 17 with Asian parties. The reliance of the EU member states on short-term gas trade increased in 2022 from roughly 20% to 48%. This is problematic because the market for flexible or short-term LNG is relatively small because most LNG has been contracted long-term.



NW Europe has swivelled away from Russian pipeline gas, regardless of the outcome of the conflict, due to the the destruction of the Nordstream piplines in September 2022. This has changed the orientation of the internal NW European pipeline gas infrastructure from a mainly east-west to a west-east oriented supply system, creating new capacity bottlenecks and potentially thwarting early refurbishment to carry hydrogen.

The gas crisis is far from over. Most new LNG supplies are expected to come on stream in or after 2025 depending on sufficient commitments (long-term contracts) to make a final investment decision. These decisions are not made with the EU market in mind but are based on expected demand developments in Asian and other markets. The recent victory laps of EU policymakers may therefore be very premature because this winter depended on depressed Chinese demand and the willingness to sell their LT LNG for a premium to the EU, the mild winter weather, closed production lines of companies and shivering consumers. The international impact of the EU's move into LNG was also large and led to brownouts in emerging market economies that could not afford to bid against the EU.

Also, in oil there have been major upsets because of banning Russian crude oil and oil products from the US, UK, and EU markets. Russia is one of the largest exporters in the world and although the re-routing of crude oil flows has taken place without too many upsets, the international crude oil, but particularly the middle distillate markets, are very fragile. The EU is a long-time middle distillate net-importer, also from Russia, and going forward demand and supply may become very tight. Much depends on economic activity in the coming years. Price volatility may stay with us for a while.

In general, EU natural gas and crude oil and oil product markets have been forced to move from nearby just-in-time energy trade to further away suppliers. The energy transition plans should move the EU closer to a just-in-case situation, but without an appetite for long-term contracts this may be difficult for imported oil, oil products, natural gas/LNG and imopterd low carbon hydrogen carriers. The EU has transformed into a premium short-term oil, oil product and natural gas market, mainly for US and Middle East suppliers, while expediting the energy transition agenda.

The EU's strategy and policymaking were based on international open and competitive markets while the international order is becoming more strategically devided and restricted. Support for the Washington-consensus-world is waning in strategic resource holding countries, and a geopolitical battle has erupted between state capitalist and liberal capitalist-oriented countries.

The REPowerEU agenda is supposed to accelerate the Fit for 55 agenda but the aspired volumes of low carbon molecules and renewable electricity are very large indeed to realise in only 7-8 years. At the same time, EU member states must reorganise their oil and gas intake, help companies and consumers survive the increase in energy prices, and expediate the energy transition in an uncertain economic environment. The expenditure needs and fiscal deficits may become a serious showstopper considering the increased expenditure on defense, energy, and other issues troubling societies. The EU strategic industry agenda and the growing dependence on China for crucial resources for the energy transition, amid growing geopolitical and geo-economic tensions, may require a a more structural reorientation of policymaking.



There appears to be a growing gap between a paper reality and what can be realised on the ground. Anchoring dates in legislation can be a good stimulus to push society in the right direction, but when it becomes dislodged from how it can be realised due to permitting, limits on strategies to mitigate investment risks, government interventions, and other bureaucratic stumbling blocks, it can lead to frustration and divided societies over progress in the energy transition. The current increased costst of materials, energy, capital may delay or redirect investments to other jurisdictions with more room to mitigate investment risks. Already competition with the US in energy transition funding is a complication for the EU.

A significant level of domestic production creates more comfort regarding imports, while also fuel choice provides some comfort to diversify demand for imported energy. The Fit for 55 packages should help to alleviate the energy security crisis in the medium to long term. Indeed, every electron and molecule that can be produced in the EU is of vital importance and will help improve the security of supply situation. Speeding up the energy transition in resource poor Europe helps, but the commodities needed to build these new production capacities have increased in price, are under long term contracts (China), come from Russia or require investments not in line with ESG standards and/or lead to higher CO2 emissions. The risk of sudden cleantech supply chain disruptions, given the current unpredictable geopolitical context, must be taken seriously. The switch away from oil, gas and coal may take longer than policymakers are communicating, the energy system will very likely experience a longer period of a hybrid energy system in the world and in the EU, CCUS technologies may be needed to stay on emission-reduction-track, and the EU member states and/or companies may thus have to scour international markets for new fossil supplies in the long period of a hybrid energy system.

Managing the energy transition is not only about speeding up the introduction of the low carbon energy technologies but also managing the decline in demand of fossil fuels. The aim is to prevent a long period of uncertainty, volatility, energy poverty, and geo-economic and geopolitical strife negatively impacting the functioning of the NW European energy system. Energy diplomacy should emphasise the opportunities, also for fossil fuel producers, to monetise on their reources and reduce CO2-emissions. Multilateral collaboration instead of conflict is more condusive to realise the climate change goals in the world. CIEP will continue to study the complexities of international energy markets, energy relations, and the energy transition.



BOARD OF THE FOUNDATION: STICHTING FONDS INSTITUUT CLINGENDAEL (SFIC) IN 2022



Clingendael International Energy Programme (CIEP) is the only project of Stichting Fonds Instituut Clingendael (SFIC) since 1 September 2001. Each CIEP project period lasts four years. 2021 was the first year the sixth project period (1 January 2021-until 31-12-2024).

In its meetings in May and November the Board discussed the impact of Covid-19 on CIEP and the chairman was in regular contact with the director on how members of staff were coping.

CIEP SUPPORTING INSTITUTIONS

In 2022, the following institutions supported CIEP:

Air Liquide Industries B.V. BP Europe SE- BP Nederland Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A. ('Rabobank') Dutch Ministry of Economic Affairs and Climate Change Dutch Ministry of Foreign Affairs EBN B.V. Eneco Holding N.V. ENGIE Energie Nederland N.V. Esso Nederland B.V. Havenbedrijf Rotterdam N.V. GasTerra B.V. Neptune Energy Netherlands B.V ING Bank N.V. Koninklijke Vopak N.V. Nederlandse Aardolie Maatschappij B.V.



N.V. Nederlandse Gasunie Vattenfall NL ONE-Dyas B.V. RWE Generation NL B.V. Shell Nederland B.V. Equinor ASA TenneT TSO B.V. Uniper Benelux N.V. Wintershall Dea Nederland B.V.

These institutions are a cross-section of energy sector stakeholders in the Netherlands and beyond. The companies are major international players in their field of expertise. The institutions contribute to CIEP's knowledge base and *vice versa*, especially within the CIEP Advisory Board and the Contact Group. Furthermore, staff members from the institutions participated actively in CIEP brainstorm groups and roundtables.

STAFF

In 2022, the CIEP staff comprised the following employees:



Other functions held by CIEP director in 2022:

Member of the Wise Person group of the IGU (since 2004 until 3 March 2022). Member of the Supervisory Board of Wintershall Dea Nederland B.V. (WDNL) until 3 March 2022.

Member of the Supervisory Board of Koole Terminals B.V.



Professor Energy and Geopolitics, Faculty of Arts, Unversity of Groningen (0,1 fte) until 1 November 2022 DBA Lark Holding B.V. and Lark Advisory B.V.

Martha Huysinga was an intern at CIEP from 15 September 2021 until 1 July 2022 and wrote her thesis for TuD at CIEP on a subject close to the public agenda research on hydrogen imports. She finished her thesis with distinction.

In addition to the research staff, senior and associate fellows contributed to CIEP's work and network:

| (| Dick de Jong, Honorary Fellow |
|----------|--|
| | Jacques de Jong, Honorary Fellow |
| | Maria van der Hoeven, Senior Fellow |
| | Geert Greving, Senior Fellow |
| | Noe van Hulst, Senior Fellow |
| | Bert Roukens, Senior Fellow |
| | Pieter Boot, Senior Fellow |
| | Luca Franza, Associate Fellow |
| | Gert van der Lee Associate Fellow |
| | Piet Nienhuis, Associate Fellow |
| ٩ | Aad Correljé, Associate Fellow (project basis) |
| (| Martien Visser, Associate Fellow (project basis) |
| | Jan Hein Jesse, Associate Fellow (project basis) |
| | Ruud Bos, Asssociate Fellow (project basis) |
| | Remko Kruithof, Associate fellow (project basis) |

NETWORK

Many of our activities and studies are conducted in cooperation with partner organisations in the Netherlands and abroad. Over time a wide network of researchers has developed. The intensity of contact depends on the project at hand, but in general many of the contacts continue in other projects. We are also regularly approached to participate in consortia of researchers in which CIEP decides to participate on a case-by-case basis depending on the relevance of the project for the public agenda of that period. The network of energy researchers is global, and each year new partners join the network. Some relations with research and activity partners have become very close and a variety of interactions take place every year, from keeping in touch on current issues to organizing conferences and conducting joint studies. In 2021, because of the pandemic, webinars were organised with partner organisations such as IAI, IEA, and Kapsarc. In the course of 2022, the covid-19 measures were relaxed and we were able to organise more events in the summer and fall compared to previous years.



INTERNAL ORGANIZATION

CIEP administers the allocation of staff and budgets to the different activities, research projects and other pursuits. CIEP uses time registration, which facilitates prioritizing time and assets.

CIEP PUBLICATIONS

The following overview highlights 2022 publications, most of which are available on CIEP's website (<u>www.clingendaelenergy.com/publications</u>). CIEP (associated) staff also published articles elsewhere, which are typically listed under the tab "other work" when we are permitted to post the contribution (<u>www.clingendaelenergy.com/otherwork</u>). In 2022 CIEP published 1 joint paper with KAPSARC and a contribution to a work on Energy Security in the Mediterrenean Countries.

Papers

Coby van der Linde, Managing Future Security of `low Carbon Hydrogen Supply, July 2022 (<u>https://www.clingendaelenergy.com/publications/publication/managing-future-security-of-</u>low-carbon-hydrogen-supply)

Jasper Meijering, Recarbonizing the Chemical industry, August 2022, (<u>https://www.clingendaelenergy.com/publications/publication/recarbonizing-the-chemical-industry</u>)

Coby van der Linde, Jasper Meijering, Roelof Stam en Pier Stapersma, From Just-in-Time to Just-in-Case of just too late? The impact of EU Oil Sanctions on Crude Oil and Oil products Markets in the Netherlands and its relevant markets, December 2022

(https://www.clingendaelenergy.com/publications/publication/the-impact-of-eu-oil-sanctions-oncrude-oil-and-oil-product-markets-in-the-netherlands-and-its-relevant-markets)

Other work

Now is the time to get hydrogen off the ground in Europe, Noe van Hulst en Kirsten
 Westphal, <u>https://illuminem.com/energyvoices/a08ea94d-6b64-4008-ae4d-657b5117d337</u>

COLUMNS

The 2022 columns of Coby van der Linde, Martien Visser, Pieter Boot en aad Correljé appeared on the Energieforum website (www.energiepodium.nl). Some can also be found on the CIEP website (clingendaelenergy.com/columns).

EVENTS/ACTIVITIES

CIEP organized 2 (online) events in 2022 due to the Civid-19 restrictions.

See the list of <u>online events</u> below, which is also available on <u>clingendaelenergy.com/events</u>; select 2022:

- 10-11 January 2022 Understanding Phantom Oil together with Kapsarc and Atlantic Council
- 1 February 2022 Webinar IEA Quarterly Gas Report presentation



Clingendael International Energy Programme (CIEP) and The Istituto Affari Internazionali (IAI) in cooperation with the International Energy Agency (IEA)

- 21 February 2022 IRENA-CIEP webinar on 'The Roadmap for Hydrogen in a Geopolitical Context'
- 25 March 2022 Round table on security of supply of energy and resources and the long term low carbon solutions
- 7 July 2022 Webinar IEA's Quarterly Gas review 2021 Clingendael International Energy Programme (CIEP) and The Istituto Affari Internazionali (IAI), in cooperation with the International Energy Agency (IEA)
- 8 September 2022 CIEP Gas(ses) Day
- 15 September 2022 Presentation and discussion with Fatih Birol, Executive Director of the IEA, on the Energy Crisis, Glazen Zaal, The Hague.
- 17 October 2022Webinar IEA's Quarterly Gas review 2021Clingendael International Energy Programme (CIEP) and The Istituto AffariInternazionali (IAI), in cooperation with the International Energy Agency (IEA)
- 12 December 2022 Webinar IEA's Global Gas security review 2021 Clingendael International Energy Programme (CIEP) and The Istituto Affari Internazionali (IAI), in cooperation with the International Energy Agency (IEA)
- 12 December 2022 Presentation of the IEA Global and European Hydrogen market developments- 2022 in review

TRAINING

Due to corona the in situ traning days of CIEP (May and November) were discontinued in 2020 - 2022. Instead, an in-situ training was organsied for Public Matters June - September 2022.

Luca Franza and Coby van der Linde taught the course 'International and European Gas Markets' in the Energy Master Programme of SciencesPo in Paris in January-March 2022.

Coby van der Linde also taught a half-course on energy security at Groningen University in February-March 2022.

CIEP staff also contributed to (online) training programs directed to government officials, diplomats, personnel of international organizations and energy professionals, organized among others by the Clingendael Institute, Erasmus University-UPT, Energy Academy and the Energy Delta Institute (EDI).

Many meetings, including teaching at the universities, were online in 2022.



CIEP MEETINGS

Board Stichting Fonds Instituut Clingendael 17 May 2022 (online) 24 November 2022 (in person)

Advisory board 21 June 2022 (in person) 12 December 2022 (online)

Contact group 15 March 2022 (online) 14 June 2022 (online) 13 October 2022 (in person) 6 December 2022 (online)

WORKING IN AN ONLINE ENVIRONMENT

CIEP staff worked at home most of 2022 until late spring and returned part-time to the office in the summer and early fall and from October onwards reduced working at the office to manage the energy bill. CIEP uses the Teams platform. A work at home contribution was part of the compensation package in 2022 (based on CAO sector Rijk, while laptop computers were provided to work on the platform in the office and at home).

LECTURES, SPEECHES, PRESENTATIONS, MEDIA

During 2022, CIEP staff participated in various expert meetings and project meetings. In addition, CIEP staff members gave numerous lectures, speeches, and presentations or chaired sessions during training courses, conferences, and seminars in 2022. All were on-line. CIEP staff in 2022 also gave various radio, television, and written media interviews. In 2022 many conferences were hybrid and and free to attend online. CIEP staff used this opportunity to attend many international conferences on various geopolitical and energy transition issues.

MEETINGS 2022

| January | EBN-energieontbijt (online) Coby van der Linde (18 January) |
|----------|--|
| | Meetings (online) about projects oil value chain in the Netherlands, Pier Stapersma, Jasper Meijering and Coby van der Linde |
| February | Meetings (online) on project H2TB, Pier Stapersma and Coby van der Linde |
| | Meetings (online) about projects oil value chain in the Netherlands, Pier Stapersma, Jasper Meijering and Coby van der Linde |
| | Presentation (online) SIPA, Columbia University on current situation on European gas markets and energy transition, with Tim Boersma |



| | Meetings (online) on project H2TB, Pier Stapersma and Coby van der Linde. |
|-------|--|
| | Meetings (online) on biofuels, Jasper Meijering, Coby van der Linde and Pier Stapersma |
| | Consulted by Embassy of Australia on gas supply situation Europe; Coby van der Linde & Pier Stapersma |
| | Consulted on CBAM by Municipality of Rotterdam; Coby avn der Linde & P. Stapersma |
| | Contributor/host MENA Shiraka course/contribution Instituut Clingendael (Academy) Pier Stapersma |
| | Consulted by French Embassy Lunch on energy policies, Pier Stapersma |
| | Contributor and host CIEP-IRENA webinar on hydrogen, Pier Stapersma; C.oby van der Linde |
| | CIEP Roundtable on reliability and affordability of electricity towards 2035; Pier Stapersma |
| March | |
| | Meeting (online) on the Kapsarc CEE index, Coby van der Linde |
| | Meeting (online) national traineeship programme, Coby van der Linde |
| | Meetings (online) on project H2TB, Pier Stapersma and Coby van der Linde |
| | Meeting (in person), Swiss minister of Energy, Coby van der Linde |
| | Meeting Cyrill Numn and Elizabeth Borger (online), Embassy Germany, Coby van der Linde |
| | Contributor/host MENA Shiraka course/contribution Instituut Clingendael (Academy), Pier Stapersma |
| | Cooperated in 'interview carrousel', interviewed by Dutch national government officials (Rijksambtenaren), on energy & climate policy, hosted by Instituut Clingendael Academy, Pier Stapersma |
| | Meeting (hybrid) on short-term and long-term liquid energy and feedstock developments, VNO-NCW, Coby van der Linde, Roelof Stam and Jasper Meijering |
| | Klankbordgroep II3050, Coby van der Linde |



IEA Low Carbon Gas Day (online), Coby van der Linde

| April | |
|--------------|---|
| | Meeting (online) Imports of H2 Nationaal Waterstofprogramma, Coby van der Linde |
| | Meetings (online) on project H2TB, Pier Stapersma and Coby van der Linde |
| | Meeting (online) of biofuels platform, I&W, Coby van der Linde |
| Мау | Meetings (online) on project H2TB, Pier Stapersma and Coby van der Linde |
| | Presentation (online) Hydrogen developments, IGU, Coby van der Linde |
| | Expert meeting Province of Groningen, Pier Stapersma |
| | Roundtable diner Vattenfall |
| | Meeting Imports of H2 Nationaal Waterstofprogramma, Coby van der Linde |
| | Oil task force (EZK), Coby van der Linde |
| June | Meetings (online) on project H2TB, Pier Stapersma and Coby van der Linde |
| | Expertsessie Energie EZK, Minister Jetten, Coby van der Linde |
| | Oil task force (EZK), Coby van der Linde |
| | Training Public Matters, Coby van der Linde, Pier Stapersma and Jasper Meijering |
| | Meeting (online) VNO-NCW werkstroom olie, Coby van der Linde |
| | Klankbordgroep II3050, Coby van der Linde and additional meeting on addional issues |
| | Vattenfall stakeholder meeting, Coby van der Linde |
| | Meeting Imports of H2 Nationaal Waterstofprogramma, Coby van der Linde |
| | RUG summer school presentation (in person) on energy security, Coby van der Linde |
| July | Presentatie (online) zuivelindustrie over energiecrisis, Coby van der Linde |
| | Meeting (online) VNO-NCW werkstroom olie, Coby van der Linde |
| 14 CLINICEND | |



Training Public Matters, Coby van der Linde, Pier Stapersma and Jasper Meijering August Meeting on energy transition, Delft, Coby van der Linde Consulted by ROSEN on European hydrogen policies/developments, Pier Stapersma Contributor to training for diplomats from Pakistan & Bangladesh on Energy and Sustainability, hosted by Instituut Clingendael (Academy), Pier Stapersma Meeting (online) VNO-NCW werkstroom olie, Coby van der Linde September Energy Crisis and energy Transition conference (Berlijn), Coby van der Linde Lunch meeting on energy crisis with Danish Embassy and other Nordic countries, Pier Stapersma and Coby van der Linde Oil task force (EZK), Coby van der Linde Meeting with Fatih Birol, at EZK, Coby van der Linde Contributor-host MENA Shiraka course and contribution, Instituut Clingendael (Academy) Pier Stapersma, coby van der Linde and Jasper Meijering Training Public Matters, Coby van der Linde Pier Stapersma and jasper Meijering Meeting (online) VNO-NCW werkstroom olie, Coby van der Linde Meetings with oil sector experts, Roelof Stam, Coby van der Linde, Jasper Meijering Expertsessie Energie, Minister Jetten, EZK, Coby van der Linde October Oil task force (EZK), Coby van der Linde Meetings with oil sector experts, Roelof Stam, Coby van der Linde, Jasper Meijering Meeting (online) VNO-NCW werkstroom olie, Coby van der Linde Import workgroup National Hydrogenprogramme, Coby van der Linde Meeting (online) on update CEE-index, Kapsarc, Coby van der Linde



| November | Presentation on energy crisis, RvC Gasunie, Coby van der Linde |
|----------|--|
| | Meetings National Crisis plan Oil, in person, Coby van der Linde |
| | Contributor to Leergang Buitenlandse Betrekkingen, developments in international energy markets and policy- course hosted by Instituut Clingendael (Academy)Pier Stapersma |
| | Meeting (online) VNO-NCW werkstroom olie, Coby van der Linde |
| | Oil task force (EZK), Coby van der Linde |
| | Meeting AFM on NW European gas market, Coby van der Linde and Pier Stapersma |
| | Meetings with oil sector experts, Roelof Stam, Coby van der Linde, Jasper Meijering |
| | Presentations CEFIC (online) on energy crisis- Coby van der Linde and Recarbonising the chemical industry – Jasper Meijering |
| December | EFI-KAPSARC Joint Work Program - Advisory Committee Meeting (online), Coby van der Linde |
| | Presentation (online) on energy crisis, FIA-Brussels, Coby van der Linde |
| | Expert sessie (online) -initiatiefwet energievoorzieningszekerjeid S. Erkens |

EXTERNAL LECTURES/PRESENTATIONS

In 2022, many lectures and presentations were online until summer 2022. In 2022, Pier Stapersma and Jasper Meijering taught courses at Clingendael Academy.

Pier Stapersma taught various classes in a joint MENA energy transition project with Clingendael Academy.

Luca Franza and Coby van der Linde taught a course on European gas markets at SciencesPo (Feb-March.

Coby van der Linde taught various masterclasses on hydrogen for EDI, a half course on gas markets at SciencesPo (Jan-Feb), energy security in Groningen (Feb-March), a presentation in the MENA energy transition, a joint project with Clingendael Academy and a masterclass on hydrogen during WGC Korea (online).

Jasper Meijering presented his study on recabonizing the Chemical Industry in various fora.



WEBSITE

Everything CIEP published or organised from 2001 onwards, could be found at <u>www.clingendaelenergy.com</u>. Internet is an important communication and information dissemination tool for CIEP.

This is where our visitors came from in 2022

| Country | Users 🗸 | Users | Contribution to total: Users 🗸 |
|---------------------------|--|--|--------------------------------|
| | 11,489 % of Total: 100.00% (11,489) | 11,489 % of Total: 100.00% (11,489) | |
| 1. 1. Image: Netherlands | 4,119 | 35.91% | |
| 2. 🔳 🔤 United States | 1,202 | 10.48% | 26.3% |
| 3. 🔳 🚟 United Kingdom | 753 | 6.57% | 35.9% |
| 4. 🗖 🔳 Germany | 639 | 5.57% | |
| 5. 🔳 🚺 Belgium | 349 | 3.04% | |
| 6. 🔳 🔛 China | 345 | 3.01% | 6.6% |
| 7. 📕 🛄 France | 326 | 2.84% | |
| 8. 📕 🚺 Italy | 286 | 2.49% | |
| 9. 🔳 💽 Switzerland | 218 | 1.90% | |
| 10. 🔲 🚾 Spain | 214 | 1.87% | |

This is how they reached us in 2022:

| Default Channel Grouping | Users V | Users | Contribution to total: Users V |
|--------------------------|--|--|--------------------------------|
| | 11,489 % of Total: 100.00% (11,489) | 11,489 % of Total: 100.00% (11,489) | |
| 1. Direct | 4,842 | 41.97% | |
| 2. Organic Search | 4,303 | 37.30% | 15.3% |
| 3. Referral | 1,761 | 15.27% | 42% |
| 4. Social | 628 | 5.44% | |
| 5. (Other) | 2 | 0.02% | 37.3% |



Unique page visits to our publications in 2022:

| | Page | Unique Pageviews 🗸 | Unique Pageviews 🗸 |
|-----|---|---|---|
| | | 4,348 % of Total: 17.29% (25,145) | 4,348 % of Total: 17.29% (25,145) |
| 1. | /publications/publication/the-impact-of-eu-oil-sanctions-on-crude-oil-and-oil-product-markets-in-the-netherlands-and-its-relevant-markets | 512 | 11.78% |
| 2. | /publications/publication/recarbonizing-the-chemical-industry | 505 | 11.61% |
| 3. | /publications/publication/managing-future-security-of-low-carbon-hydrogen-supply | 269 | 6.19% |
| 4. | /publications/publication/the-energy-and-feedstock-transition-in-the-port-of-rotterdam-industrial-cluster | 248 | 5.70% |
| 5. | /publications/publication/hydrogen-in-north-western-europe-a-vision-towards-2030 | 221 | 5.08% |
| 6. | /publications/publication/quickscan-rotterdam-haven-industrie-fit-for-55 | 212 | 4.88% |
| 7. | /publications/publication/the-european-refining-sector-a-diversity-of-markets | 177 | 4.07% |
| 8. | /publications/publication/developments-in-eu-russia-gas-relations | 149 | 3.43% |
| 9. | /publications/publication/the-dynamic-development-of-organic-chemistry-in-north-west-europe | 145 | 3.33% |
| 10. | /publications/publication/refinery-2050-refining-the-clean-molecule | 128 | 2.94% |

Unique page visits for events in 2022:

| | Page | | Unique Pageviews 🗸 | Unique Pageviews 🗸 |
|-----|--|----|--|--|
| | | | 2,509 % of Total: 9.98% (25,145) | 2,509 % of Total: 9.98% (25,145) |
| 1. | /events/event/presentation-of-the-lea-quarterly-gas-market-report-q1 | ß | 927 | 36.95% |
| 2. | /events/event/rondetafelgesprekvoorbereiden-op-grotere-risicos-in-leveringszekerheid-van-branden-grondstoff en-en-de-langere-termijn-koolstofarme-oplossingsrichtingen | Ð | 708 | 28.22% |
| 3. | /events/event/irena-ciep-webinar-on-the-roadmap-for-hydrogen-in-a-geopolitical-context | B, | 222 | 8.85% |
| 4. | /events/event/presentation-of-the-iea-global-and-european-hydrogen-market-developments2022-in-review | Ę | 176 | 7.01% |
| 5. | /events/event/presentation-of-the-iea-gas-market-report-q3- | R) | 119 | 4.74% |
| 6. | /events/event/presentation-of-the-iea-gas-market-report-q4-2022 | æ | 53 | 2.11% |
| 7. | /events/event/presentation-of-the-iea-gas-market-report-q4-2021-including-the-global-gas-security-review-2021 | Ð | 40 | 1.59% |
| 8. | /events/event/presentation-of-weo-2019 | Ð | 23 | 0.92% |
| 9. | /events/event/ciep-energy-lecture-mckinseys-2019-global-energy-perspective-reference-case | Ð | 20 | 0.80% |
| 10. | /events/event/world-energy-outlook-2018 | R) | 17 | 0.68% |

Unique page visits 'overall' in 2022:

| | Page | Unique Pageviews 🗸 | Unique Pageviews 🗸 |
|-----|---|---|---|
| | | 25,145 % of Total: 100.00% (25,145) | 25,145 % of Total: 100.00% (25,145) |
| 1. | ٩. / | 7,386 | 29.37% |
| 2. | /publications @ | 1,220 | 4.85% |
| 3. | /about_us/staff/member/coby-van-der-linde | 1,205 | 4.79% |
| 4. | /about_us @ | 1,007 | 4.00% |
| 5. | /events/event/presentation-of-the-iea-quarterly-gas-market-reportq1 | 927 | 3.69% |
| 6. | $/events/event/rondetafelgesprekvoorbereiden-op-grotere-risicos-in-leveringszekerheid-van-brand-en-grondstof \eqref{eq:events} fen-en-de-langere-termijn-koolstofarme-oplossingsrichtingen$ | 708 | 2.82% |
| 7. | /about_us/staff | 704 | 2.80% |
| 8. | /about_us/staff/member/maria-van-der-hoeven | 553 | 2.20% |
| 9. | /publications/publication/the-impact-of-eu-oil-sanctions-on-crude-oil-and-oil-product-markets-in-the-netherlands- ${}_{\ensuremath{\mathcal{B}}}$ and its-relevant-markets | 512 | 2.04% |
| 10. | /publications/publication/recarbonizing-the-chemical-industry | 505 | 2.01% |



PROJECTS

In 2022, we finalised work on a paid project on the oil value chain and security of supply of imported hydrogen, both projects for EZK. The hydrogen study is also our contribution to a larger joint project on imported hydrogen together with TuD, EUR (Drift, UPT). We also did a project on the potential impact of sanctions on crude oil and oil product imports from Russia for Vemobin and Votob.

FINANCES

2022 was the second year of the sixth project period (1-1-2021 to 31-12-2024).

The overall financial result for 2022 was -30.020 euro.

| | | 2022 | | 2021 |
|-------------------------------|---|-----------|---|-----------|
| | | | | |
| Contribution stakeholders | | 569.672 | | 575.000 |
| Project income | | 96.267 | | 98.803 |
| Other income or cost | | -5.401 | | -5.398 |
| Staff costs | | -531.019 | | 465.330 |
| Deprecation cost | | -7.229 | | -5.842 |
| Public activity costs | | -31.539 | | -15.139 |
| Foundation costs | | -120.771 | | -102.147 |
| Profit Taxes (Paid or return) | | | € | -690 |
| | | | | |
| TOTAL RESULT | € | -30.020 | € | 79.257 |
| Liquidity | € | 1.211.794 | € | 1.266.238 |
| Foundation Capital (CIEP) | | | | |
| CIEP-reserves | € | 1.005.143 | € | 1.003.822 |
| Destination Public Reserves | € | 109.274 | € | 140.615 |
| | | | | |



ANNEX 1 ABOUT CIEP

HISTORY

In September 2001, Clingendael *International Energy Programme* (CIEP) was founded under the Foundation Stichting Fonds Instituut Clingendael. In 2022, this Foundation was renamed Stichting Fonds Institute CIEP.

CIEP participates in and seeks to make significant and substantive contributions to the public debates on national and international developments in the energy sector, including the energy transition.

MISSION

Through research, the publication of studies, information releases, columns, and media and the organization of courses and training programs, CIEP makes a fundamental contribution to the public debate on international politics and economic developments in the energy sector (oil, gas, renewables and electricity), energy related climate issues and the energy transition.

OBJECTIVES

- To serve as an independent forum for governments, non-governmental organizations, the business community, politics, the academic world, the media and other stakeholders or interested parties.
- To gather and develop information and knowledge about international political and economic developments in the energy sector based on research, supported by a documentation system.
- To propagate information and knowledge about international political and economic developments in the energy sector and energy transition by means of seminars, conferences, lectures, courses, publications, and information releases via the media.
- To initiate discussions about current events and future developments relevant to the energy sector, energy policy, legislation and the relationship between the government and the private sector.

RESEARCH AND ACTIVITIES

CIEP's current research and activities revolve around the issues of the geo-political and geo-economic consequences of changing supply and demand patterns in energy, in particular oil and natural gas and renewable energy carriers, and the development of European energy markets and energy policymaking against the background of international energy market developments and energy transition.

