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Knowledge center and interest group  
for non-domestic energy and water consumers

Houttuinlaan 12

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[www.vemw.nl](http://www.vemw.nl)

## VEMW Tailor-made annual overview 2022

### Your company (including any affiliates)

The text of this tailor-made annual report has been translated from Dutch into English by means of an electronic tool. No individual amounts and values are mentioned in this version. These can be found in the Dutch version of the Annual Report Tailored for your company. No rights can be derived from this translation

No individual values are incorporated. an electronic copy of this tailor-made annual report has been sent to every employees of your company who has given us permission to include their names in our database.



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## Preface

Dear reader,

We are proud to present the VEMW Customized Annual Review for the fifth time now. In the turbulent year 2022, VEMW has again assisted you with advice and action. We account for this in this report. Not only in a qualitative sense, but as usual we also try to indicate quantitatively how much the VEMW membership has yielded your company.

Fortunately, last year we were able to make much more use of our office and meeting facilities in Woerden. This made it possible to meet members and to have physical meetings with each other on a regular basis. Thanks to the video equipment, more and more members can also participate in the meetings online. This increases participation.

In 2022 we were finally able to hold an Energy Day again. We were guests at TU Delft. In collaboration with our new partner SKIW, we organized the National Water Symposium. We were happy to meet many of you.

The employees of the office could only do their job well thanks to the intensive cooperation with you and your colleagues in all task and policy groups, SectorTeams and other associations of our association. I would like to thank everyone who contributed to the results in 2022.

I hope you enjoy reading it!

Gertjan Lankhorst,

Chair



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## Reading Guide

We have prepared this Tailor-made Annual Review 2022 especially for [Your company] with great dedication. It focuses entirely on your company or organization, including any subsidiaries that are also members of VEMW. We have taken into account energy and/or water-related topics that are relevant to your organization.

In this annual overview you can read which topics VEMW has been involved in in 2022 and which benefits the VEMW [Your company] membership has delivered. Where possible, we have quantified this in euros, so that we can show as concretely as possible what value the membership represents for your organization.

### **Explanation of the icons:**

## Introduction

We don't have to beat around the bush: the year 2022 was of course the year of the energy crisis. Looking back at this special year, it quickly becomes clear that this crisis is the coat rack on which we can hang almost all current developments. The crisis forces us to accelerate the energy transition. VEMW is, as it were, the spider in the web in this transition: we are involved in numerous consultations and initiatives. In this Tailor-made Annual Report, we set out what our commitment means to you.

### Proposing solutions

The energy crisis has a major impact on Dutch industry and its business operations. High and volatile prices affect the cost level of many companies. Several companies have had to reduce their production considerably: sometimes by tens of percent and in some cases even completely. In response to this, we have set up the Working Group on Bridging the Energy Crisis for Industry, the WOEI. This working group is looking for connections across the various sectors in order to come up with solutions to guide the industry through the crisis. We included this input in a roundtable discussion with the House of Representatives and wrote a position paper about it.

### Congestion problem

In our view, sustainability is the logical and only structural solution to the energy crisis. However, we see that in the pursuit of further sustainability we run into all kinds of problems, of which the congestion problem is a very urgent one. In order to accelerate sustainability, companies must be able to make optimal use of electrification options. That is why we have repeatedly pressed for structural improvements in 2022: we simply have to invest considerably more in the grid and the available capacity must be used to the maximum. We have submitted our views in the National Grid Congestion Action Plan.

### Potency of hydrogen

In 2022, we have requested and received extensive attention in the media for the problems Dutch businesses are facing as a result of the energy crisis. We have also paid attention in many different ways and made contributions to energy saving and sustainability. For example, we have organized various meetings and inspirational tours and, for example, actively engaged in Project 6-25, which focuses on the accelerated application of innovative technology to reduce CO<sub>2</sub> emissions. We also pay ample attention to hydrogen. Hydrogen has the potential to make an important contribution to the energy transition. We believe it is important that a good infrastructure for hydrogen is set up quickly and that companies can make optimal use of it.

### Water transition

VEMW also represents the interests of business water consumers. 2022 was also a challenging year in that regard. We had to deal with a prolonged drought, which had major consequences for some companies. We have therefore decided to revise our vision on water and are working on a position paper on sustainable water use. In addition to the energy transition, we are facing a water transition. How we can ensure sufficient water of good quality is only one of the points of attention. The discharge of cooling and waste water, salinization and water retention are also subjects that require our attention.

### Trust

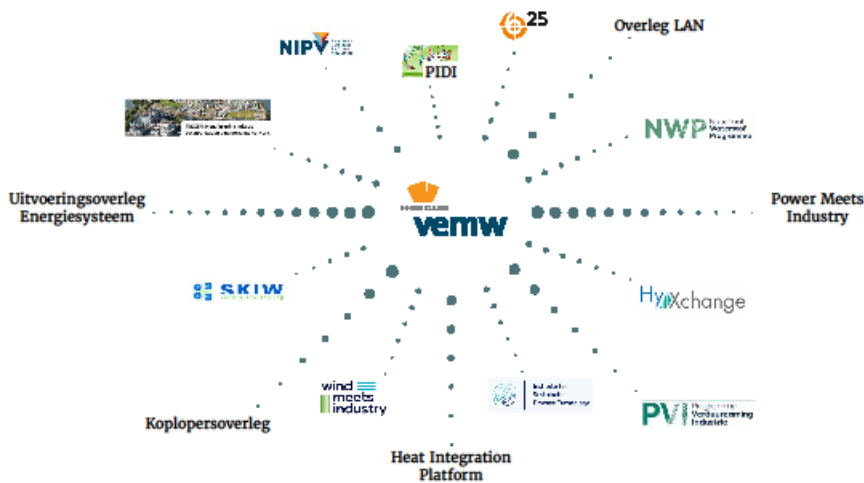
It has not escaped your notice: 2022 was a special year and 2023 does not promise calmer waters for the time being. We have committed ourselves with great enthusiasm and commitment from and for our members and will of course continue to do so. We thank you for the trust you have placed in us.

Hans Grünfeld, VEMW Managing Director

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## VEMW spin in het transitieweb





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## The added value of your membership

This is the Tailor-made Annual Review, which we have put together for your organization. The annual review focuses entirely on [Your company] and any subsidiaries. Based on the files that were current in 2022 and, insofar as possible, we have calculated which benefits and/or which avoided costs our efforts have yielded for you. We have taken into account the energy and/or water-related topics that are relevant to your organization.

VEMW represents your interests in the Netherlands and Europe in the field of electricity, gas, hydrogen and water. We also stand for your position in climate policy and the possibilities for making your organization more sustainable. As a member of our association, you can use our expertise and information in the Knowledge Base on our website and you can attend the (online) meetings. You can also participate in the annual Energy Purchasing Benchmark for free. We have calculated the value our efforts have yielded for you on numerous files and/or which costs you could avoid thanks to our efforts. Below you will find a summary of the calculated results of our efforts for [Your company] and your contribution for the year 2022. In the report we explain the files and the calculated results

Your membership fee	€ [CNTR22]
Climate	
Result achieved for you:	€ [RES3_K]
Electricity	
Result achieved for you:	€ [RES3_E]
Gas	
Result achieved for you:	€ [RES3_G]
Water	
Result achieved for you:	€ [RES3_W]
Network, information, knowledge and advice	
Total result achieved for you:	€ [RES3_V]
Total value of your 2022 membership:	€ [Totaal_RES22]



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## Knowledge, network, information and advice

### Introduction

**A As a member of VEMW, you can make use of numerous access options to relevant information and assistance regarding issues for [Your company].**

Because of our role as advocate and through our contact with parties and customers involved in energy and water, we at VEMW have a great deal of knowledge and information. We make it available to [Your company]. VEMW informs you through the online quarterly magazine Inzicht, the Energy & Water Update (three to four times a year), the newsletters and through numerous meetings and webinars on a wide range of subjects.

As a member you always have access to the VEMW website, including the 'members only' information about policy, regulations, rates and market developments. The long-term quotations for electricity and gas in our price overview were available until October. The agreement with ICE-Endex to take over long-term pricing has not been renewed. From the beginning of 2023 we show the spot quotations on our homepage every day. As a VEMW member you can attend meetings, webinars and seminars of VEMW and conferences of third parties (with a discount). Every year, VEMW organizes the Energy Purchasing Benchmark in which you can participate for free. You can contact us with all your energy and water-related questions. If we cannot answer these ourselves, we will help you by recommending other external experts from our knowledge network. As a VEMW member you can make use of numerous access options to relevant information and help with regard to issues for [Your company].

### Network

**VEMW has an extensive network and our meetings and webinars give you access to specialists from various fields.**

VEMW has a large internal and external network, which we gratefully use. We organize various meetings where you can usually participate free of charge and gain valuable knowledge. By participating in these meetings or webinars you gain access to various specialists from different fields. We know from experience that members regard their participation in VEMW meetings as very useful and valuable. You can obtain relevant information for [Your company] during these meetings. We value the importance of the network function on xx euros.

### Member groups VEMW

**Through various groups, we ensure that we arrive at well-considered and widely supported positions. We also form groups in which members can exchange knowledge.**

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### Task forces, policy group and working parties

In our policy group and task groups, we develop policy and formulate our positions in close consultation with members of VEMW. These groups are composed of a broad representation of VEMW members. We monitor the level of representation of this composition, facilitate the meetings and meetings and provide the secretary. The members provide the practical knowledge and experience necessary for a well-considered and well-founded position. VEMW provides substantive support in this respect and propagates its views to the government, regulators of the energy and water sector and other parties involved and the media. We have one policy group, five task groups and three working groups. The working groups work out specific topics and provide a task group with information.

### Sector Teams

VEMW's SectorTeams give members the opportunity to gather information with colleagues from the same sector and/or with similar issues, to exchange knowledge, to go deeper into specific subjects and to carry out joint activities. VEMW has three SectorTeams: Hospitals, TenneT and Multisites. The meetings of these teams will be organized virtually in 2022. [xxxx]

Below is an overview of the various groups that are active within VEMW. A checkmark means that [Your company] is represented by one or more colleagues in that group.

[Board member]	Board Member VEMW
[BGW_Member]	Policy Group Water
[TGWKwal_Member]	Task Force Water quality
[TGWT_Member]	Task Force Water technology
[TGE_Member]	Task Force Electricity
[TGG_Member]	Task Force Gasses
[TGEK_Member]	Task Force Energy & climate
[WgCodes_Member]	Working Party Codes Elektriciteit en gas
[WgGKwal_Member]	Working Party Gas quality
[WGSpKwal_Member]	Working Party Voltage quality
[WgBM_Member]	Working Party Benchmark
[STMS_Member]	Sector Team Multisites
[STzkh_Member]	Sector Team Hospitals
[STTennet_Member]	Sector Team Tennet
[ATO_HNS_Member]	Working Party ATO-HNS
[HKW_Member]	Working Party VEMW Windconsortium

### Meetings

We organize numerous meetings and webinars for members on a variety of topics.



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After two years of restrictive measures due to COVID-19, during which we organized all meetings digitally, we were able to meet physically again in 2022. We certainly did. Nevertheless, we still often opted for webinars. An additional advantage is that this allowed a larger number of interested parties to participate than if these meetings were to take place physically in Woerden. As a Member you can easily attend a webinar and avoid travel times. Webinars can no longer be ignored and remain a permanent part of the meetings that VEMW offers you. In 2022, sometimes together with third parties, such as SKIW, we organized the following webinars for [Your company]:

#### **Water**

- Practical Cases Treatment of Industrial Wastewater (with SKIW)
- Webinar Legionella in biological water treatment plants
- The National Water Symposium (together with SKIW)
- VEMW Webinar Drought Crisis

#### **Energy**

- The energy transition: How do you get from ambition to realisation?
- VEMW Electricity and Gas Basic Course 2022
- VEMW Webinar Congestion Management
- VEMW Webinar Energy crisis: new phase reached!
- Triptych interpretation of the energy markets by:
  - Hans van Cleef (then Sr. Energy Economist at ABN AMRO, now Head of Energy Research & Strategy at Public Affairs)
  - Dennis Hesseling (Head of Infrastructure, Gas & Retail at ACER)
  - Bart Jan Hoevers (member of the Executive Board and director of Gasunie Transport Services (GTS))
- Gas news meeting
- News about gas prices and gas shortages
- VEMW Webinar Flexibility
- VEMW Energy Day
- Gas Crisis Webinar: first phase Gas Protection and Recovery Plan
- Webinar Energy Transition: Heat Integration and Carbon Pricing (EU ETS)
- Energy Efficiency Quick Wins: A total of 1500 tons of CO<sub>2</sub> reduction
- Workshop 'Reboot your Roadmap': what will be the next step for your company?
- Making industry more sustainable: from ambition to realisation, regional meeting in the center of The Netherlands

It is important for you and your colleagues to keep abreast of developments in the field of electricity, gas, sustainability, the energy transition, energy conservation and water. With the meetings that we organize, we think we do meet that need.

#### **Inspiration tours (together with NVDE and RVO)**

**Our free Inspiration Tours clearly meet a need and encourage Members to take sustainable steps.**



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VEMW organized a series of 'Inspiration Tours' together with RVO and NVDE for the fifth year. After the completion of the previous series in 2021, it turned out that the webinars meet a need and encourage end users to take the next steps in reducing their emissions and making processes more sustainable. The relevance increases further due to historically strong energy cost increases and geopolitical challenges. Six tours have been organized in 2022:

- Inspiration tour CO<sub>2</sub> reduction industry: Scope 1,2 and 3 – emission reduction in the chain
- Inspiration tour CO<sub>2</sub> reduction industry: From fossil to circular raw materials
- Inspiration tour CO<sub>2</sub> reduction industry: Care systems for energy saving at (ETS) companies
- Inspiration tour CO<sub>2</sub> reduction industry: Heat exchange between Twence and Grolsch
- Inspiration tour CO<sub>2</sub> reduction industry: Flexibilization of production (processes) and fuel switch
- Energy storage inspiration tour for the changing energy supply

[xxxxxx]

In addition to the inspiration tours, VEMW also contributes to the RVO-KWA Masterclass (twice a year) and the Multibenefit analysis of CO<sub>2</sub> reduction (once a year). All tours and additional information can be found on the website of the Sustainable Industry Program ([verduurzamingindustrie.nl](http://verduurzamingindustrie.nl)). The available information, the meetings of VEMW and the inspiration tours can be visited free of charge. We value these opportunities to gather valuable knowledge free of charge at [xxx] euros.

## Basic course Electricity & Gas

**VEMW's Electricity & Gas basic course offers solid and up-to-date basic knowledge to everyone involved in energy.**

Every year VEMW organizes the basic course Electricity & Gas. This course provides a comprehensive overview of all aspects of production, transport and distribution, trade, supply and use of energy and climate-related issues. In addition to technical aspects of connections and networks, sustainability, markets for electricity and gas, pricing and purchasing, the underlying European and Dutch policy, legislation and regulations and supervision are also discussed.

The Electricity & Gas Basic Course is very suitable for newcomers in the energy world, but also for those who have to deal with energy issues and want to broaden their knowledge. We ask for a contribution towards the costs of the course. We estimate the additional value of the knowledge that is made available at [xxxxxx] euros.

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### **VEMW Energy Purchase Benchmark**

**The Energy Purchasing Benchmark provides valuable information to review and optimize your electricity and gas purchasing where possible.**

Every year members have the opportunity to participate free of charge in the VEMW Energy Purchasing Benchmark. The unique benchmark compares the delivery prices, the purchasing and pricing strategy and the sustainability of purchasing over the previous year (2021). Purchasing performance has been compared for more than a hundred companies. The total volume entered into the benchmark for electricity and gas is almost 9 and 26 TWh of gas respectively. By participating annually, monitoring of performance over time is possible. We value the possibility of using the benchmark for both the electricity and gas purchases of [Your company] at [xxxx] euros.

### **VEMW Wind Consortium**

**With the VEMW Wind Consortium, we gave our members the opportunity to participate in the tender of the Hollandse Kust West wind farm that is being built in the North Sea.**

At the end of 2021, the VEMW Wind Consortium was launched and opened to all members of VEMW. This gave business energy users the opportunity to participate in the tender for the Hollandse Kust West wind farm (1.4 GW). Due to its large volume and companies that invest in sustainability and electrification, the Consortium forms an attractive group for interested parties who want to build the offshore wind farm. For them, a certain sales is important for their business case. It offers members to the consortium the opportunity to share knowledge and to share the costs of legal support and analysis tools. In 2022, intensive discussions were held with potential developers and, after a selection, extensive negotiations were held with a number of providers. Ultimately, a term sheet with competitive conditions was agreed with the party that - in the opinion of the Working Party - offered the best conditions for VEMW members. The term sheet would be converted into a Power Purchase Agreement (PPA) at a profit for each Member of the collective. The disappointment was great when the message that someone else ran off with the loot. However, the initiative is certainly not over. VEMW's supporters look ahead and continue their sustainability plans. The next wind project IJmuiden Ver is awaited with interest, on which the consortium is once again committed.

[Your company] has been a Member of the VEMW Wind Consortium. A Working Party consisting of senior officers from LyondellBasell, Nobian, USG and VEMW led the project. We estimate the efforts or avoided costs for the Members at [xxxxxx].

### **Website**

**We have created a 'Knowledge Bank' on our renewed website, where you will find a wealth of information about energy and water.**



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At the end of August we launched our new website. The design has completely changed. From the homepage you can click through to various parts of the website. With the introduction of the 'Knowledge Bank', we are shaping our ambition to be 'the knowledge center for business users of energy and water'. All important documents on energy and water use are available in the Knowledge Base. Thanks to the very unique and extensive search and filter options, as a member of VEMW you have access to a wealth of information in the field of policy, regulations, supervision, rates and markets. Also new is the 'My VEMW environment'. Here you can indicate which topics are of particular interest to you. The knowledge base messages and news that are relevant to you will then be displayed first. Task Force members can also find the meeting documents in their own environment. The information that VEMW makes available per file on the website is of value to [Your company]. We estimate this at [xxxx] euros.

### **VEMW magazine Inzicht, Energy & Water Update, newsletters**

**We inform you about current developments with various digital publications.**

VEMW publishes the online magazine Inzicht (Insight) four times a year. Insight is digitally distributed among about 1,700 members and relations of VEMW. VEMW produces the Energy & Water Update available between the editions of Insight. This electronic quarterly publication, exclusively for members, provides an overview of new and ongoing developments in the field of European and national policy developments, legislation and regulations. You will also receive our weekly newsletter by e-mail containing an overview of recent developments in the field of energy and water, sustainability and information about VEMW's activities. We estimate the value of the magazine Inzicht, the Energy & Water Update and the newsletters together at [xxxx] euros.

### **Individual support**

**As a VEMW member, you can obtain advice or support via e-mail, telephone or during a visit.**

We advise our members on issues related to energy, sustainability and water. Some issues require further investigation, consultation of colleagues or other experts. VEMW receives requests for support via e-mail, telephone contact and visits. If there was individual support, we value this service at 700 euros per part of the day. This service is included in the membership. In 2022, VEMW has supported 43 members individually with various issues. [xxxx]

### **Helpdesk**

**You can contact the VEMW helpdesk with all your energy and water-related questions.**

We receive numerous questions on a weekly basis that we answer by e-mail or for which we meet physically or by telephone. In contrast to individual support, the helpdesk is about questions that we



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can answer immediately based on available knowledge. Answering such questions is part of membership. We value the availability of the helpdesk at [xxxx] euros.

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## Hydrogen

**We devote a great deal of time and attention to hydrogen: the crucial supply of the future.**

Developments for hydrogen have gained momentum in the past year. These developments are becoming increasingly important to [Your company]: not only because of hydrogen as an energy carrier, but also as a raw material ('feedstock' and 'building block'). The proposed obligation in the Renewable Energy Directive (RED) will put increasing pressure on hydrogen users to accelerate the use of sustainable hydrogen. Hydrogen will also play an increasingly important role in the electricity supply. The report 'Towards a CO<sub>2</sub>-free electricity system in 2035' - to which VEMW contributed - describes the importance of hydrogen for the supply of CO<sub>2</sub>-free power. That is why in 2022 VEMW has devoted more time and attention to this crucial provision of the future. We will continue to do so. In doing so, we focus, among other things, on the design of the incentive framework for the purchase of sustainable hydrogen, the design of the purchase obligation of sustainable hydrogen in the Netherlands and the access to and development of a hydrogen market and the conditions for using the public hydrogen infrastructure. The VEMW efforts in 2022 have not yet been quantified because there is no hydrogen infrastructure yet.

### Hydrogen and decarbonized gas package

**The design of the legal framework is crucial for the future hydrogen network. VEMW is closely involved in this.**

With the hydrogen and decarbonized gas package (regulation and regulation), the European Commission has made a proposal for legislation regarding hydrogen in Europe and strengthening of the legislation for natural gas, which will eventually be incorporated into the Dutch Energy Act 2.0. VEMW is involved in the design of this package through its sister organization IFIEC and the Ministry of Economic Affairs and Climate Policy. We have advocated, among other things, the earlier introduction of regulated third-party access (earlier than the planned 2031; until that year, *negotiated access* applies), stricter regulations on discounts on network tariffs, stricter requirements for hydrogen blending and broadening of the sustainable hydrogen purchase obligation. Negotiations on the gas package will be completed in the coming year, after which the legal framework for hydrogen will be established at European level.

### Delegated Act hydrogen

**VEMW is actively involved in the hydrogen Delegated Act: when is hydrogen green?**

The Delegated Act on hydrogen is a document that will determine the shape of Europe's energy supply. The Delegated Act establishes the definition of sustainable hydrogen/fuels. In addition, this Delegated Act is also referred to from the state aid rules for electrification projects. The Delegate Act, in effect, establishes how electrification projects may obtain their sustainable electrons in order to be classified as sustainable. This is very important for [Your company] because you have to meet



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obligations for the consumption of sustainable hydrogen or if [Your company] wants to use subsidy instruments for electrification. VEMW has actively participated in this discussion by responding to the consultation of the European Commission and by proactively co-writing an opinion from the industry.

### Hydrogen market regulation

**VEMW argues for a limited role for network operators in the production of hydrogen and for a major role for the market.**

When developing a new market, it is important that it is clear which parties take on which roles and what obligations these parties have. Grid operators, for example, must be limited in the roles they are allowed to fulfill, otherwise they will compete unfairly with the rest of the market. Last year, VEMW gave its opinion on the consultation of the Ministry of Economic Affairs and Climate Policy on the regulation of the hydrogen market. In this, VEMW argued for a limitation of the possibilities for the network operator in the production of hydrogen and for a major role for the market.

### Hydrogen quality

**In 2022 we were actively involved in the discussion about the quality of hydrogen in the future hydrogen network.**

Gasunie has committed to a hydrogen quality of 98% purity, so that the old natural gas pipelines can be reused. Those pipes can be polluted by years of use as a natural gas transport pipeline. VEMW has questioned this percentage. For example, it is unclear whether this percentage leads to the lowest social costs, what the influence of higher purity is on commodity costs and what the influence is on the development of the hydrogen market. The Ministry of Economic Affairs and Climate Policy will determine the hydrogen quality and has set out a consultation on the hydrogen quality, on which VEMW has expressed its views. We will also enter into discussions with the ministry to explain our viewpoint and help the ministry to make an assessment based on effectiveness and efficiency.

### Hydrogen certification

**With our position paper *Hydrogen certification* we draw more attention to hydrogen certification.**

Just as with electricity and green gas, certification of hydrogen is necessary in order to earn from the added value of sustainable hydrogen. In addition, certificates are important for [Your company] to demonstrate the lower CO<sub>2</sub> intensity of your production process to your customers and to meet government objectives. The members of VEMW have pushed for a clear industry position on hydrogen certification. This has resulted in the VEMW position paper Hydrogen certification. With this we ask for more attention in the Netherlands and Europe for hydrogen certification and we try to align this with the objectives and needs of the industry.



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## HyXchange

**VEMW is involved in the development of HyXchange: the hydrogen exchange.**

Without an exchange to trade hydrogen - both a forward market and a day ahead market - it is difficult to realize a functioning hydrogen market and to determine what the efficient price for hydrogen is. VEMW is involved in the HyXchange project led by Bert den Ouden (including ex-CEO of the APX exchange). VEMW facilitates this. You can provide your input so that the exhibition meets the wishes of [Your company]. Trading can then be started as soon as possible, creating an efficient price through market forces.

## Connection agreement and transport agreement HNS

**VEMW is committed to good connection conditions with a reasonable and fair distribution of rights and obligations between the future network operator of the hydrogen network and connected parties.**

For the development of the hydrogen network, the conditions for [Your company] to be connected are of great importance. Before the hydrogen network is regulated in 2030, a negotiated access regime (nTPA) will prevail. HyNetworkServices (HNS), the future network operator of the hydrogen network designated by the minister, must offer non-discriminatory and reasonable conditions to network users. It has been decided to hold negotiations in trilogue with the representative organizations Energie Nederland and VEMW. These negotiations concern the connection and transport agreement for the hydrogen network. They give substance to, among other things, the reasonable conditions for metering, liability, force majeure, closing conditions, interruption conditions, socialization of costs and more. VEMW's aim at the trilogue table is to arrive at good connection conditions with a reasonable and fair distribution of rights and obligations between the network manager (HNS) and connected parties. The process is comparable to the conditions that VEMW negotiated with GTS in 2009 and TenneT in 2010.

## NWP and VNO-NCW Hydrogen expert group and other forums

**VEMW is involved in various forums on hydrogen.**

Hydrogen is a subject with many facets: from production and import to consumption. By being part of various hydrogen-related forums, we can effectively represent the interests of energy consumers. For example, via the National Hydrogen Program (NWP), VEMW is involved in drawing up the subsidy instruments and related legislation via both the production and the consumer groups.

Quote on Hydrogen: Jacques van de Worp:

**"VEMW has taken a position when it comes to hydrogen supply, efficient costs and their allocation, certification and access to and organization of a hydrogen market."**



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## Electricity

### Investment plans of the network operators and I13050

**Grid managers will invest more proactively. From 2030, there will be more efficient grid investments and less congestion on the electricity grids. Thanks to VEMW's contribution.**

It is of great importance to [Your company] and future other network users that the networks are realized adequately, efficiently and on time. Crucial in this are the investment plans (IP) of the network operators, in which they explain where and how much they will invest in the next ten years. The network operators' IPs are based on the scenarios in the report 'infrastructure outlook 2030-2050': the choices for network investments ensue from this. These choices lead to concrete cost items. In the past year, VEMW not only provided input on the I13050 and the IPs, but also ensured that network operators involve their stakeholders much more in drawing up the scenarios in the IPs. As a result, the CO2 emission reduction target for 2030 has been raised from -55 to -60% and the network operators can make more accurate predictions. This leads to less grid congestion, allowing [Your company] to invest and electrify sooner. This will have a major impact on your grid tariffs, especially on the electricity grid, as the risk of underestimating the transmission capacity requirement will be reduced. As a result, future congestions will be less.

As a result of VEMW activities, there will be less congestion on the electricity grids in the future than would be the case without VEMW. Because the grid managers invest more proactively, there will be more efficient grid investments from 2030 onwards. As a result, the network congestion costs for the two years 2030 to 2031 are expected to be 3% lower. These congestion costs would otherwise be discounted in the network tariffs. With a very conservative estimate, VEMW assumes constant congestion management costs of EUR 339.7 million, based on the year 2021. The value of these avoided costs in the two years 2030 to 2031 is calculated back to a present value in 2022. 33% of these avoided costs can be divided among our members, via a distribution key based on their consumption. This is estimated to have a financial value for [Your company] of [xxxx].

### National Grid Congestion Action Plan

**In order to limit the economic damage of congestion on the electricity networks, we have been closely involved in the various regulatory and policy processes.**

VEMW's involvement ranges from discussions in and prior to the National Grid Congestion Action Plan (LAN) in both regional and national task forces, to close involvement in the congestion management code amendment decree. In response to the congestion problem in the provinces of North Brabant and Limburg, grid operators TenneT and Enexis announced a halt to connections in this service area. After further investigation, part of this stop turned out to be unnecessary. The congestion problem was the reason for setting up a regional task force and ultimately a national grid congestion task force.

VEMW's participation in the various forums prevented the implementation of a congestion charge for consumers at an early stage. Based on the shared pieces, the congestion charge would lead to higher average network tariffs of 4 euros per MWh. For [Your company], VEMW therefore estimates the value of preventing this on the basis of the congestion charge times your total annual consumption in MWh, namely: [xxxx]

### Congestion in closed distribution systems (GDS)

**VEMW was closely involved in the creation of the code amendment decree on congestion management, with a particular focus on the interests of closed distribution systems (GDS).**

We have been able to prevent the congestion management system, as designed for public network operators, from becoming mandatory within a GDS. This avoids the related administrative costs of, among other things, drawing up congestion reports.

VEMW estimates the administrative costs avoided by preventing the application of congestion management in a GDS at an amount of [xxxx]

### Congestion Management Code Amendment Decree – national application

**VEMW was closely involved in the creation of the congestion management code amendment decree. Partly thanks to the efforts of VEMW, the congestion management system was introduced to prevent incomplete utilization of the electricity system. Congestion management is the alternative to a transport refusal; by applying congestion management, the scarce transmission capacity is used more fully before a network operator is allowed to refuse transmission.**

In the code amendment decree, the application of congestion management is limited with two limits: the financial limit and the technical limit. The financial limit sets a limit on the application of congestion management of EUR 1.02 per MWh that is transported through the constricting network element. The application is also technically limited to a minimum of 110% of the physical transport capacity – under specific circumstances this limit may even be set at 150%. The new rules require network operators to carry out congestion management, within the set limits, before refusing transmission to a consumer or producer. VEMW estimates that a percentage of your consumption is made possible by the application of congestion management, as an alternative to a transport refusal. VEMW therefore estimates the added value of this file at 1.02 euros per MWh (as the value of each MWh for your process) multiplied by 10% of your annual consumption. This results in a value of [xxxx] for [your company].

### Participation in BAS/MFF

**We represent the interests of large consumers in the market facilitation forum and towards the manager of the agreements system (BAS/MFF).**

VEMW's main objective in this dossier is to prevent new regulations from conflicting with the interests of large-scale consumers when the regulations for information exchange and metering processes are no longer established in accordance with the Energy Act in accordance with the Information Code and Metering Codes.

VEMW participates in the market facilitation forum to prevent regulations from being developed that are not in the interests of large-scale consumers. These regulations only concern information exchange (and obligations thereto) and measurement data. VEMW estimates that the controlling function it performs within the MFF has a generic added value of [xxxx].

## Rates electricity grid

**VEMW has put pressure on the Dutch policy maker, the regulator and the network operators to establish transparent and efficient network costs.**

VEMW has provided critical feedback to *method decisions and rate decisions*. The realization of the method decisions is a lengthy process. We are closely involved in fundamental discussions about the method decisions that will determine the tariff methodology from 2022. VEMW's pressure on the various parts of the method and rate decisions means that costs are viewed more critically and must be substantiated more sharply. The real Weighted Average Cost of Capital (WACC) leads to better cost-reflective tariffs, while a nominal WACC enables grid managers to settle their costs with connected parties in advance. VEMW is appealing against the regulator's decision for a 'real WACC plus', whereby ACM opts for a middle ground between a real and nominal WACC. VEMW is the only representative who consistently provides input on the method decisions on your behalf. This systematic input has an overall dampening effect on final rates. It is estimated that this represents a saving of 1.5% of transport-related costs.

For [Your company] these results represent a value of [xxxx] euros. Based on the data known to us, we have estimated which network level you are on. Cost savings of 1.5% are assumed for each rate carrier, such as contracted capacity or peak capacity. Your total consumption or the estimated value of the relevant rate carrier is multiplied by this saving.

## EU consultations

**VEMW is represented on a wide range of subjects within IFIEC.**

One of the main tasks of IFIEC is to respond to consultations at EU level on behalf of large consumers. The European Commission, the Agency of Supervisors (ACER) and the Joint Electricity System Operators (ENTSO-E) organize consultations on important topics. By responding to these consultations, we ask regulatory parties to take the interests of large consumers into account in a timely manner. For example, in 2022, IFIEC provided input to an ACER consultation on a framework guideline for demand response. A framework is then definitively drawn up by ACER and sets the mandatory legal frameworks within which ENTSO-E must draw up new rules.



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## Energy Act

**In 2022, we provided the Ministry of Economic Affairs with solicited and unsolicited advice on the Energy Act.**

In 2022, the Ministry of Economic Affairs will continue to work on the Energy Act. VEMW has been in contact with the Ministry on several occasions and has shared views on specific parts of the Energy Act. In the run-up to the expected discussion of the Energy Act in the House, the most important lobbying elements of the Energy Act have been worked out.

## Flexibility

**VEMW is closely involved in the revision of the large-scale consumption grid tariff system and is negotiating an alternative to this.**

In 2022, VEMW has committed itself to completing the action points from the joint VEMW-TenneT position paper 'industrial flexibility'. This paper has been elaborated, among other things, in the already published white paper 'industrial flexibility' by the Top Sector Energy, which provides more insight into the flex potential. The TenneT 'Industrial ValueFlex Tool' aims to make it clearer to large consumers what the added value of offering flexible power would be for them. Discussions are currently underway with TenneT about how the product specifications for flexible power can be adjusted in order to make the provision of flexibility more flexible. Offering flexibility is also hampered by the large-scale consumption grid tariff system. VEMW is involved in the revision of this system. We contributed to a joint problem analysis and are still negotiating an alternative to the rate system.

## Directing Working Party PIDI

**In 2022 VEMW participated in the directing working Party Program Infrastructure Sustainable Energy (PIDI).**

The PIDI Directing Working Party, led by the Ministry of Economic Affairs and Climate, deals with how the government interprets the management issue regarding infrastructure construction. This includes, among other things, the associated problems with the investment plans, such as long-running permit procedures. The PIDI directing Working Party also deals with the implementation of the Multi-year Infrastructure Energy and Climate Program (MIEK) and its legal safeguards, and directing issues surrounding regional MIEKs. Within this working party direction, VEMW carried out the preliminary work in 2022 to arrive at a legal safeguard for the MIEK in 2023. With this guarantee, we want to give large-scale consumers the necessary certainty about infrastructure investments in order to be able to make large-scale investments in their consumption installations.

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### **LFDD (Low Frequency Demand Disconnect)**

**We are committed to a harmonized implementation of the LFDD in different member states in order to reduce the risk of an uneven playing field.**

In December 2022, the LFDD scheme came into effect. Since then, in all European member states, demand disconnection must take place automatically with a frequency reduction from 49.00 hertz. The LFDD must prevent a total blackout and is only activated in an emergency. VEMW will remain involved at European level in the implementation of the scheme.

### **VoLL – research contribution**

**VEMW has contributed to a study into the Value of Lost Load.**

ACM commissioned consultant Ecorys to conduct a study into the Value of Lost Load (VoLL) in order to estimate how much money connected parties would be willing to pay to prevent a one-hour power cut. VEMW was also interviewed for this study. The research results show that large consumers in the Netherlands attach great value to uninterrupted power supply. At the same time, this outcome is also a result of the chosen research method; another method could lead to a higher or lower outcome. The research serves as information for future policy considerations. For example, it helps ACM to estimate which costs are justified to guarantee security of supply. A high VoLL can be a reason to take more (expensive) measures to prevent supply interruptions.

### **Design of research on voltage quality**

**VEMW is involved in the research design and monitoring of the development of voltage quality, with the aim of achieving an optimal balance between high voltage quality on the one hand and affordability on the other.**

In 2023, the regulator ACM will start a renewed investigation into the development of the voltage quality on the Dutch electricity grids. Important factors here are the extent to which the network capacity shortage (congestions) and the increase in the share of sustainable generation influence the voltage quality. A cost consideration is made here: higher voltage quality requirements can lead to more expensive installations, but also mean that installations need to be less robust against disruptions of voltage quality standards.

### **Alternative transport rights – various subjects**

**VEMW advocates a specific interpretation of an alternative transport law that offers large-scale consumers the necessary security to make investments in flexibility with a longer payback period.**

Connected companies have to contract transmission power in order to use the transmission capacity on the public electricity grid. In order to make optimal use of the scarce transport capacity,



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alternatives to the existing firm transport rights are being discussed in various forums. With firm transport rights, affiliates are at all times entitled to use the contracted capacity. To this end, a code amendment proposal was discussed in an interim inserted GEN and submitted to ACM without support. At the same time, VEMW took part in various meetings of an informal Working Party, led by network operators, in which non-firm capacity was developed that could count on more support. In response to these two developments, ACM launched a consultation on 'alternative transport rights and use-it-or-lose-it', to which VEMW submitted an opinion. With our opinion, we advocate a specific interpretation of an alternative transport law, as further explained in a later memorandum 'clauseerd transport law'. The stipulated transport law, as described in VEMW's memorandum, offers large-scale consumers the necessary security to make investments in flexibility with a longer payback period.

Chiel Bakker:

**“In 2022 the congestion problem came into the spotlight. VEMW is continuing to work on a clean solution to the network capacity shortage in which the problem is not placed unilaterally with large-scale consumers.**”



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## Gas

**Fossil fuels such as gas are being phased out. VEMW has made efforts in 2022 to limit the consequences for industrial gas customer.**

While the electricity supply is experiencing strong growth, the natural gas supply is shrinking. Shrinkage, because fossil fuels (coal, petroleum, natural gas) are being phased out in the context of the climate objectives. We are already seeing a trend that the contracted capacity (calculation volumes) of gas on GTS's national network is decreasing annually. When the allowable efficient costs are stable, this means an increase in rates. Good news is that natural gas pipelines can be reused to transport hydrogen. In principle, this is much cheaper than laying new pipelines, provided the costs are not unnecessarily high. A third important trend is the energy crisis. Commodity costs not only reached a historically high level in 2022, but security of supply also seemed to be at stake. This led to many questions - also at [Your company] - about a possible shortage: who will be disconnected and in what order? VEMW provided a lot of input in 2022 to minimize the consequences of these developments for [Your company] where possible.

### Transfer gas assets to hydrogen network

**VEMW has advised ACM on the costs of reusing GTS (GasUnie transport services) pipelines for the hydrogen transport**

In the coming years, the use of the natural gas network will decrease, with lower calculation volumes (contracted transmission capacity). GTS pipelines will become superfluous and can be released for reuse as a hydrogen pipeline. The new hydrogen infrastructure of network operator HyNetworkServices (HNS) can take over these pipelines and use them at a lower cost than the construction of completely new hydrogen pipelines. According to VEMW, the transfer of these assets from GTS to HNS must take place via the current regulated asset value at the time of transfer. HNS grid users will pay for those transferred assets and GTS grid users will have the transfer proceeds deducted by means of a grid tariff reduction. We have shared this view with regulator ACM and with HNS. ACM has adopted our position in an advice to the Ministry of Economic Affairs and Climate Policy. The efficient costs that can be allocated to the transport of natural gas and hydrogen respectively will therefore also be included in the transport tariffs for natural gas and hydrogen respectively.

The total costs for the transfer of the assets amount to 460 million euros according to HyWay27. The difference in asset value compared to Gasunie's method is 5%. This amount will be deducted from the rates. Consumers pay 60% of the tariffs and 33% of the gas is used by industry. The result of our efforts is distributed by: a distribution key based on the consumption of [Your company]. The calculation results in a value of [xxxx].

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## Gas protection and recovery plan: tender regulation and shutdown sequence

**When there are physical gas shortages, we see the solution in a tender arrangement and not in mandatory disconnection. This proposal has received political support.**

Especially at the beginning of last year, just after the invasion of Ukraine, there was a great fear of physical gas shortages. Subsequently, the Dutch government initiated the first phase ('alerting') of the so-called Gas Protection and Recovery Plan (BHG) and has further elaborated this for possible subsequent phases ('alerting' and 'emergency'). It turned out that the Ministry of EZK did not have a well-developed plan for the emergency. In concrete terms: who must be switched off and in what order? And - because such a mandatory load shedding is a drastic measure that has major consequences - a voluntary load shedding based on a tender scheme for grid users (market forces) can postpone or even prevent that obligation.

In this context, VEMW has pointed out the major risks associated with the forced downscaling of large-scale consumers in the event of an emergency. In addition to considerable economic damage, there is also the risk of accidents and damage to installations. In addition, VEMW advocated a voluntary tender with which companies make agreements in advance about possible interruptions in the event of a calamity. The result: political support for a tender scheme (elaboration: Ministry of Economic Affairs and Climate Policy) and a much more realistic picture of where and how the industry is affected and will be affected when the emergency is declared. We have also charted the chain effects between companies and industries. At the end of 2022, the Ministry is still working hard to determine both schemes (tender and load shedding).

We include a fixed amount of [xxxx] as a basis for the efforts made by VEMW for the tender scheme, the attention to chain effects during interruption (Berenschot study) and clarity about the mandatory interruption.

## Groningen gas

**VEMW considers it unwise to permanently and irreversibly close down the Groningen gas field. We advocate keeping the production field on the *pilot light* for emergencies.**

Crucial to security of supply is the Netherlands' own production of gas. In previous years, the security of supply of low-calorific gas depended solely on our own production from the Groningen field. Low-calorific gas is increasingly being produced from high-calorific gas (mixing of gas flows, nitrogen injection). From the point of view of security of supply, low-calorific gas could be produced entirely from high-calorific gas. However, the delivery of the new nitrogen plant has been seriously delayed, a shortage may arise on a cold winter day and we are in the middle of a geopolitical conflict with no Russian gas and high demand for liquefied gas (LNG). In this light, VEMW considers it unwise to close the Groningen gas field by (irreversibly) sealing the wells. We have raised this problem with GTS and the Ministry of Economic Affairs and Climate Policy, among others. We have given our view on the calculation method for the conversion of high-calorific gas into low-calorific gas. As a result, GTS can provide the minister with better advice on the required extraction of gas from the Groningen field.





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We believe it is necessary for the Groningen field to remain open on a pilot light, so that in an emergency the Groningen field can continue to produce.

VEMW has helped ensure (via GTS, EZK and Parliament) that the production field remains on the pilot light and has not been definitively closed. That is why we have included a lump sum [xxxx] here for our efforts.

### Gas storage filling

**Politicians have opted to fill the gas storage facilities for at least 90%, as also advised by VEMW.**

From the start of the energy crisis, VEMW has emphasized the importance of the security of gas supply. We have frequently pointed out in the media the need to fill the gas storage facilities and indicated that the storage facilities should be filled beyond the 80% required by the EU. Politicians have adopted this and set a minimum of 90%. According to VEMW, the security of gas supply is of national importance and risks in that area must be covered from the government's general resources. However, the ministry has opted to add the costs of filling the gas storage facilities to the transport tariffs. The scheme has proven to be effective: the Dutch gas storage facilities were almost completely filled before the start of 2022-2023 winter. The costs turn out to be much lower than budgeted. VEMW's plea for continuation of the scheme is followed by EZK, which reduces the chance of gas shortages.

Failure to fill the gas storage facilities would have a major impact on the price of natural gas. That is why VEMW has calculated a value of this dossier on the basis of the natural gas price. VEMW assumes an increase in the natural gas price of 5% compared to the annual average of 2022. This is a value of 75 euros/MWh. VEMW believes it has exerted an influence of approximately 5% on the filling of the gas stocks. This results in an amount of [xxxx] for [Your company].

### Joint Purchase Mechanism and temporary State aid framework

**VEMW is actively involved in proposals to jointly purchase gas at EU level and proposals about state aid. We provide input on both the position of the Dutch government and via IFIEC to the European Commission.**

The European Commission has come up with several proposals to make Europe more effective in dealing with the energy crisis. At the start of the crisis, the European Commission temporarily relaxed the state aid framework, so that countries could give more support to the industry. VEMW has actively lobbied for the use of the possibilities within this state aid framework. The Dutch government is currently actively monitoring whether support is necessary for energy suppliers, to prevent crucial system players in the energy domain from falling over due to the high guarantees that are necessary. In addition, the European Commission has proposed purchasing gas jointly with suppliers and large companies in the Member States.

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## Network rates GTS and RNB

**Gas transport rates have risen, partly because GTS is allowed to write off investments more quickly. VEMW appealed against this. The judge has not yet ruled.**

The gas transport tariffs of GTS have increased by 18% in 2022 compared to 2021: 12% at exit points (from 2.2902 to 2.5710 euros/kWh/hr/yr) and 22% at entry points, taking into account a cost distribution of entry:exit from 40:60. Main reason: the calculation volumes (contracted capacity) decrease sharply due to a reduction in exports (entry: closure of the Groningen field) and a decrease in gas consumption (exit: sustainability through energy conservation and electrification). The increase is also due to the fact that GTS is allowed to write off investments more quickly. VEMW has appealed against the ACM Method Decision 2022-2026 to accelerate the amortization of costs. However, this ACM decision applies until the court has issued a ruling. In addition to the calculation volumes and accelerated depreciation, some corrections are applied to GTS's permitted income (+4%).

The average increase in the gas transport tariffs of regional network operators amounts to 1-5%, with one outlier. Members of Enduris (Zeeland) were faced with sharp increases, because the your company merged with Stedin (South Holland and Utrecht) on 1 January 2022.

For those directly connected to GTS's national gas transport network, we have derived the transport capacity from the annual volume (m<sup>3</sup>/year) times the energy content divided by 8,000 hours of operating time. Based on the data known to us and the tariff increase at exit points of 12%, we have determined the result for [Your company] at [xxx]

## State support gas crisis

**Thanks to temporary crisis measures from the European Commission, the Dutch government can support companies. However, VEMW notes that the rules are not being applied.**

Russia's invasion of Ukraine has a major impact on energy prices. With the expectation that energy prices will remain high for a longer period of time and in view of their impact, the European Commission has taken temporary crisis measures for a framework to support the economy. The measures offer the Dutch government opportunities to support companies (including SMEs). VEMW has taken a positive attitude to this, but unfortunately has to conclude that the temporary rules have only been applied to a limited extent.

Jacques van de Worp:

**“The year 2022 was a historic gas year with high and volatile gas prices and uncertainty about security of supply: are there enough alternatives to Russian gas and who should be disconnected in case of a shortage?”**

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## Water

### Cooling water discharge policy

**VEMW has ensured that the new rules for discharging residual heat do not apply to existing situations. We have also created a checklist for the exchange of information between the discharger and the drinking water your company.**

In 2022, the government decided to adjust the policy on the discharge of residual heat. The change means that the maximum temperature will be reduced from 28 degrees to 25 degrees Celsius. This means that the space for discharge decreases. The idea is that this will encourage companies to reuse residual heat. This adjustment is not favorable for energy companies and industrial companies. VEMW has ensured that this adjustment only applies to new situations and not to existing situations. As a result, industrial companies that cool with water do not have to make certain investments. Incidentally, VEMW will investigate in 2023 to what extent a reconsideration of the policy adjustment

We estimate that our efforts for industrial users of cooling water can lead to savings of approximately [xxxxx] euros per year. This mainly concerns avoided costs as a result of investments that can be omitted.

Since 2019, companies that discharge process water in the vicinity of an intake point for drinking water supply are subject to an information obligation. This means that, in the context of applying for a discharge permit, they must inform the drinking water your company about the intended discharge. VEMW, together with VNCI and Vewin, the trade association of drinking water companies in the Netherlands, has developed a tool that companies and drinking water companies can use to exchange relevant information between the discharger and the drinking water your company. It is a template or a checklist with topics that should be discussed in the conversation. Consider, for example, data about the location of the discharge and the intake point and data about drinking water-related substances, including properties such as solubility and degradability. Subjects such as the emergency procedure are also part of the checklist.

The efforts of VEMW have given substance to an agreement that was laid down in the Immission Test Handbook in 2019. We provide a practically usable tool with which the permit procedure can be completed more efficiently. Moreover, the template offers good conditions for unambiguous coordination between the discharger and the drinking water your company.

### Development of approach of the water framework directive

**Partly due to the efforts of VEMW, a plan has been developed for a significant decrease in the risk that companies will be held responsible for not achieving the WFD targets in 2027.**

The aim of the European Water Framework Directive (WFD) is for all water in Europe to be clean and healthy by 2027 at the latest. This is not optional: the WFD is European legislation that has been

enshrined in law by all Member States. Although the water in the Netherlands has become cleaner in many places, the Netherlands is not doing very well in Europe. In 2022, VEMW contributed to an action plan for (additional) measures to achieve the WFD targets for chemical substances. The idea is that the business community, together with the Ministry of I&W, RWS, the water boards and knowledge institutes, determine which substances are involved, what the relevant sources are and which companies or industries (possibly) have a WFD problem. Subsequently, the companies in question carry out a scan to determine which processes lead to the emission, after which a plan of action is drawn up aimed at prevention and approach to the source.

### Drinking water saving

**We have been involved in the discussion about water conservation for some time and, at the request of the minister, we will also remain closely involved in the elaboration of the plans.**

Due to climate change, extreme situations are increasing, we are faced with higher temperatures, more evaporation and greater precipitation deficits in the summer. The drought we have experienced in recent years makes it necessary, on the one hand, to be able to retain and store more water and, on the other hand, to use water more sparingly. In 2022, the cabinet has decided that large users must reduce the use of drinking water by 20% by 2035. VEMW makes constructive contributions to the discussion about water conservation. As a result, the Minister has stated in a letter to the House of Representatives that VEMW will be closely involved in the further elaboration. We have also urged the government to opt for a nuanced approach that we believe to be feasible, taking into account the diversity of water users and the feasibility and action perspective.

### Future fresh water supply

**Following the evaluation of the drought in 2018 and 2019, VEMW has proposed creating a new instrument: the water profile. In 2022, the instrument will be further developed and applied at more companies.**

A water profile provides insight into the water interests of an industrial water user. Basic data about the water use of an industrial your company is presented in a clear way in a specially designed template. In 2021, a pilot was carried out in the western port area in Rotterdam on behalf of the Ministry of Infrastructure and Water Management. VEMW was closely involved in this as a member of the steering committee. The pilot proved successful: the water profile contributes to providing insight into the water interests of the industry and thus to the quality of decision-making in the event of a (threatened) water shortage. The roll-out will start in 2022 in various freshwater regions. We are involved in this at VEMW.

The water profile enables water-dependent companies to quickly gain insight into their own water supply and its vulnerabilities. It can also form the basis for water balances, which accurately show

how the water can be used in the various processes. Our efforts avoid for you the costs associated with hiring advice.

Thanks to the efforts of VEMW, the companies for whom a water profile has been drawn up have realized a saving of [xxx] euros. This concerns consultancy costs that could be avoided.

## Legionella in biological AWZI (wastewater treatment plant)

### **In 2022, VEMW held the first discussions about legislation that should prevent legionella in**

In 2017 and 2018, there were two incidents in which two industrial wastewater treatment plants were identified as a likely source of Legionella patients in the area. As a result, companies with a biological water treatment plant are expected to control the risks of the growth and spread of legionella. In recent years, VEMW has emphatically profiled itself as a representative of companies that may be involved with legionella. For example, we have made agreements with environmental services, commissioned our own research among the grassroots and insisted on a guideline for legionella prevention in AWZI. Such a guide should provide companies with clear guidelines for managing risks and ensure that the companies involved are treated in an unequivocal manner by the competent authorities. A guide will be completed in 2021 under the direction of the Ministry of Infrastructure and Water Management. VEMW has actively contributed to this. The document provides concrete tools for the inventory, analysis and assessment of risks and at the same time offers sufficient scope for a tailor-made approach. The next step is to formulate legislation. To this end, we from VEMW entered into discussions in 2022 with the ministry and other stakeholders.

The efforts made in 2021 and 2022 have led the national government to make agreements with environmental services that mean that water treatment plants do not have to be covered. For [Your company], this has led to savings of approximately EUR 300,000 per installation. This saving is based on the total avoided investments associated with the realization of a roof over your (biological) treatment plant. Based on a depreciation period of five years, this means a saving of [xxxx] euros per year.

## Rates and charges

### **Partly due to the efforts of VEMW, it has been ensured that there is a controlled development of various water (related) tariffs.**

VEMW members pay different water rates and levies. [Your company] pays to the water your company for the drinking or industrial water that is purchased and to the water manager (water board or Rijkswaterstaat) for the process water that is discharged indirectly (to the sewer system) or directly (to surface water). A sewerage levy is due to the municipality and a groundwater levy to the province if groundwater is extracted. Partly due to the efforts of VEMW, it has again been ensured that, despite the pressure on the costs of water management, there is a controlled development of



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the various water (related) tariffs. There is, however, a significant increase for the drinking water tariffs. This is related to sharply increased costs for energy and materials, a rising demand for drinking water, growing pressure on the quality of the sources and an increasing task to replace underground infrastructure.

VEMW's efforts have led to a tempering of drinking water rates. We estimate that this amounts to a saving of 1.5 percent. At an average drinking water rate of EUR 1.05 per cubic meter, this leads to savings of approximately EUR [xxxx] for [Your company].

Quote Water Roy Tummers:

**“At the end of 2022, the government will present the contours of the national water policy. Water and soil are leading in the spatial planning of the Netherlands. The choices made by the Cabinet will also have significant consequences for business water.”**

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## Climate

### **A VEMW-IFIEC study shows that the uneven playing field in Europe is mainly caused by the sovereignty of member states.**

The year 2022 has been dominated by the European Commission's 'Fit For 55' and 'RePowerEU' packages. Proposals have been made for amendments to twelve existing and three new directives and regulations. Once again, attention was paid to the uneven playing field in Europe. A VEMW-IFIEC study showed that this is not so much caused by a failure of the market or a lack of infrastructure that hinders that market. The cause lies much more in the sovereignty of Member States with regard to the interpretation of their own fuel mix (gas, nuclear energy, lignite, coal), subsidy instruments ('carrots') and taxes and levies ('sticks').

### **Fit For 55 & RePowerEU**

#### **VEMW has informed members extensively about the Fit For 55 package.**

The European Commission's proposals from the Fit For 55 package and RePowerEU will have a direct and major impact on Dutch industry. Not only the EU ETS, but also standards in the field of hydrogen and sustainable electricity consumption will have a direct and indirect impact on the energy supply. Last year, VEMW closely followed all proposals and provided feedback to her members on progress in Task and Working Parties.

By providing information about the Fit For 55 package, end users can better anticipate European policy, assess the consequences of the policy and prepare an adequate response for their business operations. VEMW determines the value of this file by multiplying the number of hours we put into the file by the hourly rate of a policy adviser and dividing it among the members. This results for [Your company] in an amount of [xxxx].

### **Working Party additional task and CO<sub>2</sub>-free electricity system**

#### **VEMW has actively contributed to the reports “Pull out all the stops” (“Alles uit de kast”) and Towards a CO<sub>2</sub>-free electricity system in 2035.**

Last year, the electricity table had its members conduct two studies into the tasking for the future energy system. The research reports set out the renewable energy need for 2030 and the need for CO<sub>2</sub>-free adjustable capacity for 2030 and 2035 to indicate what is needed to guarantee security of supply while meeting the objectives of the coalition agreement and European policy. These reports are influential because they emphasize to the minister the magnitude of the task, the importance of security of supply and the role that industry can play in this. The report on CO<sub>2</sub>-free adjustable capacity also points to the importance of a level playing field between various flexibility options, including Demand Side Response.

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## National tax on CO<sub>2</sub>

The Dutch government has decided to introduce a national CO<sub>2</sub> tax from 1 January 2021 for direct emissions from industry. This is part of the Climate Agreement and is in addition to the existing pricing by the European Emissions Trading System (ETS). VEMW has been involved with sector organizations in the implementation of the levy. A levy that came about under political pressure because the ETS price was so low that there was hardly any incentive to immediately take emission-reducing measures. The CO<sub>2</sub> levy links a price to the industrial emission of a ton of CO<sub>2</sub>. In 2022, that price was 41.75 euros. The rate will then increase every year until 2030. A decreasing proportion of industrial emissions is exempt from the levy. The ETS price has now risen to such an extent (above 50 euros/ton) that the material value of the national levy will also be marginal in the year 2022.

## Cogeneration (CHP) Tax review

**VEMW is against the proposed CHP tax reform. We have explained our position in detail to the Ministries of Economic Affairs and Finance.**

In anticipation of a revision of the Energy Tax Directive (ETD), the government intends to abolish the Energy Tax exemption for CHP (> 10 million kWh/year). The reason: although a high-efficiency CHP is an energy-saving technology, it is fueled with natural gas. The use of fossil fuels, including natural gas, should be taxed and no longer rewarded. VEMW considers this intention undesirable due to the increasing costs for companies with high-efficiency CHP and the policy neglect of flexible capacity in the industry. In the coming years (transition to sustainable capacity), this will lead to an increase in scope 1 emissions (behind the meter) and scope 2 emissions (electricity production plants). The network costs (TenneT and DSOs) will increase further due to a reduced use of CHP (loss of contribution to system integrity). The flexible capacity is also more than ever necessary for the integrity of the electricity supply system in this phase (2020-2030) of the energy transition. VEMW has extensively discussed these aspects with the Ministries of Economic Affairs and Finance.

We attribute the estimate of the result of our efforts to 10% of the electricity production from that installation (2.5% of the taxed gas input) that is supplied to the public electricity grid. Because we do not have the data of all installations, we take as a starting point a CHP of 20 MW with an operating time of 4,000 hours/year: 80,000 MWh times 0.025 times 2.5 euros. In that case, we believe we can state an amount of [xxxx] (per CHP) as result.

## The EU-ETS Emission trade system

**Through IFIEC we are involved in the introduction of CBAM and the ETS revision.**

The European emissions trading system ETS is being reviewed as part of the Fit For 55 package and an intended introduction of a Carbon Border Adjustment Mechanism (CBAM). CBAM will tax the CO<sub>2</sub> component of a number of products imported from outside the EU. The aim is to create a more level playing field and thereby protect European industry.



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An important aspect of the ETS revision is an extension to other – now non-ETS – sectors, such as mobility and the built environment. The opt-out arrangement is also under discussion. The Commission wants to discourage companies from leaving the ETS and is turning two buttons: the limit (currently 25 MW installed capacity) and the time (5 years instead of 1 year).

### **SDE++ subsidy scheme - new round**

**VEMW is active in the industry's SDE++ Working Party, which investigates which new technologies can reduce emissions, but which still have an unprofitable top, for which no SDE++ subsidy is available.**

In 2020, the SDE subsidy scheme will be expanded. Not only renewable energy production is stimulated, but also emission-reducing measures in industry (SDE++). By subsidizing the unprofitable top (ORT), the SDE++ focuses on cost reduction and upscaling. VEMW is represented in the industry's SDE++ Working Party. In consultation with policy maker EZK and calculator PBL, this Working Party investigates which new technologies have the potential to reduce emissions cost-effectively, but which still have an unprofitable top. In 2022, these included the multi-stage heat pump (process efficiency and electrification) and the hybrid glass furnace. Both are not yet included in the scheme but are under serious consideration for the 2023 round. The quantity of eligible CCS (in Mton) has also been increased.

### **CBAM**

**VEMW is involved in the introduction of CBAM through IFIEC.**

CBAM (Carbon Adjustment Mechanism) is an important part of the European Fit For 55 package. The mechanism should stimulate the import of goods (products in carbon-intensive sectors) that meet the high climate standards of the 27 Member States, by companies from outside the European Union. CBAM aims to achieve a fair regulation for imported goods and to promote a level playing field for companies that produce in the European Union. Partners from outside the Union should be encouraged to participate in climate efforts. The introduction of CBAM must go hand in hand with the abolition of the free EU ETS emission allowances for the industrial sectors concerned. This abolition is part of the revised EU emissions trading system (ETS).

### **Nitrogen: NO<sub>x</sub>, NH<sub>3</sub>, N<sub>2</sub>O**

**In 2022, VEMW again drew attention to the business climate in the Netherlands. This is under pressure due to uncertainties and delayed permit granting as a result of the nitrogen problem.**

At the end of 2022, the Remkes Committee, based on a study, advised the government on a long-term structural approach to the nitrogen deposition problem (NO<sub>x</sub>, NH<sub>3</sub>, N<sub>2</sub>O). The advice opts for a generic approach to tackling NO<sub>x</sub> emissions, unless the area analysis shows that there is a 'peak



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load'. Differentiated, area-specific customization is central to the reduction of NH<sub>3</sub> emissions. Although industry makes a relatively small contribution to the problem, it also applies to peak loaders in industry that accelerated reduction of nitrogen deposition and sustainability is necessary. VEMW has investigated that the ten largest NO<sub>x</sub> and the three largest ammonia emitters stand out in terms of industrial emissions (peak load). Nevertheless, the government is still focusing on a larger group of fifty companies, with stricter permits and accelerated sustainability and agreements in 2023. The government wants to join the tailor-made approach and will evaluate after a year whether this has yielded sufficient results.

## State support EEAG

**We have emphasized the need of more clarity on the state aid rules of the European Commission.**

The European Commission has committed to amending the state aid rules ('Guidelines on State aid for environmental protection and energy', EEAG). The adjustment is intended to stimulate the energy transition instead of hindering it unnecessarily. The state aid rules create a framework for financially and economically supporting companies for emission-reducing and energy-saving measures, without giving those companies an advantage over competitors in other EU Member States. VEMW has successfully argued for more clarity via EZK (in collaboration with VNO-NCW) and the European Commission (presidency of the IFIEC Taskforce EEAG): we have done this via so-called 'guiding principles' and the interpretation of subsidy schemes, such as the SDE++ in the Netherlands, which are a good and inspiring example of how things can and should be done when it comes to preventing prohibited state aid. It should become clear in 2023 whether this actually contributes to improving the (level) playing field.

## Taskforce Climate Action Energy Enabling Pricing (CAEEP)

**VEMW chaired Taskforce CAEEP, an ad-hoc Working Party of IFIEC.**

This Working Party has investigated whether the existing 'Energy Only' market model for electricity will still suffice when the share of renewable energy in the fuel mix continues to grow. This model is being questioned by stakeholders, because wind and solar have low marginal costs and the market price is determined in most hours of the year by a fossil power plant (coal or gas) with high marginal costs. In line with ACER's advice to the European Commission, the Taskforce has come to the conclusion, after extensive consultation and research, that the market model works, even though we do not always find the results of the model very welcome. There is also price convergence between Member States. However, possibilities can be looked at to make the market model work better and to remove any perverse incentives.

Yet the energy costs of companies in the Member States differ. However, this is caused by the sovereignty of member states when it comes to their fuel mix, incentives and tax instruments.



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Unfortunately, these differences have only increased in the corona years (2020 and 2021) and during the energy crisis (2022).

### Energy saving obligation for ETS companies

**VEMW set up and completed Project 6-25 with FME to support members in short-term energy savings. This project with voluntary participation is an alternative to the Energy Saving Obligation, and can deliver 4 to 6 Mton emission reduction in 2025.**

In 2022, the Ministry of Economic Affairs decided to introduce an Energy Saving Obligation for ETS companies from 1 January 2023. A budget of 56 million euros has been allocated to enforce this legal obligation. Together with VNO-NCW, FME and VNCI, VEMW has calculated that such an obligation will lead to an emission reduction of 0.4 to 0.6 Mton on a target of over 20 Mton in 2030. stand, absolutely do not weigh against it. VEMW continues to fight with FME for the continuation of Project 6-25. This project by, for and by companies, can deliver 4 to 6 Mton emission reduction in 2025 through stimulation and with far fewer resources.

Project 6-25 screened 40 industrial companies. The project was open to all ETS companies to investigate which energy saving opportunities come into view. VEMW has made an important contribution to this project.

[Your company] participated in Project 6-25 and thus obtained an advantage that we value at a fixed amount of [xxx], or [Your company] did not participate in Project 6-25 and therefore missed an opportunity to receive [xxx] worth of advice for [Your company].

### Indirect cost compensation (IKC)

**We have been campaigning for years for the IKC scheme, which is intended to prevent companies from paying twice for CO<sub>2</sub> emissions.**

The IKC scheme compensates companies for higher energy costs charged on by energy producers. It concerns costs for the ETS allowances that electricity producers have to buy and pass on when supplying that electricity. The aim of the IKC scheme is to protect companies that use a lot of electricity and are sensitive to 'carbon leakage' against those indirect costs for CO<sub>2</sub>. This prevents them from paying twice for CO<sub>2</sub> that they emit themselves and that is included in the purchase price of electricity. VEMW has been campaigning for years - together and in consultation with VNO-NCW and FME, among others - for the compensation scheme from the point of view of a level playing field. The 2022 national budget includes 81.6 million euros for IKC. However, while Germany largely uses its ETS auction revenues to compensate the industry, the budget in the Netherlands is being reduced (still 179 million euros in 2020), while auction revenues are rising due to the increased CO<sub>2</sub> price

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### White paper on heat recovery

**A VEMW Working Party has investigated why there is an impasse in the realization of heat networks.**

The Ministry of Economic Affairs and Climate Policy is working on an amendment to the Heat Act, which will include a revision of the no-more-than-usual principle (nmda). We are also looking at a regulatory framework that can break through the impasse in the realization of heat networks and the decoupling of industrial residual heat. A VEMW Working Party has investigated the possible reasons for the impasse and the preconditions needed to break it. After all, it is not the case that industry and waste incineration plants do not want to disconnect for useful reuse. The most important conclusion included in a VEMW white paper: a residual heat project is always tailor-made. Technically it is often not complicated, but organizationally and financially-economically it is. There are lessons to be learned from the green gas dossier.

### MIDDEN: update on industry data

**It became increasingly apparent that the government uses outdated data for policy substantiation and support. Because of that VEMW has insisted on an up-to-date dataset.**

PBL and TNO started the MIDDEN initiative in 2018: Manufacturing Industry Decarbonization Data Exchange Network. This network focuses on building a knowledge base for decarbonization opportunities and is shared and recognized by all stakeholders. VEMW has successfully insisted on this through stakeholder consultations with PBL and TNO, because it became increasingly apparent that the government uses outdated data for policy substantiation and support. This is undesirable and can even be disastrous for the implementation of energy and climate objectives. Up-to-date information can lead to new insights, to the benefit of Dutch industry and the economy as a whole. MIDDEN has been collecting up-to-date information on Dutch industrial sites, processes and products since 2018, along with a wide range of decarbonization options for those processes. The information comes from companies themselves and has been collected by PBL, TNO and a number of universities. The inventory work will almost be completed in 2022. To guarantee applicability, all findings have now been verified with the industrial companies themselves. VEMW has noticed that the work has not been in vain: the way to the current dataset, to which we have made an important contribution, is being found more and more and a framework is being developed to keep the data up to date. .

The MDDEN initiative only concerns industry. VEMW has made an important contribution to the updating of data. We estimate your member benefit based on the following basis: the old usage data was based on the past. A past in which you used more electricity and gas than in 2022. Per MWh of annual consumption we charge: 1 euro (reference: 0.5% of 230 euros/MWh). We estimate that our efforts for [Your company] can lead to savings of [xxxx] euros per year.

Jacques van de Worp on Climate:



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**“After adopting the Green Deal, the European Commission came to a concrete implementation with the Fit For 55 package: amendments to twelve existing and three new directives and regulations. These will all be implemented in Dutch legislation and regulations.”**



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## Text accompanying the fileholders photographs

### Jacques van de Worp

"The year 2022 is a historic year in many ways. The war in Ukraine, disrupted supply chains, unprecedentedly high energy prices and more and more visible bottlenecks in the electricity infrastructure. That promises something for the coming years. It won't get any quieter, with the necessary unplanned changes in addition to planned!"

### Eric Picard

"Every year there are a number of projects in which I am intensively involved. At the beginning of the year, we are preparing for the elaboration of the Customized Annual Report. It is called 'tailor-made' because we calculate as well as possible for you as a member of VEMW and estimate what the impact can be for your company. Together with my colleagues, we discuss which variables there are, which characteristics we need and for whom the subject is important. With that input I then make the calculations for each your company. After a thorough sanity check, we determine the results for each file. We combine the results in the report, for which we all prepare our texts. A great project that I enjoy working on. With the Tailor-made Annual Report, we provide you with a compact overview of the issues at stake. The indicative amounts also give you an idea of what is at stake for [Your company].

Another annually recurring project is the VEMW Energy Purchasing Benchmark. In the benchmark we anonymously compare the purchasing prices of electricity and gas with other Members who have a similar purchasing profile. We not only look at the prices, but also ask questions about the purchasing and pricing strategy and sustainability. Last year we adjusted many questions and answer options so that they are now more in line with practice. More than 100 companies participate annually, with a total volume of approximately 26 TWh of gas and 9 TWh of electricity. The great interest supports me in the idea that we meet a need with this service and that we should continue to do so. Are you participating again this year?

Finally, a project that started in 2021, but gained momentum in 2022. Together with a group of thirteen companies, we formed a consortium for the Hollandse Kust West tender (an offshore wind farm to be built, with a capacity of 1.4 GW). As secretary, I was part of the Working Party together with representatives of three members. The aim was to conclude a deal for the supply of sustainably generated energy with the developer who, in our opinion, had the best credentials to win the RVO tender. Unfortunately, we did not win this tender. However, an enormous amount of knowledge and experience has been gained in the consortium. We can put them to good use for the tender of a new wind farm: Windpark IJmuiden Ver.

In short, an exciting year with activities and projects to which I was happy to contribute for you."



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### Roy Tummers

“The concept of transition has been subject to inflation lately. In every domain where something needs to be done, the term transition is added. With that it loses power. Nevertheless, the changes that are coming our way in the water sector do deserve to be labeled transition. After we in the Netherlands for centuries were almost exclusively concerned with the question of how we could protect ourselves against too much water, the reverse issue is now urgently pressing. In 2022, the largest drinking water your company in the Netherlands will have refused no less than 19 requests from companies to supply more drinking water. In order to alleviate the pressure on water availability, the cabinet has indicated in the letter to the House of Representatives 'controlling water and soil' that large users must reduce their drinking water consumption by 20% by 2035 at the latest. VEMW is happy to contribute to this savings ambition. Sustainable and circular use of freshwater is of great importance. Business water users are happy to take up the gauntlet, but they cannot do it alone. The government and water managers have an equally important role. They must create the right conditions for sustainable use of water. This means, for example, that the water must be retained longer, especially in areas where no external water supply is possible. Furthermore, (water) economic interests must be anchored in the (water) planning and decision-making process and the business climate for water-dependent companies must be strengthened. As VEMW, we strive for this year after year.”

### Chiel Bakker

"In 2022, the energy crisis made sustainability via electrification an urgent problem for large-scale consumers. Gas prices are putting strong pressure on the profitability of consumption processes, based on stable low gas prices. Large-scale consumers who wanted to improve sustainability through electrification were confronted with congestion and long-drawn-out connection problems. Network operators started congestion management under the new rules from November 2022. At the same time, work was being done, sometimes under high political pressure, on new rules to make better use of the scarce network infrastructure. that the congestion problem - caused by a failed planning by network operators - is passed on to large consumers by weakening their rights.”



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## Overview of abbreviations used in this Annual report

ACER: European Union Agency for the Cooperation of Energy Regulators  
 ACM: Autoriteit Consument en Markt  
 AVI: Afvalverbrandingsinstallatie  
 AWZI: AfvalWaterZuiveringsInstallatie  
 BAM: (Carbon) Border Adjustment Mechanism  
 BAS/MFF: Beheerder Afspraken Stelsel  
 BHG: Bescherm- en Herstelplan Gas  
 CAEEP: Ifiec Taskforce Climate Action Enabling Energy Pricing  
 CBAM: Carbon Border Adjustment Mechanism  
 CCS: Carbon Capture and Storage  
 CCU: Carbon Capture and Usage  
 DSO: Organisatie Regionale Netbeheerders  
 DSR: Demand Side Response  
 EEAG: Guidelines on State aid for environmental protection and energy  
 ETD: Energy Tax Directive  
 EU-ETS: EU Emission Trading System  
 EZK: Ministerie van Economische Zaken en Klimaat  
 FME: Ondernemersorganisatie voor de technologische industrie  
 GEN: Gebruikersplatform Elektriciteits- en Gastransportnetten  
 GLDPM: Generation and Load Data Provision Methodology  
 GTS: Gasunie Transport Services  
 HNS: HyNetworkServices  
 IFIEC: International Federation of Industrial Energy Consumers  
 IKC: Indirecte KostenCompensatie  
 IP: InvesteringsPlan  
 JPM: Joint Purchase Mechanism  
 KRW: (Europese) KaderRichtlijn Water  
 LFDD: Low Frequency Demand Disconnect  
 LNG: Liquefied Natural Gas  
 MFF: MarktFaciliteringsforum  
 mFRR: manual Frequency Restoration Reserve  
 MIDDEN: Manufacturing Industry Decarbonisation Data Exchange Network  
 MIEK: Meerjarenprogramma Infrastructuur Energie en Klimaat  
 nmda-principe: niet-meer-dan-anders-principe  
 NIPV: Nederlands Instituut Publieke Veiligheid  
 nTPA: Negotiated third party access of onderhandelde nettoegang  
 NVDE: Nederlandse Vereniging Duurzame Energie  
 NWP: Nationaal Waterstof Programma  
 ORT: OnRendabele Top  
 PBL: Planbureau voor de Leefomgeving  
 PIDI: Programma Infrastructuur Duurzame Industrie  
 PVI: Programma Verduurzaming Industrie ([verduurzamingindustrie.nl](http://verduurzamingindustrie.nl))  
 RED: Renewable Energy Directive





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RNB: Regionale Netbeheerder

RVO: Rijksdienst voor Ondernemend Nederland

RWS: Rijkswaterstaat

SDE++: Stimulering Duurzame Energieproductie en Klimaattransitie

VNCl: Vereniging Nederlandse Chemische Industrie

VoLL: Value of Lost Load

WACC: Weighted Average Cost of Capital

WKK: WarmteKrachtKoppeling (co-generation)