



13 November 2019

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# **Partial revision of the Ordinance on the Reduction of CO<sub>2</sub> Emissions (CO<sub>2</sub> Ordinance)**

## **Explanatory report**

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Reference/File number: S362-0324

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## 1 Background

Emissions trading is a market-based climate policy instrument that enables participants to reduce greenhouse gas emissions cost-effectively. The Swiss Emissions Trading Scheme (ETS) includes around 54 emission-intensive industrial installations; in return for participating, they are exempted from the CO<sub>2</sub> levy on fuels. However, because of the small number of participants, the Swiss CO<sub>2</sub> market only has limited scope for development. Switzerland is therefore seeking to link its ETS with the much larger ETS of the European Union (EU) so that emission-intensive Swiss companies can benefit from the liquid and transparent European CO<sub>2</sub> market and, in the long term, from lower marginal costs for greenhouse gas reductions. This will place them on a level playing field with their European competitors. To this end, an Agreement on the linking of the two ETSs was signed in Bern on 23 November 2017. It will come into force on 1 January 2020.<sup>1</sup>

The Agreement essentially regulates the mutual recognition of emission allowances from the two ETSs, each of which has its own legal basis. Anyone obliged to participate in the Swiss or EU ETS can use emission allowances from both their own scheme and that of the other party to cover their ETS greenhouse gas emissions. This will require an electronic link between the Swiss and EU Emissions Trading Registries so that emission allowances can be transferred between the two schemes. In addition, as a result of the linking, aviation and fossil-thermal power plants will now be integrated into the Swiss ETS, in line with the system in the EU. As with other agreements with the EU, a Joint Committee will be established to manage the Agreement. This committee may, in particular, decide on amendments to the annexes. The Agreement does not provide for the direct adoption of EU law. Since it is a cooperation agreement and not a market access agreement, it will not fall within the scope of a future institutional agreement.

Based on the Federal Council Dispatch of 1 December 2017 approving the Agreement and concerning its implementation (partial revision of the CO<sub>2</sub> Act),<sup>2</sup> Parliament adopted the bill in the final vote on 22 March 2019.<sup>3</sup> For its part, the EU approved the Agreement on 23 January 2018.<sup>4</sup>

To implement the changes in the CO<sub>2</sub> Act, the Ordinance on the Reduction of CO<sub>2</sub> Emissions of 30 November 2012 (CO<sub>2</sub> Ordinance)<sup>5</sup> also needs to be amended, in particular regarding the inclusion of aviation and fossil-thermal power plants. These changes will come into force, together with the Agreement and the partially revised CO<sub>2</sub> Act, on 1 January 2020.

## 2 Explanations concerning the bill

### 2.1 Main features of the bill

This partial revision of the CO<sub>2</sub> Ordinance entails the following amendments and additions:

- Replacement of terms: In line with the partial revision of the CO<sub>2</sub> Act, with a few exceptions the term 'company' is replaced by 'installation operator' and the term 'fixed' is deleted throughout the Ordinance (Article 2 paragraph 5 of the partially revised CO<sub>2</sub> Act now defines 'installations' as fixed technical units at a site). This editorial change affects the previously used terms 'ETS companies', 'companies with reduction obligations' and 'companies that operate CHP

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<sup>1</sup> Agreement of 23 November 2017 between the Swiss Confederation and the European Union on the linking of their greenhouse gas emissions trading systems, SR **0.814.011.268**

<sup>2</sup> Botschaft vom 1. Dezember 2017 zur Genehmigung des Abkommens zwischen der Schweiz und der Europäischen Union über die Verknüpfung der Emissionshandelssysteme und zu seiner Umsetzung (Änderung des CO<sub>2</sub>-Gesetzes), BBI **2018** 441, 17.073

<sup>3</sup> Bundesbeschluss über die Genehmigung des Abkommens zwischen der Schweiz und der Europäischen Union zur Verknüpfung der Emissionshandelssysteme und über seine Umsetzung (Änderung des CO<sub>2</sub>-Gesetzes), BBI **2019** 2643

<sup>4</sup> Council Decision (EU) 2018/219 of 23 January 2018 on the conclusion of the Agreement between the European Union and the Swiss Confederation on the linking of their greenhouse gas emissions trading systems, OJ L 43 of 16.2.2018, p. 1.

<sup>5</sup> SR **641.711**

plants'. The amendment makes the ETS terminology consistent with EU provisions and simplifies practical implementation of the ETS in Switzerland.

- ETS for installation operators: The practical implementation of exemptions from the obligation to participate in the ETS ('opt-out') is clarified; an installation operator that newly engages in an activity listed in Annex 6 of the CO<sub>2</sub> Ordinance can, in future, apply for an exemption with immediate effect if it permanently emits less than 25,000 tonnes of CO<sub>2</sub>eq per year. The hardship provision for installation operators, which was introduced as a transitional arrangement pending the linking with the EU ETS and was limited to the end of 2018, is extended. As a general rule, fossil-thermal power plants will now participate in the ETS; Parliament has repealed the previous compensation obligation in the Act. However, under Article 17 of the partially revised CO<sub>2</sub> Act, the CO<sub>2</sub> levy on fuels will only be refunded to such installation operators in the ETS to the extent that the operators pay for the external costs of their greenhouse gas emissions, minus the purchase price of surrendered emission allowances.
- ETS for aircraft operators: The obligation for aircraft operators to participate in the ETS is specified for the first time. In accordance with the Agreement (Annex I, Part B), operators that carry out domestic flights in Switzerland or flights from Switzerland to the European Economic Area (EEA) are obliged to participate. Under the Agreement, flights from the EEA to Switzerland are covered by the EU ETS. In line with arrangements in the EU, exemptions for special flights (e.g. military, rescue or research flights) and thresholds are defined in the Swiss ETS. For the first time, there are regulations governing calculation of the maximum available quantity of emission allowances for aviation and their issue (free-of-charge allocation and auction). There are also new rules on CO<sub>2</sub> reporting and the surrender of emission allowances.
- Auction of emission allowances: In addition to the emission allowances for installations which are not allocated free of charge, the Federal Office for the Environment (FOEN) will now auction 15 per cent of the maximum available quantity of emission allowances for aircraft, in line with the rules applying in the EU ETS. As recommended by the Swiss Federal Audit Office (SFAO), the annual auction of emission allowances for installations will be limited to a maximum of 10 per cent of the previous year's cap in order to counteract any oversupply of the market. As before, the emission allowances will be auctioned in a competitive procedure based, with a few differences, on the current auction procedure. The non-competitive auction procedure will be scrapped due to a lack of demand and in line with arrangements in the EU. As previously, anyone wishing to participate in the auction will need to have an account in the Swiss Emissions Trading Registry. In addition to installation operators participating in the Swiss ETS, auctions will now, in accordance with the Agreement with the EU (Art. 5), also be open to installation operators participating in the EU ETS, aircraft operators participating in the Swiss and EU ETs and the other companies from the EEA admitted to bid in auctions in the EU. The information that must be provided in order to participate is defined.
- Emissions Trading Registry: Until now, Swiss emission allowances could only be kept in the Swiss Emissions Trading Registry and European emission allowances only in the European registry (Union Registry). Electronic linking will allow emission allowances to be transferred between the registries. Since these registries contain substantial assets, they must undergo rigorous technical maintenance and be protected from abuse and criminal activity. Accordingly, the requirements for opening, managing and closing accounts will be tightened.
- Counting European emission allowances: Since the linked ETs are considered to form a single market, Swiss and European emission allowances will have the same value and will therefore be freely interchangeable. Consequently, ETS participants do not need to differentiate between them when it comes to meeting their surrender obligation. If the emissions of all installation operators in the Swiss ETS exceed the maximum available quantity of Swiss emission allowances for installations ('cap') and these emissions are covered by European emission allowances, the European emission allowances – in keeping with the single market logic – are counted towards the Swiss reduction target under Article 3 of the CO<sub>2</sub> Act. However, they are

only counted if the Swiss reduction target would not otherwise be met and they must be disclosed separately.

- Approval of decisions of minor importance: The Agreement with the EU (Art. 10, 12–13) provides for a Joint Committee to manage and, where relevant, further develop the Agreement. Joint Committee decisions of a technical and administrative nature and of minor importance may be approved by the Federal Department of the Environment, Transport, Energy and Communications (DETEC) in order to reduce the workload of the Federal Council and shorten the approval procedures for these decisions.

The details of the provisions can be found in the relevant notes (see section **Fehler! Verweisquelle konnte nicht gefunden werden.**).

Most of the provisions will continue to apply after 2020 and will be included in the bill on the total revision of the CO<sub>2</sub> Ordinance, which will follow Parliament's approval of the total revision of the CO<sub>2</sub> Act after 2020.

## 2.2 Relationship to international law

The proposed amendments to the Ordinance are compatible with all international obligations, in particular the Agreement between Switzerland and the EU on linking their ETSs.

In the field of international civil aviation, the International Civil Aviation Organization (ICAO) is aiming for CO<sub>2</sub>-neutral growth from 2020. One of the ways it intends to achieve this is a new market-based measure called the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). CORSIA involves offsetting CO<sub>2</sub> emissions from international civil aviation above the 2019–20 average, primarily with reductions in other sectors. Permissible reduction units will be purchased on the global CO<sub>2</sub> market.

CORSIA is being introduced via the Chicago Convention.<sup>6</sup> The provisions required for its implementation were adopted by the ICAO Council on 27 June 2018 and are presented in the form of ICAO Standards and Recommended Practices (SARPs). The First Edition of Annex 16, Volume IV, to the Chicago Convention, which contains the relevant SARPs for CORSIA, came into force on 22 October 2018. The reporting component of these SARPs took effect on 1 January 2019, while the offsetting component will start to apply on 1 January 2021. Participation in the CORSIA offsetting requirements is voluntary for ICAO Member States from 2021 to 2026. Currently, they are due to remain in place until 2035. However, Switzerland, together with the other 43 states of the European Civil Aviation Conference, including the EU Member States, has announced that it will participate in the CORSIA offsetting requirements from 2021 onwards, irrespective of the linking of the Swiss and EU ETSs. Reduction units for the 2021–23 pilot phase do not need to be surrendered until January 2025.

Under Switzerland's monist system, a provision of international law, as soon as it comes into force for Switzerland, becomes valid in the Swiss legal system without a constitutive internal act of transformation. A provision of international law is directly applicable if it concerns rights and obligations that are sufficiently clear and precise to be directly applied by a law-enforcement authority or court. The CORSIA SARPs satisfy these requirements.

There are currently no differences, for the year 2020, between the Agreement on the linking of the Swiss and EU ETSs (and its implementation) and Switzerland's obligations under CORSIA, primarily because the CORSIA offsetting requirement will only apply from 2021 and because a number of implementing provisions, including the list of permitted CORSIA reduction units, are not yet known or have not yet been decided. The EU has not yet determined how the EU ETS and CORSIA could interact in the future. Accordingly, potential implications for the linking of the ETSs, which would need to be discussed by the Joint Committee, are not yet known. Should the inclusion of aviation in the Swiss ETS give rise, in the future, to differences with respect to Switzerland's obligations under the Chicago Convention, in

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<sup>6</sup> Convention on International Civil Aviation, signed in Chicago on 7 December 1944 (SR0.748.0)

particular CORSIA, Switzerland could notify ICAO of these under Article 38 of the Chicago Convention. The ICAO Council must immediately inform the other ICAO Member States of any such notification.

Furthermore, under Article 16a paragraph 4 of the partially revised CO<sub>2</sub> Act, the Federal Council must ensure that, in the case of multiple obligations under international law, the CO<sub>2</sub> emissions of the aircraft operators concerned are not subject to multiple charges. An emitted tonne of CO<sub>2</sub> must only be covered once, either by an ETS emission allowance or by a CORSIA unit. The main measure that the Federal Council could take would be to conclude an agreement with the EU amending the Linking Agreement. Should delays occur or should the EU subject its aircraft operators, in full or in part, to a double charge, the Federal Council, for example, would be required to submit a dispatch to the Federal Assembly immediately, amending the CO<sub>2</sub> Act.

To minimise the additional administrative burden for aircraft operators with obligations under both the Swiss ETS and CORSIA from 2020, Switzerland will offer the possibility of integrated reporting for both systems.

### **3 Notes on individual provisions of the bill**

#### *Replacement of terms*

With a few exceptions, the term 'company' is replaced by 'installation operator' throughout the Ordinance. This editorial change affects the previously used terms 'ETS companies', 'companies with reduction obligations' and 'companies that operate CHP plants'. The amendment makes the ETS terminology consistent with EU provisions and simplifies practical implementation of the ETS in Switzerland. Furthermore, the term 'fixed' is deleted throughout the Ordinance as it is now included in Article 2 paragraph 5 of the partially revised CO<sub>2</sub> Act.

#### *Art. 2*

The definition of 'companies' in letter b is repealed because the term 'installations' is now already defined in the Act.

#### *Art. 5 Requirements*

Domestic emission reduction projects within the geographical perimeter of an installation participating in the ETS are only accepted if they relate to greenhouse gas emissions not recorded in the ETS. This is now specified in paragraph 1 letter c number 2. The relevant system boundary of an installation participating in the ETS is defined by the geographical perimeter and the relevant greenhouse gas emissions of the installation.

In paragraph 1 letter c number 3, the concept of companies is accordingly replaced by that of installations and the necessary editorial changes made.

#### *Art. 10*

In paragraph 4, the references to the Energy Act, which was completely revised by a decree of 30 September 2016 and came into force on 1 January 2018, are updated.

#### *Art. 12 and 12a*

The term 'company' is replaced by 'installation operator'.

#### *Art. 13*

The term 'operator or personal account' is replaced by 'account' to allow for other possible future account types in the Emissions Trading Registry.

#### *Art. 41 Exemption from the obligation to participate*

At the beginning of the period 2013–20, operators of existing installations were able to apply for an opt-out from the ETS effective from 1 January 2013, subject to the relevant conditions being met. They can

continue to apply for an opt-out if their greenhouse gas emissions in the previous three years were less than 25,000 tonnes CO<sub>2</sub>eq per year (para. 1). By contrast, installation operators that newly engage in an activity listed in Annex 6 do not have representative historical emissions data. In this case, the requirement to have participated in the ETS for three years and the associated initial effort required to calculate the emission allowances to be allocated free of charge would be disproportionate. A new paragraph 1<sup>bis</sup> therefore states that such installations operators can apply for an opt-out with immediate effect if they credibly report that their emissions are permanently less than 25,000 tonnes CO<sub>2</sub>eq. Paragraph 3 specifies that installation operators whose greenhouse gas emissions increase to more than 25,000 tonnes CO<sub>2</sub>eq during a year must participate in the ETS from the beginning of the following year. In addition, the term 'company' is replaced by the concept of installations in paragraphs 1, 2 and 3.

#### *Art. 42*

In paragraphs 1 to 3, the term 'company' has been replaced by the concept of installations and the term 'fixed' has been deleted. Editorial changes have been made to the article to take account of these replacements.

#### *Art. 43 Installations not taken into account*

The term 'fixed' has been deleted in the heading and in paragraphs 1 to 3.

#### *Art. 43a and 44*

'ETS company' and 'companies' have been replaced by 'installation operator(s)' and editorial changes made.

#### *Art. 45 Maximum available quantity of emission allowances*

As before, the article only deals with the calculation of the maximum available quantity of emission allowances ('cap') for stationary installations. The term 'ETS companies' is replaced by 'installation operators in the ETS' (para. 1).

Editorial changes have been made to paragraph 2. The reserve of 5 per cent of the cap will continue to be retained to make it accessible to installation operators participating in the ETS for the first time and those that significantly increase their capacity.

#### *Art. 46 Emission allowances to be allocated free of charge*

In paragraphs 1 and 2, the term 'ETS companies' has been replaced by 'installation operators' and editorial changes made.

#### *Art. 46a Allocating emission allowances free of charge to installation operators participating in the ETS for the first time*

In the heading, 'new ETS participants' has been replaced by 'installation operators participating in the ETS for the first time'. In addition, the term 'company' has been replaced by the concept of installations (para. 1 and 3).

#### *Art. 46b*

Editorial changes have been made to the introductory sentence in paragraph 1. In paragraphs 1 and 2, the term 'ETS company' has been replaced by 'installation operator'. The term 'fixed' in paragraph 1 letter a has been deleted. In paragraph 1 letter b, 'company's operations' is replaced by 'operation of the installations'.

#### *Art. 46c*

In paragraphs 1 and 3, the term 'ETS company' has been replaced by 'installation operator'. In addition, the term 'fixed' has been deleted (para. 1, 3 and 4). Editorial changes have been made to paragraph 1.

**Art. 46d**      *Aircraft operators with participation obligations*

An aircraft operator is obliged to participate in the ETS if it performs flights subject to the obligation in accordance with Annex 13 (para. 1). It must register immediately with the competent authority in accordance with Annex 14 if it expects to perform such flights in 2020 (para. 2). The operator of an aircraft is deemed to be the entity specified in item 7 of the ICAO flight plan, whether using the ICAO designator or, if there is no ICAO designator, the aircraft code. For CO<sub>2</sub> emissions from flights subject to the obligation in calendar year 2020, emission allowances and, if permitted, emission-reduction certificates must be surrendered by 30 April 2021 in accordance with Article 55 paragraphs 2 and 3.

Paragraph 3 assigns responsibility in the event that the operator of the aircraft cannot be determined. In this case, the keeper of the aircraft is deemed the operator. If the keeper cannot be determined either, the owner of the aircraft is deemed the operator.

Paragraph 4 states that the FOEN may request aircraft operators to designate an address for service in Switzerland. This is necessary so that, when required, legally binding documents (such as rulings) can be sent to an aircraft operator without a registered office in Switzerland, since such documents cannot be sent abroad.

**Art. 46e**      *Maximum quantity of emission allowances available*

Letter a states that the FOEN calculates the maximum quantity of emission allowances for aircraft available annually ('aviation cap'). The calculation is based on the tonne-kilometre data collected by the aircraft operators for the year 2018. The details are set out in Annex 15 numbers 1 and 2. In addition, letter b stipulates that the BAFU calculates the quantity to be auctioned (15 per cent of the aviation cap) and the quantity to be withheld for new and fast-growing aircraft operators (3 per cent of the aviation cap) in accordance with Annex 15 number 3 letters b and c. As the tonne-kilometre data acquired for 2018 is sufficiently up to date, no such reserve is available for 2020 (Annex 15 no. 5). From 2021, this reserve will be available for the free-of-charge allocation of emission allowances to new and fast-growing operators.

**Art. 46f**      *Emission allowances to be allocated free of charge*

For all aircraft operators that have submitted a verified tonne-kilometre monitoring report, the FOEN calculates the quantity of emission allowances for aircraft available for allocation free of charge in accordance with Annex 15 number 3 letter a (para. 1). The FOEN calculates the quantity to be allocated to each individual operator on the basis of the relevant tonne-kilometre data in 2018 in accordance with Annex 15 number 4 (para. 2). For the number of emission allowances for aircraft per tonne-kilometre to be allocated, the same benchmark applies as in the EU. If an aircraft operator does not perform any flights subject to the obligation in accordance with Annex 13 in a particular year and thus is not required to surrender any emission allowances, it must return the emission allowances for aircraft allocated free of charge which it received for the year in question to the competent authority by the specified deadline. These emission allowances are then cancelled (para. 3). Emission allowances intended for allocation free of charge but which cannot be allocated free of charge are also cancelled (para. 4). This may be the case, for example, if the operator has ceased operating in the meantime.

**Art. 47**      *Eligibility for admission*

The provisions previously contained in Article 47 ('Auction of emission allowances') are now laid down, in amended form, in Article 48 ('Conducting the auction'). Article 47 now sets out who is eligible to bid in auctions of emission allowances. In addition to installation operators participating in the Swiss ETS, auctions will now, in accordance with the Agreement with the EU (Art. 5), also be open to installation operators participating in the EU ETS, aircraft operators participating in the Swiss and EU ETSs and the other companies from the EEA admitted to bid in auctions in the EU. As before, anyone wishing to take part must have an account in the Swiss Emissions Trading Registry.



**Art. 48**      *Conducting the auction*

For reasons of internal coherence, the provisions previously contained in Article 48 ('Emission reduction certificates') have been moved, without substantive amendments, to Article 55b.

Article 48 now covers the auctioning of emission allowances (formerly Art. 47). The auctions should take place at regular intervals to maintain a certain level of consistency.

In accordance with Article 19 paragraph 5 of the partially revised CO<sub>2</sub> Act, the Federal Council can now provide for the quantity of emission allowances auctioned for installations to be reduced if a significant quantity of emission allowances are available on the market for economic reasons. Since, in accordance with Article 45 paragraph 2, a reserve of 5 per cent of the 'cap' is retained to make it accessible to new participants and installations that increase their capacity, an increase of 5 per cent in the quantity of emission allowances no longer allocated free of charge due to capacity reductions, partial closures and closures, making 10 per cent in total, can be considered significant. On the other hand, if the reserve is fully used up due to new market entries or capacity expansions, this is an indication that the market is not oversupplied. The provision therefore stipulates that, each year, the FOEN auctions no more than 10 per cent of the previous year's cap, even if more emission allowances were no longer allocated free of charge, but only if the reserve is not fully used (para. 1 let. a). This provision implements the recommendation of the SFAO<sup>7</sup> that the quantity of emission allowances auctioned should be adapted to the economic conditions. For the 2021–30 phase, this arrangement in the Swiss ETS will be reviewed and if necessary adjusted taking into account developments in the EU ETS (e.g. methods for calculating the free-of-charge allocation).

In addition, in accordance with the Agreement with the EU, the FOEN will now regularly auction 15 per cent of the maximum quantity of emission allowances for aircraft available annually (para. 1 let. b).

As before, the emission allowances will be auctioned in a competitive procedure based, with a few differences, on the current auction procedure. Possible options could include allowing a higher number of price/quantity pairs to be entered per bid or shortening the auction window. As previously, there will be general conditions governing the auction procedure (see Art. 49 para. 1 let. c). The non-competitive auction procedure (awarding installation operators a limited quantity of emission allowances at the price corresponding to the result of the competitive auction simultaneously carried out) will be scrapped due to a lack of demand and in line with the auction procedure in the EU (former Art. 47 para. 3).

Under paragraph 2, the FOEN may also now cancel the auction without accepting a bid if the highest bidding price differs significantly from the relevant price on the secondary market. Due to a lack of knowledge of the secondary market price for Swiss emission allowances, the FOEN will take as its basis the secondary market price of European emission allowances. The FOEN may also cancel the auction if there are safety risks or other reasons that jeopardise the proper implementation of the auction.

If an auction is cancelled in accordance with paragraph 2 or if demand for the quantity of emission allowances assigned to an auction is not fully met, the remaining emission allowances are transferred to a subsequent auction, regardless of the quantities referred to in paragraph 1 letters a and b. This can be done by holding the auction again or by allocating the emission allowances to the subsequent auction(s) (para. 4).

At the end of the 2013–20 obligation period, the FOEN will cancel the emission allowances for installations and aircraft which are not assigned to an auction (para. 5). These include, for example, emission allowances for installations which are not auctioned due to the quantity restriction referred to in paragraph 1 letter a or the emission allowances for aircraft withheld by the FOEN in accordance with Annex 15 number 2 letter c.

In accordance with paragraph 6, the FOEN may continue to commission private organisations to conduct the auction. In so doing, the FOEN would now have to consider the relevant provisions of the

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<sup>7</sup> SFAO (2017): *Evaluation of incentive effect of emissions trading scheme* (in German, summary available in English)

Agreement with the EU, in particular regarding supervision of the auction by the platform operator itself and appropriate supervision of the auction platform by competent authorities.

*Art. 49 Information to be submitted for participation*

For reasons of internal coherence, the provisions previously contained in Article 49 ('Recalculation of the quantity of emission-reduction certificates') have been moved, without substantive amendments, to Article 55c.

Article 49 now sets out the information to be submitted for participation in the auction (formerly Art. 47a para. 1 and 2).

As previously, paragraph 1 letters a and b state that at least one and no more than four (previously two) authorised auction agents and at least one and no more than four (previously two) bid validators must be designated. The increase in the maximum number is in response to concerns expressed by ETS participants. It is specified that the email address must be personal. Usernames are sent by email only, to the email address registered in the Emissions Trading Registry. Since usernames are confidential and personal, central email addresses to which more than one person has access (e.g. info@companyXY.ch) should not be used. Authorised auction agents and bid validators must now also submit a criminal record certificate. In addition, operators and companies wishing to participate in the auction as well as the bid validators and authorised auction agents must submit a declaration that they accept the general conditions of the auction (para. 1 let. c).

Paragraph 2 states that, instead of a Swiss criminal record certificate, a notarial certificate may be submitted to the FOEN, in which the notary confirms that the person concerned has not been convicted of any of the criminal offences set out in Article 59a paragraph 1 letter b and that the criminal record certificate is genuine. The notary must be given the necessary authorisation to do this. The notary's fees are payable by the applicant.

To verify eligibility for admission to the auction and to enable the auction to proceed, installation and aircraft operators from the EU ETS must also, under paragraph 3, provide evidence of an operator account in the Union Register and designate an address for service in Switzerland. Paragraph 4 states that the other EEA companies admitted to bid in auctions in the EU must also designate an address for service in Switzerland, and submit the following additional information: evidence of direct admission to bid in auctions in the EU, information on the admission-to-bid category under Article 18 paragraphs 1 and 2 of Regulation (EU) No 1031/2010<sup>8</sup> and an affirmation that they are participating in the auction solely on their own account, i.e. not on behalf of a customer. The allowances acquired in this way may subsequently be resold in the secondary market.

Paragraph 5 states that the FOEN may request additional information if it requires it for the participation in the auction.

Paragraph 6 stipulates that the proof of identity and criminal record certificates of bid validators and authorised auction agents and any information under paragraph 5 must be authenticated. Copies of documents issued outside of Switzerland must be apostilled. In the interests of security, the date of the documents to be submitted and the authentication or apostille may not be more than three months before the date of application.

As before, the information is recorded in the Emissions Trading Registry (para. 7).

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<sup>8</sup> Commission Regulation (EU) No 1031/2010 of 12 November 2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowances trading within the Community, OJ L 302 of 18.11.2010, p. 1; last amended by Delegated Regulation (EU) 2019/7, OJ L 2 of 4.1.2019, p. 1.

**Art. 49a**      *The binding nature of the auction bids*

Paragraph 1 of this new article states that the auction bids will now be made in euro, reflecting a concern expressed by ETS participants. As previously, auction bids are only binding after a bid validator gives consent (former Art. 47a para. 3).

Under Article 28a paragraph 3 of the partially revised CO<sub>2</sub> Act, the Federal Council can now provide that payments in connection with the auction of emission allowances be made via a bank account in Switzerland or in the EEA. In paragraph 2, the Federal Council makes use of this provision, thereby ensuring that Swiss and European provisions requiring banks to combat money laundering and terrorist financing are applied. Since the auction bids and thus also the highest bidding price are in euro, the invoice for the auctioned emission allowances must be settled in euro. The FOEN may exclude participants from future auctions if they fail to settle the invoice.

**Art. 50**      *Data collection*

For installation operators, the FOEN or a FOEN-authorized entity will continue to collect the data required to calculate the cap and the quantity of emission allowances to be allocated free of charge. This arrangement, as distinct from that applying to aircraft operators, is clarified in paragraph 1. Editorial changes have also been made to paragraph 1.

As before, installation operators have an obligation to cooperate (para. 2). If this obligation is violated, the installation operator loses its entitlement to receive emission allowances free of charge.

The new paragraph 3 stipulates that aircraft operators themselves are responsible for collecting the data relating to their activity under this Ordinance. The data for calculating the aviation cap and the free-of-charge allocation has already been collected in connection with the Ordinance of 2 June 2017 on the Acquisition of Tonne-Kilometre Data and the Preparation of Monitoring Plans relating to Distances covered by Aircraft.<sup>9</sup>

**Art. 51**      *Monitoring plan*

Paragraph 1 summarises the previous paragraphs 1 and 2 concerning the submission of a monitoring plan for installation operators. Installation operators that, under Article 40 paragraph 2, newly engage in an activity listed in Annex 6 or exceed the threshold referred to in Article 41 paragraph 3 and must therefore again participate in the ETS, shall submit their monitoring plan three months after notification of their obligation to participate. Installation operators that apply to participate in the ETS in accordance with Article 42 shall also submit their monitoring plan no later than three months after submitting their application. The monitoring plan still has to be submitted to the FOEN in accordance with Annex 14.

Paragraph 2 now covers the submission of monitoring plans for aircraft operators. Aircraft operators shall submit their monitoring plan for approval to the FOEN or the competent foreign authority in accordance with Annex 14 no later than three months after notification of their obligation to participate. If the monitoring plan must be submitted to the FOEN, the aircraft operators shall use the template provided.

The requirements for the monitoring plan of installation operators previously defined in paragraph 3 are now laid down in Annex 16 together with the requirements for the monitoring plan of aircraft operators. The reference in paragraph 4 has been amended accordingly. Paragraph 4 still requires installation operators, and now also aircraft operators, to keep their monitoring plan up to date. In case of changes, installation operators must submit the amended monitoring plan to the FOEN for approval. Aircraft operators submit their amended monitoring plan either to the FOEN or to the competent foreign authority for approval.

Paragraph 5 specifies that a CO<sub>2</sub> monitoring plan in accordance with the Ordinance of 2 June 2017 on the Acquisition of Tonne-Kilometre Data and the Preparation of Monitoring Plans relating to Distances covered by Aircraft is deemed the monitoring plan within the meaning of Article 51.

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<sup>9</sup> SR 641.714.11

## *Art. 52 Monitoring report*

Paragraph 1 now applies to both installation and aircraft operators. For installation operators, there are no changes to the annual reporting. Aircraft operators submit their monitoring report to the FOEN or to the competent foreign authority in accordance with Annex 14, as appropriate. When reporting to the FOEN, the template provided must be used. For installation operators, it remains the case that the template of the organisation authorised by the federal government is deemed equivalent to the FOEN template.

The requirements for the monitoring report of installation operators previously defined in paragraph 1 letters a–d and paragraph 2 are now laid down in Annex 17 together with the requirements for the monitoring report of aircraft operators (para. 2). The changes made to the article to incorporate the rules for aircraft operators have altered the position of the paragraphs. As before, the FOEN may request additional information if required for monitoring (previously para. 3, now para. 2). Also as previously, the FOEN may require at any time that the monitoring report of installation operators be verified (previously para. 4, now para. 3). Aircraft operators, by contrast, must have their monitoring report verified annually in accordance with the Agreement with the EU (para. 4). The requirements in this regard are set out in Annex 18. Some small emitters are exempted from the verification obligation in the Swiss ETS. The emitters in question are those that are also classified as small emitters in the EU ETS in accordance with Article 28a paragraph 6 of Directive 2003/87/EC<sup>10</sup> (emissions of less than 3,000 tonnes of CO<sub>2</sub> on intra-EEA flights in the EU ETS or less than 25,000 tonnes of CO<sub>2</sub> in the full scope of the EU ETS). In return, these small emitters in the Swiss ETS must use a tool as referred to in Article 54 paragraph 2 of Regulation (EU) No 601/2012<sup>11</sup> to determine their CO<sub>2</sub> emissions, in line with the rules applying in the EU ETS. This requirement ensures equal treatment of small emitters on flights between Switzerland and the EEA.

Paragraph 6 states that the FOEN will estimate the greenhouse gas emissions of installation operators, and now also the CO<sub>2</sub> emissions of the aircraft operators administered by it, if an ETS participant submits an incomplete monitoring report or fails to submit it by the deadline, with the costs being payable by the ETS participant. The FOEN informs the EHS participant in advance and can grant a reasonable deadline for any subsequent improvements. If there are doubts about the correctness of the verified monitoring report, the FOEN or the competent foreign authority may adjust the emissions at its own dutiful discretion, taking due account of all circumstances in the case concerned (para. 7). In so doing, the FOEN or the competent foreign authority will consider equality before the law, proportionality and the public interest and will heed the meaning and purpose of the Ordinance in its decision. If aircraft operators are involved, the FOEN will consult the Federal Office of Civil Aviation (FOCA) and make use, where appropriate, of data from the European Organisation for the Safety of Air Navigation (EUROCONTROL).

## *Art. 53 Obligations to report changes*

Owing to the new provisions for aircraft operators, the reference to ETS companies is deleted from the heading. In addition, paragraph 1 refers to ETS participants. This reflects the fact that aircraft operators too are obliged to report to the FOEN or the competent foreign authority, without delay, changes affecting the emission allowances to be allocated free of charge and changes in contact information. Paragraph 2 requires aircraft operators to report to the competent authority in accordance with Annex 14 within three months if they no longer perform flights subject to the obligation under Annex 13.

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<sup>10</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC, OJ L 275 of 25.10.2003, p. 21; last amended by Directive (EU) 2018/410, OJ L 76 of 19.3.2018, p. 3.

<sup>11</sup> Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council, OJ L 181 of 12.7.2012, p. 30; last amended by Implementing Regulation (EU) 2018/2066, OJ L 334 of 31.12.2018, p. 1.

*Art. 54 The cantons' duties*

'ETS companies' is replaced by 'installation operators participating in the ETS'.

*Art. 55 Obligation*

Owing to the new provisions for aircraft operators, the more specific term 'emission allowances for installations' has been added in paragraph 1.

Paragraph 2 now lays down the obligation of aircraft operators to surrender emission allowances and emission-reduction certificates. This is done in the Emissions Trading Registry of the competent authority in accordance with Annex 14. Aircraft operators administered by Switzerland surrender emission allowances and, if permitted, emission-reduction certificates in the Swiss Emissions Trading Registry, while operators administered by a foreign authority do so in the Union Registry.

Paragraph 3, which stipulates the deadline for surrendering emission allowances, now uses the term 'ETS participants', which covers both installation and aircraft operators.

*Art. 55a Case of hardship*

The hardship provision for installation operators participating in the ETS was introduced on 1 December 2014 as a transitional arrangement pending the linking of the Swiss and European ETSs and was limited to the end of 2018. Installation operators that could not fulfil their obligations under the Swiss ETS in an economically viable manner were able to submit an application for assessment as a case of hardship. No such applications have so far been submitted. The hardship provision will be extended for cases where European emission allowances are not recognised in the Swiss ETS under the ETS Linking Agreement (para. 1). This may be the case if the Agreement is not yet in force or if the mutual recognition of emission allowances under Article 4 paragraph 1 of the Agreement is suspended under Article 15 of the Agreement. In the event of suspension, aircraft operators subject to the Swiss ETS may now also submit a hardship application. The criteria in paragraph 1 for assessing a case of hardship remain unchanged, but it is made clear that they relate to Swiss emission allowances (para. 1 let. c, para. 2).

As before, a hardship application must be submitted by 31 March for the previous year (para. 3). For example, if an ETS participant wishes to claim hardship for 2019 emissions, the application must be submitted to the FOEN by 31 March 2020.

To reduce the administrative burden and unnecessary transaction costs, the previous requirement whereby the non-covered emissions of an EHS participant classified as a case of hardship must first be covered by additional emission-reduction certificates (subsequently exchanged for acquired European emission allowances) is waived. Instead, the ETS participant will directly surrender European allowances for its non-covered emissions in the Swiss Emissions Trading Registry, provided that the Swiss and EU registries are linked or are likely to be linked in the foreseeable future; otherwise it should transfer them to a Confederation account in the Union Registry (para. 4). In both cases, these European emission allowances will then be counted towards the ETS participant's obligations in the Swiss ETS.

*Art. 55b Emission-reduction certificates for installation operators*

For reasons of internal coherence, the former Article 48 has been moved, without substantive amendments, to Article 55b. In paragraph 1, 'ETS company' is replaced by 'installation operator'. In paragraph 1 letters a and b and paragraph 2, 'fixed' is deleted.

*Art. 55c Recalculation of the quantity of emission-reduction certificates for installation operators*

For reasons of internal coherence, the former Article 49 has been moved, without substantive amendments, to Article 55c. In paragraph 1 letter b, 'the company's activities cease' is replaced by 'the operation of the installations ceases'. In paragraph 1 letters a and c and paragraph 2, 'fixed' is deleted.

*Art. 55d Emission-reduction certificates for aircraft operators*

This article lays down the maximum quantity of emission-reduction certificates that an aircraft operator can surrender in order to fulfil its surrender obligation. In accordance with the Agreement with the EU,

this quantity is 1.5 per cent of its verified CO<sub>2</sub> emissions in 2020. The surrendered certificates must meet the requirements set out in Annex 2.

*Art. 56 Non-compliance with obligations*

In paragraphs 1 and 3, the term 'ETS company', which only covered installation operators, has been replaced by 'ETS participant'. This reflects the fact that this provision also applies to aircraft operators.

*Art. 57 Principles*

As a result of the linking of Switzerland's ETS with that of the EU, aircraft operators will now also be participating in the Swiss ETS. The aircraft operators newly administered by the FOEN in accordance with Annex 14 must therefore open an operator account in the Swiss Emissions Trading Registry. This includes any aircraft operators from third countries outside the EEA (para. 1). Aircraft operators' existing accounts and their holdings will be transferred from the Union Registry to the Swiss Emissions Trading Registry.

Installation and aircraft operators participating in the EU ETS and the other companies from the EEA admitted to bid in auctions in the EU must open a personal account if they wish to take part in the auction of Swiss emission allowances (para. 1<sup>bis</sup>).

To increase security and maintain the integrity of the linked CO<sub>2</sub> markets, a position limit of one million emission allowances is being introduced for personal accounts (traders). This is the maximum amount that each account holder can keep at any one time, whether in one account or spread across multiple accounts. The limit applies to Swiss and European emission allowances collectively (para. 5).

*Art. 58 Opening an account*

To open an account in the Swiss Emissions Trading Registry, an application must be submitted to the FOEN (para. 1). In addition to the application form, legal persons must submit an up-to-date extract from the commercial register as well as proof of identity of persons authorised to represent the company or operator (para. 2 let. a). For natural persons, proof of identity must be submitted (para. 2 let. b). All persons with access to the Emissions Trading Registry, authorised representatives for the account and transaction validators as well as authorised auction agents and bid validators (Art. 49) must supply a personal email address, in addition to personal details such as name, address, etc. Usernames are sent by email only, to the email address registered in the Emissions Trading Registry. Since usernames are confidential and personal, central email addresses to which more than one person has access should not be used. In addition, all users, and now also users of operator accounts, must submit up-to-date criminal record certificates in accordance with the Agreement with the EU (para. 2 let. d and e).

Paragraph 3 states that, instead of a Swiss criminal record certificate, a notarial certificate may be submitted to the FOEN, in which the notary confirms that the person concerned has not been convicted of any of the criminal offences set out in Article 59a paragraph 1 letter b and that the criminal record certificate is genuine. The notary must be given the necessary authorisation to do this. The notary's fees are payable by the applicant.

As before, the FOEN may request additional information if required to open the account (para. 4).

Paragraph 5 (formerly para. 3) remains unchanged. It is included among the amended provisions as otherwise the term 'companies' would be replaced by 'installation operators'.

The documents to be submitted along with the respective application form (commercial register extracts, proof of identity, etc.) under paragraphs 2, 4 and 5 must be authenticated. Copies of documents issued outside of Switzerland must be apostilled. The date of the documents to be submitted and the authentication or apostille may not be longer than three months before the application date (para. 6). The three-month expiry period for authentications is stipulated in the Agreement with the EU.

The new paragraph 7 corresponds to the previous paragraph 6.

The new paragraph 8 reflects a requirement of the Agreement with the EU (Annex I, Part C). Aircraft operators administered by the FOEN must submit an application to open an account in the Emissions

Trading Registry no later than 30 working days after the approval of the aircraft operator's monitoring plan or after assignment to Switzerland or to the FOEN as the competent authority in accordance with Annex 14. The application must contain the unique aircraft code(s) of the aircraft operated by the applicant which fall under the ETS of Switzerland or the ETS of the EU.

*Art. 59 Address for service, registered office or domicile*

Paragraph 1 has undergone editorial changes.

Under paragraph 2, all auction agents and bid validators must now designate an address for service in Switzerland or the EEA. The address for service is required, in particular, for sending the Emissions Trading Registry password.

All holders of operator or personal accounts must now have an open bank account in Switzerland or the EEA and a registered office (para. 3 for companies) or place of domicile (para. 4 for persons) in Switzerland or the EEA. This provisions enacts Article 28a paragraph 2 of the partially revised CO<sub>2</sub> Act. The restriction also applies to holders of personal accounts that currently have their registered office or domicile outside Switzerland or the EEA. They must relocate their registered office or domicile to Switzerland or the EEA within a certain time frame or close their account (Art. 142a).

Aircraft operators from third countries outside Switzerland and the EEA, which are administered by the FOEN in accordance with Annex 14, do not need to comply with the requirements of paragraphs 3 and 4 (para. 5). However, such account holders must settle the invoice for auctioned emission allowances via a bank account in Switzerland or the EEA (Art. 49a para. 2).

*Art. 59a Rejection of account opening*

Paragraph 1 letter a has been linguistically clarified; letter b has been amended to include the relevant criminal offences as specified in the Agreement with the EU.

Paragraph 2 is unchanged. It is included among the amended provisions as otherwise the term 'company' would be replaced by 'installation operator'. In paragraph 3, the opening of a frozen account is extended to include aircraft operators.

*Art. 62 Registry management*

The Emissions Trading Registry is an electronic, internet-based application managed by the FOEN. Generally speaking, participants can access their account and make transactions at any time by entering their username and password and the smsTAN. The technical and electronic requirements for this are set out in the FOEN's General Terms and Conditions for the Swiss Emissions Trading Registry. To implement the Agreement with the EU, a number of technical adjustments will be made. For example, the transaction delay becomes mandatory for all users. Currently, the complete serial numbers of all unit types are visible to users in the protected area of the Swiss Emissions Trading Registry. In the Union Registry, however, the view is heavily restricted for historical reasons. With the linking of the two ETSs, the serial numbers of all emission allowances in the Swiss Emissions Trading Registry will now be displayed in the same way as in the EU Registry (as laid down in Annex XIV, Part I, Section 5 of Regulation (EU) No 389/2013<sup>12</sup>). Serial numbers of attestations and emission-reduction certificates will still be visible in the Swiss Emissions Trading Registry.

Paragraph 4 reflects a requirement of the Agreement with the EU(Annex I, Part C). All active accounts must be reviewed by the FOEN at least once every three years. If the information provided is no longer complete, up-to-date, accurate and true, the account holders concerned will be asked to report any changes.

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<sup>12</sup> Commission Regulation (EU) No 389/2013 of 2 May 2013 establishing a Union Registry pursuant to Directive 2003/87/EC of the European Parliament and of the Council, Decisions No 280/2004/EC and No 406/2009/EC of the European Parliament and of the Council and repealing Commission Regulations (EU) No 920/2010 and No 1193/2011, OJ L 122 of 3.5.2013, p. 1; last amended by Delegated Regulation (EU) 2019/1122, OJ L 177 of 2.7.2019, p. 3.

*Art. 64 Account freezing and closure*

The FOEN may now also close accounts if their holder or user has contravened the Emissions Trading Registry regulations for at least a year (para. 2 let. b) or if the annual account management fees have not been paid for over a year (para. 2 let. c).

Paragraph 3 concerns the closure of accounts with a positive balance. Since only empty accounts can be closed, the FOEN may request the holders of accounts to be closed under paragraph 2 to transfer any units held in the account concerned to another account within 40 working days. After this period, the FOEN may cancel the applicable units so that it can then close the account.

*Art. 65 Publication of information and data protection*

The FOEN may, subject to preservation of manufacturing and trade secrecy, electronically publish data held in the Swiss Emissions Trading Registry. In the EU, transaction data is published after three years, including account holder details but without disclosing account numbers or unit types. In particular, the account number is not made public in the EU, unlike in Switzerland. In Switzerland, no transaction data has been published hitherto. With the linking of the two ETSs and in the interests of transparency, transaction data will now be published in accordance with the rules applying in the EU (as laid down in Annex XIV, Part I, Section 4 of Regulation (EU) No 389/2013<sup>13</sup>), including the account numbers of account holders in the Swiss Emissions Trading Registry.

This article contains an exhaustive list of data deposited in the Emissions Trading Registry. This list has been updated to reflect the new provisions of the bill. In particular, the new letter d<sup>bis</sup> states that certain historical data of aircraft operators that already had obligations in the EU ETS prior to the commencement of the Agreement and that will be administered by Switzerland once the Agreement comes into force will be transferred to the Swiss Registry and may be published. The data in question relates to the EU ETS and the current trading period 2013–20 (annual CO<sub>2</sub> emissions, emission allowances allocated free of charge, emission allowances surrendered) and is currently published in the Union Registry.

*Art. 66–69, 73–74, 74b, 75–76 and 78*

The term 'company' is replaced by 'installation operator', with the necessary editorial changes.

*Art. 74a Deducting attestations from the emissions target*

The term 'company' is replaced by 'applicant', with the necessary editorial changes.

*Art. 79 Publication of information*

The term 'company' is replaced by 'installation operator'. Letter a is amended to include CHP plant operators. The new letter h states that the FOEN may, subject to the preservation of manufacturing and trade secrecy, publish information about investments made by CHP plant operators in accordance with Article 96a paragraph 2 or Article 98a paragraph 2.

*Chapter 6, Art. 80–85*

Articles 80 to 85 are rescinded. As part of the linking of the Swiss ETS with the EU ETS, fossil-thermal power plants will be included in the ETS, in line with other installations, if the necessary conditions are met. They are no longer subject to a compensation obligation.

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<sup>13</sup> Commission Regulation (EU) No 389/2013 of 2 May 2013 establishing a Union Registry pursuant to Directive 2003/87/EC of the European Parliament and of the Council, Decisions No 280/2004/EC and No 406/2009/EC of the European Parliament and of the Council and repealing Commission Regulations (EU) No 920/2010 and No 1193/2011, OJ L 122 of 3.5.2013, p. 1; last amended by Delegated Regulation (EU) 2019/1122, OJ L 177 of 2.7.2019, p. 3.



**Art. 91** *Meeting the compensation obligation*

The deadline in paragraph 1 is put back to 31 December of the following year for technical reasons of enforcement.

**Art. 96** *Claim for refund*

Paragraph 2 letter b is rescinded. Fossil-thermal power plant operators participating in the ETS are now covered by letter a and remain exempt from the CO<sub>2</sub> levy. The refund of the CO<sub>2</sub> levy for such operators is dealt with in Article 96b.

**Art. 96a** *Refund for CHP plant operators with a reduction obligation*

The term 'companies operating CHP plants' is replaced by 'CHP plant operators', with the necessary editorial changes.

**Art. 96b** *Refund for operators of fossil-thermal power plants*

On request, fossil-thermal power plant operators participating in the ETS will be refunded part of the CO<sub>2</sub> levy in accordance with Article 17 of the CO<sub>2</sub> Act. The amount refunded depends on the CO<sub>2</sub> levy paid and the minimum price (para. 1).

Fossil-thermal power plants are defined in paragraph 2, to demarcate them from other installations participating in the ETS. The definition is largely the same as that in the previous versions of the CO<sub>2</sub> Act (Art. 22–25) and CO<sub>2</sub> Ordinance (Art. 80–85) respecting the compensation obligation for fossil-thermal power plants. Accordingly, installations that produce either electricity alone or electricity and heat simultaneously from fossil energy sources are classed as fossil-thermal power plants if they have a total output of at least 1 MW and an overall efficiency of less than 80 per cent (let. b), and sell electricity to third parties (let. c). Installations with an overall efficiency of less than 80 per cent are deemed to be primarily designed to produce electricity and therefore fall under the definition of a fossil-thermal power plant. As previously, compliance with the overall efficiency requirement will be determined once and not subsequently reviewed, unless significant changes are made to the installations. It is assumed that industrial sites whose installations participate in the ETS have a high demand for process heat and therefore their installations are primarily designed to produce heat.

Installations are not considered as fossil-thermal power plants if they are operated at the same location for less than two years (for example on a construction site or for test purposes) or for less than 50 hours per year (emergency power systems) (let. d). Credible evidence of this must be provided by the operator. Similarly, installations used exclusively for the research, development and testing of new products and processes (let. e), and installations used primarily for the disposal of municipal or hazardous waste in accordance with Article 3 letters a and c respectively of the Ordinance on the Avoidance and the Disposal of Waste (ADWO)<sup>14</sup> (let. f), are not considered as fossil-thermal power plants.

Since the new provision only applies to new power plants or those previously subject to the compensation obligation, letter a specifies that the power plant must be participating in the ETS for the first time as a result of this amendment to the Ordinance. This is due to the fact that compliance with the overall efficiency requirement in connection with the compensation obligation was determined once and not subsequently reviewed. Consequently, it must not be possible for installations that were not classified as fossil-thermal power plants in the past to be considered as such on the basis of a re-evaluation for the last year of the commitment period.

The refund for fossil-thermal power plants participating in the ETS only applies if the CO<sub>2</sub> levy exceeds a minimum price. The minimum price is defined in Article 17 of the CO<sub>2</sub> Act as the mean of the external costs minus the auction costs of the surrendered emission allowances. The term 'external costs' refers to costs that have to be borne by society at large rather than being paid by the polluters. In evaluating the mean value of external costs, the FOEN takes into account the latest scientific knowledge (para. 3).

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<sup>14</sup> SR 814.600

In 2010, the Federal Supreme Court ruled that a rate of CHF 90 for external climate costs was permissible.<sup>15</sup> Since the external costs tend to rise year by year due to increasing damage, the latest knowledge must be taken into account. The most recent study by the Federal Office for Spatial Development (ARE) puts the external costs per tonne of CO<sub>2</sub> at CHF 121.50 for the year 2015.<sup>16</sup> Assuming a CO<sub>2</sub> levy of CHF 96 and external costs of CHF 121.50 per tonne of CO<sub>2</sub>, at an emission allowance price of CHF 10 per tonne of CO<sub>2</sub> the minimum price would be CHF 111.50; in this case, the CO<sub>2</sub> levy would not be refunded (the operator pays CHF 96 + 10 = 106 per tonne of CO<sub>2</sub>). At an emission allowance price of CHF 30 per tonne of CO<sub>2</sub>, the minimum price would be CHF 91.50; in this case, CHF 4.50 of the CO<sub>2</sub> levy paid would be refunded (the operator pays CHF 96 + 30 - 4.50 = 121.50 per tonne of CO<sub>2</sub>, i.e. the estimated external costs).

Operators of fossil-thermal power plants under Article 96b must submit the refund application to the FOEN by 30 June of the following year. If the deadline is not met, the claim for refund is forfeited. If the fossil-thermal power plant is located on the site of an installation participating in the ETS, a separate refund application for the fossil fuels consumed in the power plant must be submitted. As emission allowances may not only be auctioned but also purchased by traders or other ETS participants, the prices for the purchase of surrendered emission allowances must be attached to each refund application. After checking the information, the FOEN forwards the refund application to the Federal Customs Administration, which issues the refund (para. 4). The same procedure applies to monthly refund applications and refund applications prior to the annual surrender of the relevant emission allowances. Should it later transpire that other emission allowances or emission-reduction certificates have been surrendered, the corresponding amount of the refund must be paid back.

If the operator fails to submit any verifiable information on the prices paid for surrendered emission allowances, the FOEN will estimate these based on the origin of the emission allowances and published secondary market prices, including in particular the highest bidding prices at the most recent auctions. In each case the lowest possible price will be assumed (para. 5). Surrendered emission-reduction certificates are not taken into account.

*Art. 98a, 98b, 98c and 104 para. 2 let. a*

The term 'company' is replaced by 'installation operator', with the necessary editorial changes.

*Art. 104 Eligibility for global financial assistance*

In paragraph 2 letter a, the term 'companies' is replaced by the concept of plants and the necessary grammatical changes made.

*Art. 117 Implementation*

The technology fund charges CHF 1,000 for registering the request; the contract conclusion fee is CHF 2,000. Experience has shown that the amount of work required to process a request cannot be reliably estimated in advance. The new specification in Article 117 implements a recommendation to this effect by the SFAO. In addition, the flat-rate fees totalling CHF 3,000 for registering the request and concluding the contract will be added to the Annex of the Ordinance on the Fees charged by the Federal Office for the Environment of 3 June 2005.<sup>17</sup> The fee incurred during the term of the guarantee is retained (no more than 0.9 per cent of the guarantee amount per year).

*Art. 130 Implementation authorities*

Paragraph 1 is amended to include a reference to Annex 14, which concerns implementation for aviation in the ETS. In addition, a new paragraph 7 stipulates that the Federal Office of Civil Aviation (FOCA) shall support the FOEN in implementing the provisions relating to aircraft operators.

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<sup>15</sup> Decisions of the Swiss Federal Supreme Court (BGE) 136 II 337 E. 6.3 p. 355

<sup>16</sup> Federal Office for Spatial Development (2018): *Externe Kosten und Nutzen des Verkehrs in der Schweiz. Strassen-, Schienen-, Luft- und Schiffsverkehr 2015.*

<sup>17</sup> SR 814.014

*Art. 131 Greenhouse gas inventory*

The compensation obligation for fossil-thermal plants in the CO<sub>2</sub> Act has been rescinded. Consequently, the provision stating that the associated CO<sub>2</sub> emissions will not be taken into account in assessing whether the reduction target has been met is replaced (para. 2) by a provision, based on Article 3 paragraph 3<sup>bis</sup> of the partially revised CO<sub>2</sub> Act, concerning the eligibility of European emission allowances to count towards meeting Switzerland's domestic emission reduction target. The new provision is based on a report by the FOEN to the National Council's Environment, Spatial Planning and Energy Committee (ESPEC-N).<sup>18</sup> European emission allowances surrendered by Swiss installation operators are only taken into account if the emissions of all Swiss installations in the ETS exceed the total quantity of Swiss emission allowances (let. a) and *at the same time* the reduction target under the CO<sub>2</sub> Act would otherwise not be met (let. b). It is impossible to trace exactly when any European emission allowances taken into account were generated, as their serial number only indicates the trading period in which they were generated (currently 2013–20). The same is true of Swiss emission allowances. In both cases, it is a consequence of the budget approach applied in the ETS. Accordingly, it is irrelevant for the achievement of the target when the emission allowances used to cover emissions in 2020 were generated.

Paragraph 3 specifies the extent of the European emission allowances that may be taken into account. Provided the conditions set out in paragraph 2 are fulfilled, those European emission allowances covering emissions *above* the quantities defined in paragraph 2 are counted towards the reduction target. As operators of installations in Switzerland can still cover their emissions to a limited extent with foreign emission-reduction certificates, these surrendered certificates must be deducted from the aforementioned additional emissions. Emissions from non-ETS sectors cannot be offset with European emission allowances under this provision, nor can the provision result in the overall target being exceeded. Any European emission allowances taken into account must be disclosed separately in the FOEN's reporting on achievement of the domestic target. In the case described in Article 2, if the European emission allowances for emissions beyond the Swiss cap were not to be taken into account in assessing achievement of the domestic target, these additional ETS-sector emissions would have to be offset by additional domestic measures in other sectors, above and beyond the measures laid down in the current CO<sub>2</sub> Act.

Paragraph 4 defines the total quantity of available Swiss emission allowances. This comprises the Swiss emission allowances issued as part of the cap for installations and the emission allowances not used in the period 2008–12 and therefore carried over by installation operators to the period 2013–20.

*Art. 133 Controls and disclosure obligations*

Owing to the new provisions for aircraft operators, the term 'ETS companies' has been replaced by 'ETS participants'. This means that aircraft operators are also subject to controls by implementation authorities and obliged to disclose information to these authorities. In addition, the term 'companies' has been replaced by the concept of installations, where relevant (para. 1).

*Art. 134 para. 1, 3 and 4*

The new paragraph 1 letter e states that the FOCA shall transmit to the FOEN the data required to assess the participation obligations of aircraft operators in the ETS, as well as the data needed to assess the monitoring plans and monitoring reports of aircraft operators.

Paragraph 3 states that, in accordance with the Archiving Act, the FOEN will pass on personal data that it no longer permanently requires to the Swiss Federal Archives for storage and destroy any data deemed not worthy of archiving by the Swiss Federal Archives.

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<sup>18</sup> *Anrechnung europäischer Emissionsrechte an das Inlandziel der Schweiz*, Bericht des BAFU zuhanden der UREK-N vom 9. Februar 2018. Available (in German) at [www.bafu.admin.ch](http://www.bafu.admin.ch) > Themen > Klima > Rechtliche Grundlagen > Totalrevision CO<sub>2</sub>-Gesetz > Berichte an das Parlament.

*Art. 134a Coordination*

The new Article 134a is based on Article 11 of the Agreement with the EU, which stipulates that Switzerland and the EU shall coordinate efforts, i.e. support each other, in implementing the Agreement, in guaranteeing the integrity of the linked CO<sub>2</sub> markets and in avoiding carbon leakage and distortion of competition. According to the Agreement, such coordination shall take place through the provision of information, among other things. Article 134a of this bill explicitly lays down these requirements for the FOEN. Necessary information to be transmitted could include transaction data from the Swiss Emissions Trading Registry in connection with suspected criminal activity, for example. Such data would be transmitted, subject to preservation of manufacturing and trade secrecy, and, where necessary, anonymised and/or classified and processed in accordance with the sensitivity levels set out in Article 9 of the Agreement with the EU.

*Art. 135 Amendments to the Annexes*

The new paragraph c<sup>ter</sup> states that DETEC may amend Annex 6, which defines the categories of installations obliged to participate in the ETS, if comparable international regulations change. This applies in particular if new categories of installations are defined or existing categories are cancelled in the linked EU ETS.

Similarly, the new paragraph f states that DETEC may amend Annex 14, concerning the assignment of aircraft operators to the competent authority, if the relevant EU list changes.

*Art. 135a Approval of decisions of minor importance*

The Agreement on the linking of the Swiss and EU ETSs (Art. 12–13) provides for a Joint Committee comprising representatives from Switzerland and the EU to administer the Agreement. As with other bilateral agreements with the EU, the Swiss delegation in the ETS Agreement's Joint Committee is made up of employees of the Federal Administration. Decisions taken by the ETS Agreement's Joint Committee must, in accordance with their content and scope, undergo prior consultation, so that interested parties can have their say, and then be approved. Decisions of far-reaching scope (e.g. those that entail changes to laws) must be approved by Parliament, while decisions of limited scope (e.g. those entailing changes to ordinances) may be approved by the Federal Council. In connection with the Agreement, the Joint Committee is regularly required to take various decisions of limited scope that concern matters of a technical and administrative nature and are of minor importance (e.g. adapting the annexes to previously amended legal bases of the parties, technical agreements on the operation of the Emissions Trading Registry).

Under Article 48a paragraph 1 of the Government and Administration Organisation Act of 21 March 1997<sup>19</sup>, the Federal Council may delegate responsibility for concluding international treaties to a department; in the case of treaties of limited scope, it may also delegate this responsibility to a group or federal office. In accordance with this provision, the new Article 135a sets out the delegation of competence to DETEC for the approval of Joint Committee decisions of limited scope that concern technical and administrative matters and are of minor importance (see examples cited in the previous paragraph). This reduces the workload of the Federal Council and shortens the approval procedures for the decisions concerned. All other decisions of limited scope will continue to be approved by the Federal Council or Parliament (e.g. those entailing changes to ordinances), taking account of the usual consultation procedures.

*Art. 138 Conversion of unused emission allowances*

In paragraph 1 letters a and b and paragraph 2, the terms 'companies' and 'ETS companies' are replaced as appropriate by 'installation operators'.

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<sup>19</sup> SR 172.010

**Art. 139** *Carry-over of unused emission-reduction certificates from the 2008–12 period*

The explicit reference to power plant operators in paragraph 1 is deleted as these operators are now included among installation operators in the ETS, provided the necessary conditions are met. In addition, the concept of companies in paragraphs 1 and 4 is replaced by that of installations, as appropriate.

**Art. 142a** *Deadline for reporting a registered office or domicile for personal accounts*

For historical reasons, the Emissions Trading Registry still has holders of personal accounts with a registered office or domicile outside of Switzerland or the EEA. Such account holders must designate a registered office or domicile in Switzerland or the EEA within 12 months of the Ordinance coming into force. Otherwise, the FOEN may close the accounts concerned in accordance with Article 64.

**Art. 145** *Legally authorised power plants*

The article is rescinded because power plants above a certain total rated thermal input are subject to the ETS.

**Annex 3a** *Requirements for the calculation of emission reductions and the monitoring concept for projects and programmes in connection with local heating networks*

Editorial corrections and clarifications have been made.

**Annex 6** *Installation operators obliged to participate in the ETS*

The term 'company' is replaced by 'installation operator' and the specification 'fixed' is deleted.

**Annex 8** *Calculation and adjustment of the maximum available quantity of emission allowances for installation operators participating in the ETS*

The heading is amended to make it clear that the annex concerns 'installation operators' only, not aviation. In number 1, the term 'ETS companies' is replaced by 'installation operators' and the specification 'fixed' is deleted.

Number 2 is rescinded because fossil-thermal power plants are now also participating in the ETS, provided that the necessary conditions are met. Consequently, they are also covered by the maximum available quantity of emission allowances specified in number 1. The new provision in Article 18 paragraph 2 of the partially revised CO<sub>2</sub> Act provides for an adjustment of the quantity of available emission allowances for installations if an existing category of installations is excluded or a new category of installations is included or if international regulations change. In this case, the quantity of available emission allowances for installations is calculated in accordance with number 1 and adjusted with effect from the year in question.

**Annex 9** *Calculation of emission allowances to be allocated free of charge for installation operators in the ETS*

The heading is amended to make it clear that the annex concerns installation operators only, not aviation. The existing provision in number 1.5, that no emission allowances are allocated free of charge for the production of electricity, has been incorporated into the partially revised CO<sub>2</sub> Act. Accordingly, number 1.5 now clarifies the exception that the expedient utilisation of residual gases is taken into account in the free-of-charge allocation. However, this only applies to additional emissions from residual gas utilisation compared to the use of natural gas as a reference fuel.

In numbers 3.2 and 4.1, the term 'ETS company' is replaced by the concept of installations, as appropriate.

**Annex 13** *Aircraft operators obliged to participate in the ETS*

In accordance with the Agreement with the EU, aircraft operators are obliged to participate in the ETS if they perform domestic flights in Switzerland (no. 1 let. a) or flights from Switzerland to the EEA (no. 1 let. b).

For administrative reasons and because they account for a small share of total CO<sub>2</sub> emissions from aviation, certain flights are exempted from inclusion in the ETS (no. 2 let. a–i). Flights from Switzerland to an aerodrome in an outermost region within the meaning of Article 349 of the Treaty on the Functioning of the European Union are also not subject to the ETS (no. 2 let. l). These provisions are based on the exemptions applying in the EU ETS.

The thresholds specified in letters j and k may only be applied if the operator is not obliged to participate in the EU ETS (no. 3). If the operator carries out flights that require participation in the EU ETS, the obligation to participate in the Swiss ETS applies to all flights in accordance with number 1, unless they fall within the exemptions laid down in number 2 letters a–i and l.

To determine the thresholds for total CO<sub>2</sub> emissions and number of flights specified in number 2 letters j and k, only flights falling within the scope of application as defined in numbers 1 and 2 are taken into account. If an operators' flights exceed the thresholds specified in number 2 letter j or k, all flights of this operator are subject to emissions trading unless they fall within the exemptions laid down in number 2 letters a–i and l.

For an exemption under letter j, the criterion of commercial operation is linked to the operator and not to the flights in question. This means, in particular, that all liable flights carried out by a commercial operator must be taken into account when deciding whether that operator is above or below the thresholds, even if certain flights were performed free of charge.

The exemption under letter l of flights from Switzerland to EU outermost regions is based on a temporary derogation in the EU ETS (Art. 28a para. 1 let. b of Directive 2003/87/EC) and ensures equal treatment for flights between Switzerland and those regions in accordance with the Agreement. The outermost regions are currently: Guadeloupe, French Guiana, Martinique, Mayotte, Réunion, Saint Martin (France); Azores, Madeira (Portugal); Canary Islands (Spain).

Flights by a commercial aircraft operator that carries out fewer than 243 flights in three consecutive four-month periods are exempted from inclusion in the ETS. The four-month periods are January to April, May to August and September to December. When deciding whether the aircraft operator is above or below the exemption limits, the four-month period to which a flight is allocated is determined by the local take-off time of that flight (no. 4).

#### *Annex 14 Competent authority for ETS participants*

For installation operators participating in the ETS, the FOEN remains the competent authority (no. 1).

In the case of aircraft operators, the Agreement with the EU specifies which operators are administered by the FOEN, namely those that are obliged to participate in the ETS of Switzerland or of the EU or in both ETSs, provided that they have a valid operating licence granted by Switzerland. This includes commercial operators. In addition, the FOEN administers operators the greatest proportion of whose CO<sub>2</sub> emissions in the linked ETS are attributed to Switzerland, in comparison with the other EEA Member States; these may be domestic non-commercial operators or foreign operators. The remaining aircraft operators with obligations in the Swiss ETS are administered by a competent authority in the EEA (see no. 2.2 and 2.3).

The competent authority for aircraft operators obliged to participate in the linked ETS of Switzerland and the EU is published by the EU in an annually updated list of competent 'administering states'. From the date that the Agreement with the EU comes into force, this list also includes Switzerland as an administering state and the aircraft operators attributed to it. Annex 14 includes a static reference to this list (no. 2.1). The list is based on the current version of Regulation (EC) No 748/2009.<sup>20</sup> DETEC will amend the reference in accordance with Article 135 letter e<sup>bis</sup> if Regulation (EC) No 748/2009 changes.

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<sup>20</sup> Commission Regulation (EC) No 748/2009 of 5 August 2009 on the list of aircraft operators which performed an aviation activity listed in Annex I to Directive 2003/87/EC on or after 1 January 2006 specifying the administering Member State for each aircraft operator, OJ L 219 of 22.8.2009, p. 1; last amended by Regulation (EU) 2018/336, OJ L 70 of 13.3.2018, p. 1.

*Annex 15 Calculation of the maximum available quantity of emission allowances and the quantity of emission allowances to be allocated free of charge for aircraft*

In accordance with the Agreement with the EU (Annex I, Part B), Annex 15 sets out how the maximum available quantity of emission allowances for aircraft in 2020 ('aviation cap') is calculated (no. 2). The starting point is the sum of the tonne-kilometres reported by the individual aircraft operators for 2018. This is multiplied by the benchmark of 0.642 emission allowances per 1,000 tonne-kilometres. This benchmark is detailed in number 1 and is identical to the benchmark used in the EU EHS. The resulting quantity of emission allowances corresponds to 82 per cent of the aviation cap. Extrapolating this quantity to 100 per cent gives the maximum quantity of emission allowances for aircraft available in 2020.

This quantity of emission allowances is used as follows(no. 3): 82 per cent is allocated to aircraft operators free of charge, 15 per cent is withheld for the auction and 3 per cent is withheld for new and fast-growing aircraft operators. Because the tonne-kilometre survey took place in 2018, the data acquired is sufficiently up to date to be used as the basis for the free-of-charge allocation. Accordingly, this reserve will not be needed in 2020 and will be cancelled as specified in the Agreement with the EU (no. 5).

Number 4 sets out how the quantity of emission allowances to be allocated free of charge to each aircraft operator is calculated, based on the tonne-kilometres reported for each aircraft operator for 2018. This is multiplied by the benchmark stated in number 1 to give the quantity of emission allowances allocated to each aircraft operator free of charge.

*Annex 16 Requirements for the monitoring plan*

The requirements for the monitoring plan of installation operators previously defined in Article 51 paragraph 3 are now laid down in Annex 16 number 1.

The requirements for the monitoring plan of aircraft operators are listed in number 2. They include ensuring that the data to be collected is complete and sufficiently accurate. The monitoring plan must clearly identify the aircraft operator and aircraft and describe a methodology for completely recording the aircraft and the flights covered by the Ordinance. In addition, it must include a description of the method for calculating CO<sub>2</sub> emissions.

Aircraft operators that generate CO<sub>2</sub> emissions of more than 25,000 tonnes per year must also state how they monitor the fuel consumption of individual aircraft. The permissible methods for measuring fuel consumption are the same as those permitted in the EU ETS. Furthermore, they must describe a methodology for eliminating data gaps. It is also stipulated that, if the status of the aircraft operator changes as regards its qualification as a small emitter, the monitoring plan must be resubmitted to the FOEN for evaluation.

Number 3 sets out the method of calculating the CO<sub>2</sub> emissions of relevant flights under the ETS. The CO<sub>2</sub> emissions are determined by the quantity of fuel consumed multiplied by a fuel-specific emission factor. The emission factors to be applied, expressed in tonnes of CO<sub>2</sub> per tonne of fuel, [t CO<sub>2</sub>/t fuel], are as follows:

- for kerosene: Jet A-1 and Jet A: 3.15
- for Jet B: 3.10
- for aviation gasoline (AvGas): 3.10

The emission factors are the same as in the EU ETS to ensure that the two systems are compatible.

In accordance with the EU ETS regulations, aircraft operators may, under certain conditions, count the use of fuels from biomass. The share of biogenic fuel used is rated with an emission factor of zero tonnes of CO<sub>2</sub> per tonne of fuel, provided that this fuel meets the sustainability criteria set out in Article 17

of European Directive 2009/28/EC<sup>21</sup> (Renewable Energy Directive). Proof of this must be provided by the aircraft operator. The application of these sustainability criteria from European law allows aircraft operators to count biomass fuels in the Swiss ETS and EU ETS under the same conditions. So far, however, only negligible quantities of biofuels have been counted in the EU ETS, probably for economic reasons. In Switzerland, the legal basis for ecological and social requirements to be met by biomass fuels is currently being reviewed. This review will examine to what extent these requirements should be applied in the Swiss ETS from 2021 onwards.

#### *Annex 17 Requirements for the monitoring report*

The requirements for the monitoring report of installation operators previously defined in Article 52 paragraph 1 letters a–d and paragraph 2 are now laid down in Annex 17 number 1.

The minimum requirements for the monitoring report of aircraft operators are set out in number 2. Since, in line with the 'one-stop shop' philosophy, aircraft operators only have one contact authority (the FOEN or the competent foreign authority in accordance with Annex 14), which administers the obligations of this operator in *both* ETSs, the monitoring report contains the data for both the Swiss ETS and the EU ETS. The minimum requirements include the information required to identify the aircraft operator and the verifier. Small emitters are not required to provide information about the verifier if they are exempted from the verification obligation in accordance with Article 52 paragraph 5. Other information required includes a substantiation of any deviations from the underlying monitoring plan, a list of the aircraft used and the total number of flights subject to emissions trading. For each fuel type for which CO<sub>2</sub> emissions are calculated, the emission factor and the fuel consumption must be indicated. The total of all CO<sub>2</sub> emissions for flights for which data has to be reported must be broken down by state of departure and state of arrival and by Swiss ETS and EU ETS. Data gaps must be described and filled with substitute data, and the method of estimating CO<sub>2</sub> emissions using the substitute data must be described. For each aerodrome pair (place of take-off and landing), the ICAO aerodrome designation and the number of flights for which data has to be recorded and the respective annual CO<sub>2</sub> emissions must also be stated. Number 2.2 states that small emitters with fewer than 243 flights in three consecutive four-month periods or emissions of less than 25,000 tonnes of CO<sub>2</sub> under Article 54 paragraph 1 of Regulation (EU) No 601/2012 may estimate their fuel consumption using an instrument for small emitters in accordance with Article 54 paragraph 2 of Regulation (EU) No 601/2012. These instruments include tools implemented by Eurocontrol or other relevant organisations, providing they are approved by the European Commission. Currently, only the Eurocontrol tool meets this requirement.

#### *Annex 18 Verification of the monitoring reports of aircraft operators and requirements to be met by the verifier*

Annex 18 regulates the duties of aircraft operators and verifiers in connection with the verification of monitoring reports. The verifier must be accredited in accordance with the regulations of the EU ETS. No such accreditation procedure yet exists in Switzerland, but Swiss companies can gain accreditation in the EU. There are currently around 50 accredited companies in the EU that can be tasked with verifying monitoring reports. The verifier ensures, among other things, that all flights falling within the scope of this Ordinance are taken into account.

## **4 Impact on the Confederation, the cantons, the economy and the environment**

The impacts of the linking have already been set out in detail in the Dispatch approving the Agreement and concerning its implementation (amendment of the CO<sub>2</sub> Act). The amendment to the CO<sub>2</sub> Ordinance has no significant impacts on the Confederation, the cantons or the environment.

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<sup>21</sup> Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ L 140 of 5.6.2009, p. 16; last amended by Directive (EU) 2015/1513, OJ L 239 of 15.9.2015, p. 1.



The partial refund of the CO<sub>2</sub> levy for fossil-thermal power plants (Art. 17 para. 2 of the partially revised CO<sub>2</sub> Act), as introduced by Parliament, has the effect that operators of any new fossil-thermal power plants will still face additional costs compared to their European competitors. In future, for every tonne of CO<sub>2</sub> they emit, these operators will have to pay the CO<sub>2</sub> levy (CHF 96 per tonne of CO<sub>2</sub>, as at October 2019) as well as acquiring an emission allowance (around EUR 25 in the EU ETS, as at October 2019). Only if the sum of these costs exceeds the mean external costs of their CO<sub>2</sub> emissions will the difference compared with the external costs be refunded. In 2010, the Federal Supreme Court ruled that a rate of CHF 90 per tonne of CO<sub>2</sub> for external climate costs was permissible.<sup>22</sup> The latest study by the Federal Office for Spatial Development (ARE) puts the external costs per tonne of CO<sub>2</sub> at CHF 121.50 for the year 2015.<sup>23</sup>

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<sup>22</sup> Decisions of the Swiss Federal Supreme Court (BGE) 136 II 337 E. 6.3 p. 355

<sup>23</sup> Federal Office for Spatial Development (2018): *Externe Kosten und Nutzen des Verkehrs in der Schweiz. Strassen-, Schienen-, Luft- und Schiffsverkehr 2015.*

## List of abbreviations

CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> eq	Carbon dioxide equivalent (denominator representing the differing warming potential of different greenhouse gases)
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
EEA	European Economic Area
ETS	Emissions Trading Scheme/System
Eurocontrol	European Organisation for the Safety of Air Navigation (international body responsible for the central coordination of air traffic control in Europe)
GDP	Gross domestic product
ICAO	International Civil Aviation Organization (specialised agency of the United Nations)
SARPs	Standards and Recommended Practices (Annexes to the ICAO Chicago Convention <sup>24</sup> )

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<sup>24</sup> SR 0.748.0