

# European Union Energy Producer Finance Emergency Regulation

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## European Union Energy Producer Finance Emergency Regulation

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**Summary.** The inadequacy of the European Union energy policy became apparent during the natural gas crisis and nuclear energy crisis of 2021 to 2023. The Union also failed to recognize the signs of a looming oil crisis. This article describes the necessary correction of the Union law concerning the financing of renewable energies in the form of a new Regulation. To ensure that the Union is not surprised by another energy crisis, the Regulation must be adopted and implemented with due urgency. The instrument of the emergency Regulation is proposed here. The main content revolves around the partial replacement of the tendering and auction procedures with fixed feed-in tariffs for energy. The new emergency Regulation defines uniform feed-in tariffs for electrical, thermal, solid, liquid and gaseous energies throughout the EU. The European Commission can copy the complete text for the new emergency Regulation from this journal article and submit it to the Council for a decision.

**Keywords:** Energy emergency, financing, feed-in tariff, auctions, net metering.

## Europos Sąjungos energijos gamintojų finansavimo nepaprastosios padėties metu reguliavimas

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**Santrauka.** Europos Sąjungos energetikos politikos netinkamumas, jos trūkumai tapo akivaizdūs gamtinių dujų ir branduolinės energetikos krizės metu 2021–2023 metais. Straipsnio autorius įsitikinęs, kad Europos Sąjunga (ES) taip pat nesugeba atpažinti artėjančios naftos krizės požymių. Straipsnyje aprašomos būtinos ES teisės pataisos, susijusios su atsinaujinančiųjų energijos išteklių finansavimu, ir pabrėžiama atnaujinto nepaprastosios padėties reglamento būtinybė. Siekiant užkirsti kelią dar vienai energetikos krizei, šis reglamentas turi būti įgyvendintas kuo skubiau. Straipsnyje siūlomi nepaprastosios padėties potvarkiai, kurių esmė – dalinis konkursų ir aukcionų procedūrų pakeitimas fiksuotais įkainiais už energiją. Naujas nepaprastosios padėties reglamentas nustato vienodus įkainius už elektros energiją, šiluminę, kietąją, skystąją ir dujinę energiją visoje ES. Europos Komisija gali pasinaudoti šiame straipsnyje pateikiamu naujo reglamento projektiniu tekstu ir pateikti jį Tarybai svarstyti.

**Pagrindiniai žodžiai:** nepaprastoji padėtis energetikos srityje, finansavimas, supirkimo tarifas, aukcionai, grynoji apskaita.

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## Introduction

The European Council and Commission would like the public to believe that an energy emergency only exists in connection with the partial embargo on natural gas of Russia against the EU (Energy Emergency Regulation 2022/2577). However, this is not the case. Not only fossil natural gas but also nuclear energy and fossil oil are contributing to the current energy crisis. The unreliability of the French nuclear power plants in 2021 and 2022 (see Schneider et al., 2023) and the attempt to replace the lost nuclear power with natural gas power was the starting point for the energy emergency in the European Union. Russia was the Union's main supplier of natural gas until (and including) 2022.

The system of pricing electricity for the following day (day-ahead price) on the Union's electricity exchanges with the so-called merit order principle led to chaotic conditions in the internal electricity market of the EU. In Germany, the highest wholesale electricity price (day-ahead price) of 871 Euro per Megawatt-hour (MWh) was observed on Monday, August 29, 2022, between 19:00 and 20:00 hours in the evening (Bundesnetzagentur, 2022). The German wholesale electricity prices (day-ahead prices) already began to rise significantly in the second quarter of 2021. Meanwhile, the massive Russian military offensive started in February 2022.

Fossil oil has become the number one threat to the single market since 2019 (Laherrère, Hall, and Bentley, 2022). The decline of fossil oil since the global Peak Oil year 2019 (year with the all-time high of the global production of fossil oil) can trigger a crash of the world economy and of the internal market of the EU (Planungsamt der Bundeswehr, 2010, 2012).

The Energy Emergency Regulation 2022/2577 of 22 December 2022 addresses spatial planning for renewable energies. The expansion of renewable energies is also being slowed down by the unfavorable financial framework conditions for renewable energies. This article focuses on specifications for *Feed-In Tariffs* (FIT) systems as the most important financial measure to address the Peak Oil problem, the atomic energy problem, the energy exchange problem, and the lack of renewable energy problem.

## **Council Regulation (EU) 2025/9999 of 31 December 2025 laying down a framework for financing energy producers to accelerate the deployment of renewable energy and repealing Regulation (EU) 2022/1854**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 122(1) thereof,

Having regard to the proposal from the European Commission, Whereas:

- (1) The scarcity of resources (National Research Council, 1962) and global warming (Steffen et al., 2018; Richardson et al., 2023) could lead to the collapse of all member states. These two problems therefore represent the European Union's two most important security problems.
- (2) The global Peak Oil (peak of global fossil oil production) was in 2019.
- (3) Annual gross energy consumption (Eurostat: Gross Available Energy), including international aviation and navigation, remained constant between 1990 and 2022 at around 17 Petawatt-hour (around 62 Exajoule) for the current 27 Member States. The share of nuclear energy (thermal power) decreased from 13% to 11%. Fossil energy, which continues to dominate, reduced its share from 83 to 71 percent, and renewable energies have increased their share from 5 to 18 percent. Absolute natural gas consumption increased by 19% between 1990 and 2022. If the

EU continues at the same pace as it did between 1990 and 2022, the EU will reach 100 percent renewable energy in 2024.

- (4) Nuclear power is unsuitable in addressing Peak Oil and Peak Gas. The levelized costs of nuclear electricity are higher than those of the renewable energy sources solar photovoltaics and wind power (Präger et al., 2024, p. 3). Nuclear power is incompatible with renewable energy systems (Präger et al., 2024, p. 5–6). Alternative nuclear reactor technologies will not be available in time to make a major contribution to the mitigation of Peak Oil and Peak Gas risks in the EU (Präger et al., 2024, p. 4–5).
- (5) This Regulation supplements the Energy Emergency Regulation (EU) 2022/2577 covering spatial planning and permit-granting processes.
- (6) In addition to a feed-in tariff system, a net metering scheme catapulted the Netherlands to first place in the world in terms of cumulative installed photovoltaic capacity per population (Elektriciteitswet, 1998).
- (7) Tenders and auctions are generally inferior to well-designed FIT systems (Fell, 2012; EREF, 2021).
- (8) Price caps damage the expansion of renewable energies (Hoffstede, 2023).

## Text of the Regulation

### Article 1 Subject matter and scope

This Regulation establishes permanent rules of an emergency nature to accelerate the deployment of renewable energy installations that produce energy in the European Union and in the *Exclusive Economic Zones* (EEZ) of its Member States. In the short term, renewable energies should make fossil oil and fossil natural gas superfluous. This should prevent or at least delay a collapse of the EU's internal market in the post-peak oil phase, in the post-peak natural gas phase, and due to global warming.

### Article 2 Definitions

For the purposes of this Regulation, the relevant definitions in Directive 2009/72/EC of the European Parliament and of the Council, Directive (EU) 2019/944 of the European Parliament and of the Council and Council Regulation (EU) 2022/2577 apply.

The following definitions shall also apply:

- (a) A Kombikraftwerk (Fell, 2016) is at least one renewable electricity producing facility or an ensemble of renewable electricity producing facilities including or excluding direct or indirect energy storage or flexible loads that is connected by one or several direct lines or by the public distribution grid with at least one electricity consumer who is in the same municipality as the power feed-in point. Electricity must be generated 100% from renewable energies. The investor is completely free to choose his/her mix of renewable energy sources used to generate electricity and to choose the energy storage method (including the option of flexible loads). The mix of green electricity plants can also include the integration of existing plants, although these will then lose their previous FIT remuneration. The electricity feed-in must be completely year-round and quarterhourly in accordance with the standard load profile or, in the case of regional direct marketing, cover the entire electricity consumption of the connected end consumers, and

such objects can be: a single-family house, a rented apartment, a production plant, a hospital, a village, a district community, etc.

### **Article 3 Remuneration of electricity, solid, liquid and gaseous renewable products**

1. Self-consumption of renewable products is permitted for producers participating in the feed-in tariff system. The self-consumption of renewable energy producers shall neither be taxed nor charged with the levy (to finance a FIT system). The grid fee applies to the amount of self-consumed electricity transported by the public grid. The producer may also use its own consumption to produce other renewable products such as, for example, methanol or desalinated seawater and claim a feed-in tariff for these secondary products.
2. Installations (producers) participating in the feed-in tariff system are prohibited from selling renewable products to third parties for the calendar year in which they claim remuneration under the feed-in tariff system. Flexible biogas power plants and flexible hydropower plants that sell balancing energy on the electricity exchange and Kombikraftwerk plants are excluded. Producers who participate in the feed-in tariff system can waive the feed-in tariff entirely for entire calendar years if they wish to consume all their products themselves or sell them to third parties at any price. Within the term of 20 years, producers may switch back and forth several times for entire calendar years between complete self-marketing without any entitlement to remuneration under the feed-in tariff system and claiming the feed-in tariff. The biogas, hydro power and Kombikraftwerk plants can claim the payment of the difference between the annual revenue divided by the annual electricity produced and the FIT.
3. The obligation to purchase and pay for renewable energy or substances produced with renewable energy under this Regulation shall be limited to importers of fossil oil products, oil refineries, and grid operators for electricity, natural gas, hydrogen, water and heat.
4. The buyer of renewable methane, renewable hydrogen and desalinated seawater is obliged to finance only the last 1000 meters between the installation of the producer and the nearest point of the existing grid. In case of heat, the producer needs to pay for the construction of a new connection to an existing grid. In the case of electricity, the grid operator must pay for the connection line between the renewable product production plant and the existing grid. In the case of offshore products, this obligation is limited to the onshore part of the line.
5. The feed-in tariff for renewable products (electricity, methane, etc.) is constant for 20 years and ends on 31 December in 20 years after the start of the 20-year period.

### **Article 4 Tendering procedures**

1. Tendering procedures are possible for offshore renewable energies. All other tendering procedures for renewable energy production capacities are prohibited.
2. In order to minimize grid costs, the Member States are planning bundled direct line cable routes between the offshore wind farms and large consumption centers. Member states must complete the first phase of this grid planning within 12 months and make it publicly available as a basis for tenders for offshore energy.
3. All Member States must conduct one auction for one 10 GW offshore wind park bundled with a refinery. Slovenia, Hungary and Austria use the Northern Adriatic Sea of Italy, whereas Czechia and Slovakia use the Western Baltic Sea of Poland. Italy and Poland conduct these auctions for an administrative fee.

4. Negative FIT or entrance fees are not allowed. The weighting of the award criteria for the auctions is as follows
- I. 20%: price (= FIT requested) for one or several products mentioned in Article 5; the minimum price is zero.
  - II. 20%: direct lines to one or several big industry plants.
  - III. 10%: financing or not of direct line(s) to a major consumer or a grid connection point.
  - IV. 20%: temporal flexibility (a product mix of refinery, residual electricity to grid).
  - V. 10%: integration of own or third-party onshore solar parks, flexible biogas, flexible hydro by direct lines.
  - VI. 10%: marine mammal noise pollution control concept.
  - VII. 10%: Skilled worker-trainee ratio for the supply chain (blades, nacelle with mechanics and electrics, tower, foundation, construction and maintenance of the wind farm).

**Article 5 Feed-in tariffs for renewable products**

1. The table below lists all feed-in tariffs valid in the entirety of the European Union including territories in Europe, America, and Africa. The buyer of the renewable products has to pay the transport costs. The FIT for onshore photovoltaics is calculated by using Annex II.

Renewable product	Feed-in tariff (FIT) without Value added tax (VAT)				
	FIT price cap	Return on equity	FIT	Duration of validity of the FIT or cap from first publication of the FIT in this Regulation	Remuneration period (fixed price)
Desalinated water by Seawater reverse osmosis	0.7 € / kg	20% / a		5 years	20 years
Kerosene, fuel for big sea ships, gas oil and diesel oil, fuel oil, gasoline, naphtha, paraffin waxes, ethane, propane, butanes	350 €/MWh	20% / a		5 years	20 years
Methanol	300 €/MWh	20% / a		5 years	20 years
Methane from biogas	250 €/MWh	10% / a		5 years	20 years
Methane from waste CO <sub>2</sub> of biogas or of biogas burning or of biomethane	270 €/MWh	10% / a		5 years	20 years
Methane from air + water	300 €/MWh	20% / a		5 years	20 years
Hydrogen	200 €/MWh	20% / a		5 years	20 years
Ethanol from biomass	140 €/MWh	10% / a		5 years	20 years
Kombikraftwerk electricity			100 €/MWh	5 years	20 years
Wind onshore ≤ 100 kW			150 €/MWh	2 years	20 years
Wind onshore > 100 kW	150 €/MWh	10% / a		5 years	20 years
Train kite power plants	300 €/MWh	20% / a		5 years	20 years
Wind offshore	150 €/MWh	20% / a		5 years	20 years

Renewable product	Feed-in tariff (FIT) without Value added tax (VAT)				
	FIT price cap	Return on equity	FIT	Duration of validity of the FIT or cap from first publication of the FIT in this Regulation	Remuneration period (fixed price)
Photovoltaic onshore			Annex II	2 years	20 years
Photovoltaic offshore	200 €/MWh	20% / a		5 years	20 years
Hydro power ≤ 10 kW			220 €/MWh	5 years	20 years
Hydro power ≤ 100 kW			200 €/MWh	5 years	20 years
Hydro power ≤ 1 MW			150 €/MWh	5 years	20 years
Hydro power ≤ 10 MW			120 €/MWh	5 years	20 years
Hydro power > 10 MW			100 €/MWh	5 years	20 years
Tidal power offshore (Ruff, 2018, p. 32)	250 €/MWh	20% / a		5 years	20 years
Wave power offshore (Ruff, 2018, p. 33)	700 €/MWh	20% / a		5 years	20 years
Solid biomass electricity (Bundesnetzagentur, 2024)			220 €/MWh	5 years	20 years
Biogas electricity			220 €/MWh	5 years	20 years
Geothermal electricity	900 €/MWh	20% / a		5 years	20 years
Heat			100 €/MWh	5 years	20 years

- If the installation operator claims a feed-in tariff for a technology/product for which a maximum permitted return on equity is specified in Paragraph 1, the breakdown of the calculation must comply with Article 6. The Member States send the calculation basis for the relevant installations to the European Commission within one month after granting a feed-in tariff. The Commission publishes each calculation immediately in a database. Member States may refuse to grant feed-in tariffs with reference to this public database if the cost calculation for one or more items provides for costs that are considerably higher than the usual market values in the same country or other Member States. The European Commission analyzes the development in all Member States and proposes future updates for the FIT price caps of this article.
- After expiry of the period of validity, the operator of the old plant may claim a new fixed feed-in tariff, which also applies at that time to new plants, for a further 20 years.
- The tariffs are fixed in this Regulation. From the date on which a new tariff comes into force, the investor has the following time to build their installation and to request exactly this tariff at the start of operation (then remaining constant for the following 20 years): 2 years for onshore photovoltaic electricity and small wind power, 5 years for all other renewable energies and renewable materials.
- The feed-in tariffs must not be paid from the state budget.
- The feed-in tariffs must be paid by all end consumers via a levy. Exemptions for large consumers are prohibited. The levy may not be used for any other purposes, such as the renaturation of watercourses.
- The renewable energy produced must not be sold on energy exchanges together with fossil or nuclear energy.

8. The renewable energy produced can be sold either via an energy exchange or via a rollover mechanism to the grid operators or a rollover mechanism to the wholesalers.

## Article 6 Wind

1. The permit-granting authorities refuse all wind power projects with capacity factors below 0.15 (land) and 0.25 (sea) before deduction of any technical availability, any wind farm shadowing effects, and any operational environmental requirements by checking [www.WorldWindAtlas.info](http://www.WorldWindAtlas.info) of the Technical University of Denmark.
2. The wind electricity feed-in tariffs except small wind farms must be based on the average wind speed of the period 1991–2020.
3. The cost calculation approach for wind power is in a similar form also applicable to other renewables. It must be broken down into the following items:
  - i. Main investment costs without foundation
  - ii. Foundation costs
  - iii. Ancillary investment costs subdivided into costs for
    - A) Provision and construction of the necessary infrastructure
    - B) Grid connection
    - C) Planning costs
    - D) Development costs
    - E) Costs for compensation measures
  - iv. Other costs
  - v. Operating costs with the following details
    - A) Maintenance and servicing
    - B) Lease, operating and management costs
    - C) Insurance costs
    - D) Reserves for dismantling
    - E) Other operating costs
    - F) Direct marketing costs
  - vi. Interest on borrowed capital for a term of 20 years with 3 redemption-free start-up years at the European Investment Bank or a state bank in whose territory the project falls.
  - vii. Return on equity in accordance with Paragraph 1 of Article 5
  - viii. Levelized cost of electricity with 20 years as the lifetime of the plant.
  - ix. Energy yield
  - x. Standard assumption of an annual price increase of 2.5 % for operating costs.

## Article 7 Bioenergy

Biogas electricity production is only permitted if at least 70% of the waste heat can be used; else, only biomethane production with feeding methane into the natural gas grid or for the operation of a methane filling station is possible. The biogas plant must be built three times over and have a large gas storage tank suitable for bridging weekends (60 hours) without electricity production. Operation will include peak load phases and power interruption breaks of at least four hours each. Furthermore, the plant should produce less electricity in summer and more in winter.

## **Article 8 Net metering**

All electricity consumers are entitled to net metering with annual balance compensation with a term of 20 years with annual balance compensation. Both the energy cost component and the grid cost component are covered by net metering. Therefore, the electricity meter may also run backwards when renewable electricity is being fed into the public grid. The net export to the public grid shall be remunerated in accordance with Article 5.

## **Article 9 Distribution national renewable energy surpluses**

The EU Commission must confirm by delegated regulation within a period of three months whether a Member State has stopped all production and all imports of fossil energy and uranium. Those Member State shall have the right to transfer their renewable energy surpluses preferentially in the form of liquids (by rail, road and ship), but also in the form of gases (by ship or pipeline) and electricity (via the electricity grid), initially to the recipient states listed in column 1 of Annex I, until these can fully cover their entire fossil fuel and nuclear energy requirements. This is followed by the recipient countries in column 2, and finally those in column 3. Recipient countries in column 3 may only refuse to accept surpluses from supplier countries once the entire Union has stopped producing and importing fossil energy and uranium. The recipient countries must pay for the transport and the original feed-in tariff of the delivered products of the country of delivery.

## **Article 10 Repealing Energy Price Cap Regulation (EU) 2022/1854**

Council Regulation (EU) 2022/1854 is repealed.

## **Article 11 Criminal offense provisions**

Member States shall adopt provisions on fines and criminal offenses to enforce compliance with this Regulation. Members of company management and supervisory boards and of control authorities must also be subject to prison sentences of up to ten years in the event of a breach of their control duties, gross negligence or intent. Within 12 months of the entry into force of this Regulation, Member States shall introduce criminal offenses punishable by up to 10 years imprisonment for violations of Paragraphs 4 and 5 of Article 3 and Article 6.

## **Article 12 Entry into force**

This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union. This Regulation shall be binding in its entirety and directly applicable in all Member States.



Annex I

Supply relationship for surplus distribution

Country of delivery	Recipient country								
	1			2	3				
Belgium (BE)	NL	LU			FR	DE			
Bulgaria (BG)				GR	RO				
Denmark (DK)				SE	DE				
Germany (DE)	NL	BE	LU	DK	AT	CZ	PL	FR	
Estonia (EE)					LV				
Finland (FI)					SE				
France (FR)	IE	LU		ES	IT	BE	DE		
Greece (GR)	CY				BG				
Ireland (IE)					FR				
Italy (IT)	MT				SI	AT	FR		
Croatia (HR)					HU	SI			
Latvia (LV)	EE				LT				
Lituania (LT)				LV	PL				
Luxembourg (LU)					BE	DE	FR		
Malta (MT)					IT				
Netherlands (NL)					BE	DE			
Austria (AT)	SI				HU	SK	DE	IT	CZ
Poland (PL)				LT	SK	DE	CZ		
Portugal (PT)					ES				
Romania (RO)				BG	HU				
Sweden (SE)	FI				DK				
Slovenia (SI)	HR				HU	IT	AT		
Slovakia (SK)					PL	CZ	AT	HU	
Spain (ES)	PT				FR				
Czchia (CZ)	SK				PL	AT	DE		
Hungary (HU)	HR				RO	SI	AT		
Cyprus (CY)					GR				

## Annex II

The photovoltaic electricity feed-in tariff F1 is linked to a horizontal global irradiation (X) of 1000 kilowatt hour per square meter per year (kWh/m<sup>2</sup>/a). F1 plus the possible surcharges for value added in the European Economic Area (EEA) equals F2. The multiplication of F2 with the possible surcharge factors for full PV roof and full PV facade equals F3. The horizontal global irradiation of a NUTS3 area is Y. Then the feed-in tariff (F4) for the NUTS3 area is calculated by the following formula:  $F4 = F3 * X / Y$ . The value is rounded to 1 Euro per Megawatt hour. Table 1 shows examples for the NUTS3 areas Norrbottens län (Norrbotten county), München (Munich), and Malta.

Feed-in tariff photovoltaics onshore with examples

Location as NUTS3 administrative area				Reference	Norrbottens län	München	Malta
Capital city of the NUTS3 unit					Luleå	München	Valetta
Street address of government head building					Stationsgatan 5	Franz-Josef-Strauss-Ring 1	Kastilja
NUTS Level 0					Sweden	Germany	Malta
Elevation (from PVGIS website), m					0	516	51
Latitude North					65.582	48.142	35.896
Longitude East					22.135	11.583	14.511
Global Irradiation horizontal PVGIS-SARAH2/-ERA5, kWh/m <sup>2</sup> /a				<b>1000</b>	<b>922.34</b>	<b>1194.19</b>	<b>1871.52</b>
FIT, €/MWh	Building, noise barriers	≤ 10 kWp		158	171	132	84
		≤ 100 kWp		134	145	112	72
		≤ 400 kWp		111	120	93	59
		> 400 kWp		96	104	80	51
	Other			83	90	70	44
Surcharge factor	Full photovoltaic (PV) roof			<b>1.1</b>			
Surcharge factor	Full PV facade			<b>1.25</b>			
FIT, €/MWh	Building, noise barriers	≤ 10 kWp	Full PV Roof	173.8	188	146	93
		> 400 kWp	Full PV Façade	120	130	100	64
		≤ 100 kWp	Full PV Roof + Façade	184.25	200	154	98

*Remarks:* PVGIS: <https://ec.europa.eu/jrc/en/pvgis/docs/methods>. A Full PV roof means that the combined area of PV modules and windows is equal or exceeds 90% of the gross area of the roof (flat or inclined). A Full PV façade means that the combined area of PV modules, windows and doors is equal or exceeds 90% of the gross area of the façade (above ground).

# Surcharge on FIT for components made in EEA

Surcharge, €/MWh	Component
5	Photovoltaic module assembly
5	Solar cells
5	Silicon wafers
5	Metallurgical silicon
5	Solar glass

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