State Slovakia

General information	**Status EU membership**	Member state since 1 May 2004[1] Participant of Energy Community since 17 November 2006[2]
	Population	5,460,185 (2022)[3]
	Land area (km²)	48,080 km² (2020)[4] 49,035 km² (2015)[5]
	Urban population (%)	54 % (2021)[6]
Socio-economic situation	**GDP (current US$ billion)**	116.53 (2021)[7]
	GDP per capita (US$)	21,391.9 (2021)[8]
	Annual net earnings (Single person without children earning 100% of average earning (EURO)	10,984.68 (2021)[9]
	Median hourly earnings (EURO)	Males: 6.17 (2018) Females: 5.15 (2018)[10]
	World Bank economic classification (2021)	High-income country[11]
	Unemployment (% of total labor force)	6.7 % (2021)[12]
Energy situation in general	**Current energy sources**	- Domestic energy production: dominated by nuclear power- almost 53% of the total energy production in 2021, down from 60% in 2017, (mainly as a result of increased domestic production of natural gas (15.40%) and hydropower (15.40%)). Coal used to dominate domestic production but has been declining to 3.92 % in total energy production in 2021.[13] - Energy demand: Oil is the dominating fuel in transport; natural gas and electricity account for the largest share of Total Final Consumption (TFC) in other sectors.[14] - Total Energy Supply in 2019 constituted of: 24% Nuclear, 24% Gas, 21% Oil, 18% Coal+ Others, 13% Renewables. The Renewable supply mainly constituted of Bioenergy (79%), Hydro/Marine (18%), Solar (3%)[15] - From 2007 to 2021, the share of renewable energy in total primary energy supply (TPES) increased from 5.3% to 9.82 % and its share in electricity generation increased from 17.7% to 22.24%.[16] - Nuclear energy still generates more than 52% of all the electricity consumed in Slovakia.[17] - Electricity Generation in 2020 consisted of[18]: o Non-renewable sources: 21 981 GWh (76%) o Renewable sources: 6 857 GWh (24%), of which: ▪ Hydro: 4 517 GWh (16%) ▪ Solar: 663 GWh (2%) ▪ Wind: 4 GWh ▪ Bioenergy: 1 673 GWh (6%)
	Climate protection targets	The main quantified NECP target is to reduce greenhouse gas emissions for sectors not involved in emissions trading (non-ETS) by 20% by 2030 (the share has been increased from the originally declared 12%).[19]

Renewable energy targets	- 40% of the Slovak territory is covered by forests, which renders biofuels and waste a strategic priority for the government to achieve its renewables' targets.[20] - The RES share target in final energy consumption has been set at 19.2% for 2030, including the required target of 14% of RES in transport. In the electricity generation from RES sector, the NECP from 2019 set a target of 25% for 2030, which is at the limit of the technical possibilities of the Slovak electricity system. - One way to increase the overall share of RES in 2030 from 19.2% to 20% is via heat generation - greater use of biomass, including the production of biogas and biomethane[21], heat pumps, solar panels, and geothermal energy. The high level of gasification (over 90% of the population has access to natural gas), acts against increasing RES in the heat sector.[22]
Renewable energy potential	- Hydropower potential in Slovakia is estimated on level of 6700 GWh per annum, where 70.6% of total potential (4732 GWh/year) was already in use in 2017 and 29.4% (1968 GWh / year) remained unexploited.[23] - In 2014 **biomass** was considered to have the largest renewable energy potential, with a theoretical capacity of 120 petajoules, or 2.9 Mtoe.[24] - Installed **solar** capacity totaled 533 MW at the end of 2013 and has stayed flat since then until 2018. **Wind** resource potential is low to moderate in most of the country. Twenty-seven **geothermal** areas (around 34% of the country's territory), have been identified as potential areas for exploitable geothermal resources.[25] - Renewable Capacity in 2021 constituted: 68% Hydro, 23% Solar, 9% Bioenergy.[26] - IRENA provides estimation of potentials for Solar, Wind and Biomass in its Energy Profile for Slovakia.[27]
Renewable energy support regime	- In Slovakia, clean energy installations are not able to compete with conventual power plants without support schemes. Electricity production from RES was supported by the feed-in tariff scheme (RES producers sell electricity for fixed prices that are higher than those for conventionally produced electricity). This support scheme has increased electricity prices for all end users. The feed-in tariff rates are set on an annual basis by the Slovak Regulatory Office for Network Industries. The level of feed-in tariff depends on the year in which the project was put into operation and is guaranteed for a fixed number of years set out in law[28]. - In theory, all producers of electricity from RES in Slovakia are entitled to take advantage of preferential access to the distribution system, transmission, distribution, and supply. However, **in recent years, distribution companies have been very reluctant to connect new installations (especially solar) arguing that the national grid does not have sufficient capacity. (…)** - On 1 January 2020, an amendment to Act no. 309 / 2009 Coll., the Renewable Energy Sources Act (on the promotion of renewable energy sources and high efficiency cogeneration) was adopted - intended to lead to extensive reform in supporting electricity production from RES. - **The new feed-in premium tariff guarantees a premium above the market price through green auctions for solar installations above 100kW and other installations above 500kW. For smaller installation, the previous feed in tariff will be still available, but not**

as generous as in 2009-2010 when most of the new solar plants were installed. The amendment has also introduced a local source up to 500kW and **obligation of the distribution companies to connect these sources to the national grid on the condition that 90% of electricity is consumed at the place of installation**.[29]

- The amendment also transferred obligation to pay the tariffs from the distribution companies to a state-owned entity, Short-term Electricity Market Operator (OKTE) and ***imposed new limitations for electricity production from biomass or biogas*** due to greenhouse gas emissions.[30]
- To reduce the support paid through the feed-in-tariff scheme and entering the "system operation tariff", at the end of 2020 the Regulatory Office for Network Industries announced a "pilot regime of repowering", with the aim to extend the period of support beyond 15 years.[31]
- Supported RES technologies include: "hydropower with installed capacity of up to 500 kW, geothermal energy, combustion of landfill gas or gas from wastewater treatment plants with installed capacity of up to 500 kW, combustion of biogas produced by anaerobic fermentation with total capacity of up to 500 kW, combustion of high-efficiency cogeneration of biogas produced by anaerobic fermentation with total capacity above 250 kW and up to 500 kW".[32]
- Another draft amendment to Act No. 309/2009 Coll., approved in 2021, introduced a mandatory extension of support for electricity from existing renewable energy sources[33].
- "**Slovak Innovation and Energy Agency (SIEA)** has launched a pilot project called **'Green to the Households' in 2015**, giving Slovakia's households the opportunity to apply for grants to buy and install sources of renewable energy. Since its launch, the project has provided over EUR 30 million in total, resulting in over 18 000 installations of new renewable energy sources. These include more than 5 000 solar collectors, 3 500 heat pumps, 1 500 biomass boilers and 3 000+ photovoltaic systems."[34] These results led to next rounds of grant applications intended for the installation of new photovoltaic panels, heat pumps, biomass boilers and solar collectors outside the Bratislava region. Project had many barriers and after calls from NGOs, the system of applications was changed in June 2022 to be more transparent and available to all consumers.
- "The Operational Programme Quality of Environment (OP KŽP) allocates investment grants from the European Regional Development Fund (ERDF) for natural and legal persons, associations, or non-profit organisations. Renewable energy projects are eligible under Priority Axis 4 'Energy-efficient low-carbon economy in all sectors', namely Investment Priority 4.1 'Promoting the production and distribution of energy derived from renewable sources' (…). Specific Target 4.1.1 'Increasing the share of RES in gross final energy consumption of the SR' (as well as Specific Target 4.1.2 'Increasing the performance of small installations for the use of RES in the Bratislava Self-Governing Region') is aimed at supporting the generation of heat and electricity from renewable energy sources (RES), thereby contributing to the achievement of the planned share of RES in gross final energy

consumption until 2020. **Eligible activities under the electricity sector include the installation of small photovoltaic installations and wind turbines up to a total installed capacity of 10 kW in family houses and apartment buildings** (2.4.2.2 OP KŽP). The deployment of renewable energy sources is also supported through further investment priorities under Priority Axis 4".[35]

Legal and political framework for citizen energy

Relevant laws, policies, and plans

- Integrated National Energy and Climate Plan for 2021 to 2030, December 2019[36]
- Act no. 309/2009 Coll. on the promotion of renewable energy sources and high-efficiency cogeneration and on the amendment of certain laws as amended
- Act no. 251/2012 Coll. on Energy and on Amendments to Certain Acts, as amended
- Act no. 250/2012 Coll. on regulation in network industries, as amended[37]
- National Policy Framework for the Development of the Alternative Fuels Market (Government Resolution No 504/2016)
- Action Plan for the Development of Electromobility in the Slovak Republic (Government Resolution No 110/2019)
- "The Slovak government has already adopted a new energy law. The law amending the energy law of 2012 should have a strong focus on deregulation, but will also include the concepts of active consumers, energy communities, and will provide for a better market access for aggregators. The law came into force 1.1.2023."[38]

Regulatory framework for citizen energy

- "The Slovak Republic **has implemented legislation promoting self-consumption of electricity by introducing the "local source" concept** through an amendment to the act on the promotion of renewable energy sources and high-efficiency cogeneration (Act No 309/2018) that **became effective as of 2020**. The amendment defines that local renewable energy sources with an installed capacity of up to 500 kW can be used for local consumption. **Such sources shall have preferential access to the distribution network and may deliver surplus energy to other market participants (from up to 10% of the total installed capacity)**, but **shall not receive any feed-in-premium or feed-in-tariff**. In addition, a producer of electricity from a local source is exempt from paying a tariff for the operation of the system for all the electricity produced that he consumes himself."[39]
- "In its National Energy and Climate Plan (Slovakian government 2019) **Slovakia presents basic ideas for renewables self-consumers and renewable energy communities focusing on renewable heat**. Renewables self-consumers and renewable energy communities will be entitled to install their own equipment to produce heat from RES to provide heat for their own consumption, enable the storage of heat produced from RES and the sale of excess production. They will be subject to nondiscriminatory fees and payments to participate in the fixed costs associated with the operation of the district heating system including storage. **The right of renewables self-consumers and RECs to set up a heat generation plant in a building to cover their own heat consumption, to use energy storage, and to sell excess heat will only be exercised at the level of the whole building** (Slovakian government 2019)."[40]

Legal and political framework for citizen energy

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- On 19 October 2022, delayed transposition of DIRECTIVE (EU) 2018/2001 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 on the promotion of the use of energy from renewable sources was finally done by the amendment to Act no. 309/2009 Coll., on the promotion of renewable energy sources and high efficiency cogeneration (the Renewable Energy Sources Act).
- In 2022 several amendments of Energy Act no. 251/2012 Coll. were adopted by which the transposition of main Energy Directives was done (DIRECTIVE (EU) 2019/944 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU and DIRECTIVE (EU) 2018/2001 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 on the promotion of the use of energy from renewable sources). These main changes in energy law introduced new concepts and terms in energy sector as energy communities, contracts with dynamic prices, collective switches of suppliers, aggregates and others which can be very helpful in energy transition and market competition.

Evaluation of the legal framework

Although energy communities can already be legally established, real activities are not possible since the Energy Data Centre has not yet been built.

Transposition Tracker[42]

Existing citizen energy projects and/or research initiatives

Citizen energy projects

STEP – Solution to tackle energy poverty project - developed a simple, innovative, and replicable models of measures to address energy poverty. The project covered some of the countries with the highest rates of energy poverty in Europe. These are Bulgaria, Cyprus, Czech Republic, Latvia, Lithuania, Poland, Portugal, Slovakia, and the United Kingdom. More info on https://www.stepenergy.eu/.

CLEAR-X - CLEAR-X stands for "Consumers Leading the EU's Energy Ambition Response, Expansion" - The overall objective of the project is to **enable consumers to lead the energy transition by investing in renewable energy sources (RES) and energy-efficient (EE) technologies**. It aims to facilitate consumers' access to household renewables at an affordable price, through the provision of trusted information, collective purchase schemes, and an improved regulatory framework. More info on https://www.clear-x.eu.

Energy Community in Liptov - Local Action Group Dolný Liptov coordinates municipalities in Liptov, that want to join with companies and residents to redistribute electricity that, for example, schools or offices produce on weekends, but do not need. They will then share this energy between these entities.[43]

Cluster - Community Energy Group - Its main objective is to support the creation of energy communities in Slovakia. One of the founders of

	the cluster is the Slovak Smart City Cluster with other long-term cooperating entities.[44] **ATELIER is an AmsTErdam and BiLbao cItizen drivEn smaRt cities project -** funded by the Smart Cities and Communities call. Coordinated by the City of Amsterdam, the project combines the expertise and the commitment of 30 partners from 11 countries. ATELIER focuses on developing citizen-driven Positive Energy Districts (PEDs) in the two Lighthouse Cities Amsterdam (Netherlands) and Bilbao (Spain). Their successful implementations will then be replicated and tested for feasibility in the six Fellow Cities Bratislava (Slovak Republic), Budapest (Hungary), Copenhagen (Denmark), Krakow (Poland), Matosinhos (Portugal), and Riga (Latvia).[45]
Research and capacity building activities	Analysis and proposals for the definition of energy poverty - the study will be prepared by the Prognostic Institute of the Centre of Social and Psychological Sciences of the Slovak Academy of Sciences, which will process anonymised data on household energy consumption. Community energy is one of the solutions to energy poverty in Slovakia. The SAV study is being developed with the institutional support of the Ministry of Economy of the Slovak Republic.[46] Concept for the protection of consumers meeting the conditions of energy poverty - The Government of the Slovak Republic on 25.01.2023 at its meeting approved the draft Concept for the protection of consumers meeting the conditions of energy poverty, which was developed by Slovak Regulatory Office for Network Industries (ÚRSO). The approved draft Concept is a set of recommendations that should significantly increase the level of long-term sustainable access to energy and drinking water for socially vulnerable households in the Slovak Republic in the medium term. One of these solutions is the development of community energy. The supra-ministerial working group will further detail the material and propose concrete legislative measures.[47]

#ConsumerDebates | Energy communities: How can we better protect consumers? - With rapidly rising energy prices and a desire to move away from Russian fossil fuels, interest in energy communities has been increasing across Europe, as more and more consumers want to take their energy into their own hands through citizen-driven energy generation projects. With this rise in popularity, BEUC (the European Consumer Organisation), has conducted research into how consumer rights might be impacted by entering into various forms of energy community. The recording is available in Endnotes[48].

A how-to guide to ensure consumers reap the full benefits of energy communities - Interest in energy communities has soared in recent times, and it's easy to see why. They can be a great way to allow consumers to become self-sufficient in renewable energy and to actively participate in the energy transition. However, there are certain aspects that could be improved to enable these communities to go mainstream, according to a new BEUC report published in February 2023.[49]

Geothermal sond is a risk for municipalities, it should be covered by the state - In Slovak city Kežmarok they will heat with geothermal energy, saving up to 90% of gas consumption. They will be able to guarantee a low price of heat even in the current energy crisis, but local governments will not go into the development of boreholes if the state does not help them with the investment risk.[50]

Kežmarok plánuje na všetkých školách aj verejných budovách fotovoltické panely / Kežmarok plans photovoltaic panels on all schools and public buildings - The City of Kežmarok, in an effort to mitigate the impact of rising energy prices on its expenses, plans to install photovoltaic cells on all schools, kindergartens and public buildings. The first object that the city wants to tackle is the winter stadium, which is the most energy-demanding. This investment will require approximately 300,000 euros for panels, a battery, energy storage and its use.[51]

Zelená domácnostiam/Green to households - state support scheme coordinated by Slovak innovative and energy agency to promote the use of renewable energy sources for households. Financial support provided for photovoltaic panels, solar collectors, heat pumps, biomass boilers and wind turbines. Still very strict and complicated criteria, which makes is unavailable for many consumers.[52]

Obnov dom – Renovate your house - a state programme funded by the Slovak Republic's Recovery and Resilience Plan, which aims to support up to 30,000 older homes with a home renovation grant by 2026. Reducing the energy consumption of houses is expected to have a positive impact on households' economic performance and reduce CO2 emissions, thereby contributing to improving the quality of the environment and the health of the Slovak population. Still very strict

and complicated criteria, which makes is unavailable for many consumers[53].

Skupinové nákupy fotovoltiky a tepelných čerpadiel v rámci projektu CLEAR-X – Group purchases of photovoltaics and heat pumps in the framework of the CLEAR-X project - Consumer Association Spoločnosť ochrany spotrebiteľov organized a campaign for registration for the group purchase of photovoltaics with installation for single-family homes at the turn of 2022/2023. 2,820 consumers registered and a total amount of 450 households expressed their interest in the two discounted offers from suppliers. The process of inspections, contract signing, and installation is currently underway. In May 2023, the association plans to organize a second campaign for single-family houses to purchase and install air-to-water heat pumps. In both group purchases, only products that have been tested and have received good ratings in independent laboratories are promoted.[54]

Mystery Shopping of Heat Pumps - main objective of this project is that consumers have easy and timely access to reliable heat pump installers, who provide them with trustworthy, informed advice tailored to their energy needs. Specific objectives are that consumer organisations have better market evidence to support their advocacy activities aimed to increase availability to consumers of trustworthy heat pump installers, consumer organisations shape EU and national laws with the goal to increase availability to consumers of trustworthy heat pump installers and tools advising consumers on how to choose a trustworthy heat pump installer are available to them.

Regionálne centrá udržateľnej energetiky - Regional Sustainable Energy Centres - The proposed system is intended to create the necessary capacities, collect quality data, introduce modern regional and local energy planning, quality uniform monitoring and evaluation of the effectiveness of the measures taken, important feedback for the development of support schemes for increasing energy efficiency and the use of RES financed from public funds, support the implementation of innovative energy plans tailored to local needs and significantly strengthen the transfer of knowledge, good practice and information between regions. In addition to stabilising the economy of the regions, it should contribute to the fulfilment of Slovakia's national energy and climate commitments[55].

Štátny fond rozvoja bývania/State Housing Development Fund - finances renewable energy sources in multi-apartment buildings. The price for the construction of technical equipment that will use renewable energy sources or equipment for mechanical ventilation with heat recovery system can be included in the acquisition cost of the insulation of the apartment building or the replacement of common gas, electricity, sewerage, water, air conditioning and heat distribution systems in the apartment building. Still very strict and complicated

		criteria, which makes is unavailable for many multi apartment buildings[56]. **Solutions to Energy Poverty: Comprehensive Renovation of Buildings, Renewables and Self-generation of Energy** - Spoločnosť ochrany spotrebiteľov has produced a study for the CEE Bankwatch Network entitled Solutions to Energy Poverty: Comprehensive Renovation of Buildings, Renewables and Self-generation of Energy, which explains why reducing the energy demand and consumption of buildings through comprehensive renovation should be a priority and a key policy objective in Slovakia[57]. Other research can be found in the Endnotes[58]
Relevant actors and stakeholders	**NGOs**	- Consumer organisations: (https://www.sospotrebitelov.sk/, https://ombudspot.sk/, https://mediacnecentrum.com/) - Environmental organisations: (https://www.greenpeace.org/slovakia/, https://bpb.sk/, https://cepa.priateliazeme.sk/, https://klimatickakoalicia.sk/)
	Governmental bodies	- Ministry of economy – responsible for the implementation of EU energy legislation and national legal framework, prepare measures for different categories of energy subscribers, https://www.mhsr.sk/ - Ministry of finance – responsible for budgeting of the accepted measures, supporting schemes and social support, https://www.mfsr.sk/sk/ - Ministry of environmental protection – responsible for keeping the Slovak and EU targets for emission levels, renewable sources of energy and green transition, define and coordinates one of the state schemes – Obnov dom/Renovate your house, https://www.minzp.sk/kontakty/ - Ministry of investment, regional development and informatisation – responsible for framework of EU financial funds and resources and its effective spending, https://www.mirri.gov.sk/ - Regulatory Office for Network Industries – national regulator of energy market, https://www.urso.gov.sk/zakladne-informacie/ - Energy Ombudsman – online advice centre for consumers dealing with problem with energy suppliers, https://www.urso.gov.sk/urso-ombudsman-kto-je-to-co-robi-a-ako-pomaha/ - Slovak agency of environmental protection - state agency, which coordinates the state support scheme Obnov dom/Renovate your house, https://www.sazp.sk/ - Slovak innovative and energy agency - state agency, which coordinates the state scheme Zelená domácnostiam/Green for households, https://www.siea.sk/ - Institute of environmental policy – an analytical unit of the ministry of the environment, with mission to provide high quality and reliable environmental analysis and forecasts for the Slovak government and the public, he outputs do not necessarily reflect the official views of the ministry, aims to stimulate and improve the professional and public debate on topical issues, https://iep.sk/
	Local governments	- Municipalities, www.poprad.sk - Regional governments of eights Slovak counties - Union of Slovak cities, https://www.uniamiest.sk/

	- Association of Towns and Municipalities of Slovakia, https://www.zmos.sk/
Private actors	- RES associations (SAPI), https://www.sapi.sk/ - Photovoltaic suppliers/installers, heat pump distributors/installers - European heat pump association, https://www.ehpa.org/
International/ supra-national actors	- **European consumer organisation BEUC** - the umbrella group for 46 independent consumer organisations from 32 countries, which main role is to represent them to the EU institutions and defend the interests of European consumers in areas of competition, consumer rights, digital rights, energy, redress and enforcement, financial services, food, health, safety, sustainability and trade policy, https://www.beuc.eu/ - **International Consumer Research & Testing (ICRT) -** a global consortium of consumer organisations that collaborate on research and testing of consumer products and consumer services, not-for-profit organisation fully owned by its members, so it is independent of product manufacturers, and act exclusively in the interest of consumers, https://www.international-testing.org/ - **European Climate Foundation** - s a major philanthropic initiative working to help tackle the climate crisis by fostering the development of a net-zero emission society at the national, European, and global level, https://europeanclimate.org
Academia	- **Prognoses Institute of Slovak Academy of science** - the strategic objective of the Institute is to conduct basic and applied research to understand and manage global and local economic, social and environmental issues[59] - **Presov University**[60]
Others	

Summarizing evaluation	
Fields of Action:	In order to achieve the goal of energy self-sufficiency and to reduce the costs of heat and hot water supply by building its own RES heat source, the Slnečnica multi apartment building and all apartment buildings in Slovakia must resolve issues and overcome numerous legislative and technical obstacles in the following fields of action: 1. The administrative process of terminating the heat supply from the central supplier needs to be unified and simplified, and the costs associated with this termination should be shared fairly between the apartment building and the remaining customers. 2. The decision-making processes for obtaining the consent of the owners in the apartment building, when terminating the contract with the heat supplier, need to be standardised, simplified and motivating for both sides. 3. The issue of what options the older multi apartment buildings have with heat pumps, when they do not own the necessary land, but need to obtain the right to an adjacent property to conduct a survey for the location of a water-to-water heat pump needs to be addressed. 4. Adjusting the legislative options for apartment buildings to locate a heat pump on adjacent land. 5. Establish network of contact advice centres to make multi apartment buildings‘ managers aware of the possibilities of placing photovoltaic panels on their apartment buildings and the available state assistance and financial support.

6. Elimination of technical problems with grid capacity and significant speeding up and simplification of the process of obtaining the approval of the distribution company for the construction of a local source for the generation of electricity from renewable energy sources. Motivate prosumers by net-metering and payments for extra renewable energy sent back to the grid.

7. Examine the positives/negatives/potential of residential buildings in Slovakia for the use of photovoltaics and/or solar collectors on the roofs, on the balconies. Investigate the potential of solar parks in the sector of multiapartment buildings.

8. Consumer awareness - will all households in the multi apartment building agree to invest to photovoltaic or/and heat pumps? How and why to motivate tenants, landlords or poor?

9. Currently there are no financial instruments or help available for multi apartment buildings with savings willing to disconnect from central heating and partially or fully transfer to renewables. How to improve three current schemes and what other tools can be created?

Projects supported by the German Environment Foundation (DBU)
AZ 38629/01-43/0 Dekarbonized energy System and possibilities of Community energy for the new district Mayer Malacky (Slovak Republic) - Feasibility Study"
(Projektdauer: 30.11.2022 - 30.5.2023)
Bewilligungsempfänger: Priatelia Zeme-CEPA - Friends of the Earth-CEPA, Poniky, Slowakei

Authors of the country profile: Petra Cakovska, Tamara Mitrofanenko, Gesa Geißler

[1] https://european-union.europa.eu/principles-countries-history/country-profiles/slovakia_en
[2] https://www.energy-community.org/aboutus/whoweare.html
[3] "Slovakia Population 2022 (Live)". World Population Review. Retrieved 11 July 2022
[4] https://data.worldbank.org/indicator/AG.LND.TOTL.K2?view=chart
[5] https://european-union.europa.eu/principles-countries-history/key-facts-and-figures/life-eu_en
[6] https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?view=chart
[7] https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?view=chart
[8] https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_pc&lang=en
[9] https://ec.europa.eu/eurostat/databrowser/view/earn_nt_net/default/table?lang=en
[10] https://ec.europa.eu/eurostat/databrowser/view/earn_ses_pub2s/default/table?lang=en
[11] https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups
[12] https://data.worldbank.org/country/slovak-republic?view=chart
[13] https://www.okte.sk/en/guarantees-of-origin/statistics/national-energy-mix/
[14] Figure 2.8, TFC by source and sector, 2016. p. 22. https://iea.blob.core.windows.net/assets/7721817f-2d56-499a-866d-157873e3318b/2018SlovakRepublic.pdf
[15] https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Slovakia_Europe_RE_SP.pdf
[16] Generous financial support triggered a very rapid growth in solar power in 2010-11, but the growth has since stalled, as the government cut back the subsidies out of concern for grid instability and the financial burden on final consumers. According to statistics by the Slovak Regulatory Office for Network Industries, electricity from renewable energy sources in 2021 represented about 20,77% of the Slovak Republic's energy mix.
https://www.urso.gov.sk/podiel-vyroby-elektrickej-energie-z-obnovitelnych-zdrojov-energie/
[17] https://www.okte.sk/en/guarantees-of-origin/statistics/national-energy-mix/
[18] https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Slovakia_Europe_RE_SP.pdf
[19] https://energy.ec.europa.eu/system/files/2020-03/sk_final_necp_main_en_0.pdf
[20] https://iea.blob.core.windows.net/assets/7721817f-2d56-499a-866d-157873e3318b/2018SlovakRepublic.pdf
[21] …mainly derived from waste from plant and animal production, from the biodegradable part of municipal waste, biodegradable kitchen and restaurant waste and waste from wastewater treatment plants.
[22] https://energy.ec.europa.eu/system/files/2020-03/sk_final_necp_main_en_0.pdf
[23] https://www.iea.org/policies/5166-the-concept-of-using-hydropower-potential-in-slovakia-till-2030
[24] However, concerns about illegal logging prevail. https://iea.blob.core.windows.net/assets/7721817f-2d56-499a-866d-157873e3318b/2018SlovakRepublic.pdf
[25] https://iea.blob.core.windows.net/assets/7721817f-2d56-499a-866d-157873e3318b/2018SlovakRepublic.pdf

[26] https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Slovakia_Europe_RE_SP.pdf
[27] https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Slovakia_Europe_RE_SP.pdf
[28] The reform was prepared in line with the phasing-out philosophy, with the priority of ensuring cost- effectiveness and minimising the impact on final energy prices. Source: https://cms.law/en/int/expert-guides/cms-expert-guide-to-renewable-energy/slovakia
[29] https://cms.law/en/int/expert-guides/cms-expert-guide-to-renewable-energy/slovakia
[30] https://cms.law/en/int/expert-guides/cms-expert-guide-to-renewable-energy/slovakia
[31] "This will create space for reducing the system operation tariff in electricity prices for consumers and at the same time promote the decarbonisation goals of the Slovak Republic. The Office's intention was to involve as many electricity producers as possible from solar energy, biogas, hydropower, biomass, landfill gas and gas from wastewater treatment plants. (…) The gradual deployment of low-carbon technologies for electricity generation has led to a reduction of fossil fuel consumption and therefore also of greenhouse gas emissions. The current support scheme enables achievement of the set goals in a cost-effective way. With the construction of electricity generation sources with a relatively small installed capacity, the necessary increase of installed capacity leading to an increased share of RES can be expected in the coming years. Due to its proximity to the customer, such electricity generation does not place increased demands on transmission capacities". P 125. https://www.urso.gov.sk/data/att/f93/1685.afd20b.pdf
[32] P. 126. https://www.urso.gov.sk/data/att/f93/1685.afd20b.pdf
[33] http://www.czechcompete.cz/good-governance/legal-reform-and-transparency/important_legislative_changes
[34] http://eko-unia.org.pl/wp-content/uploads/2018/06/mini-report-1_-Slovakia.pdf
[35] "Except of the Bratislava Self-Governing Region (BSK), OP KŽP promotes the provision for energy audits at small and medium-sized enterprises (SMEs) authorised to do business in industrial sector and related services as well as the implementation of measures arising from energy audits (incl. renewable energy sources' installation) in the enterprises (Investment Priority 2, Specific Target 4.2.1). Additionally, the use of renewable energy sources is incentivised through the Investment Priority 3 of Priority Axis 4, namely 'Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings, and in the housing sector'. Apart from other supported measures, the improvement of energy performance of public buildings can be achieved also through the construction of renewable energy plants in buildings covering their energy consumption (Specific Target 4.3.1). However, the installation of renewable energy sources will be promoted only as part of a comprehensive project for improvement of the energy efficiency of public buildings (except of BSK) (2.4.4.3 OP KŽP)."http://www.res-legal.eu/search-by-country/slovakia/single/s/res-hc/t/promotion/aid/subsidy-iii-operational-programme-environment/lastp/187/
[36] https://energy.ec.europa.eu/system/files/2020-03/sk_final_necp_main_en_0.pdf
[37] https://www.okte.sk/en/renewable-resources/legislation/
[38] https://energycommunitieshub.com/country/slovakia/
[39] Frieden et al. 2020. Collective self-consumption and energy communities: Trends and challenges in the transposition of the EU framework. Working Paper Compile project.
[40] Frieden et al. 2020. Collective self-consumption and energy communities: Trends and challenges in the transposition of the EU framework. Working Paper Compile project.
[41] Frieden et al. 2020. Collective self-consumption and energy communities: Trends and challenges in the transposition of the EU framework. Working Paper Compile project.
[42] https://www.rescoop.eu/policy/slovakia
[43] https://spravy.rtvs.sk/2023/03/v-liptove-vznika-prva-energeticka-komunita-budu-si-vyrabat-vlastnu-elektrinu/.
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[45] https://smartcity-atelier.eu.
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[51] https://www.asb.sk/zelena-obnova/kezmarok-planuje-na-vsetkych-skolach-aj-verejnych-budovach-fotovoltaicke-panely
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[58]-https://www.sospotrebitelov.sk/aktuality/na-slovensku-si-blokujeme-vznik-energetickych-spolocenstiev-a-samovyrobcov-energie-az-do-jula-2024/; https://www.sospotrebitelov.sk/aktuality/slovensko-problem-energetickej-chudoby-stale-ignoruje/; https://euractiv.sk/section/budovy/opinion/slovaci-si-chcu-vyrabat-energiu-sami-brani-im-v-tom-byrokracia-a-slaba-podpora-statu/; https://euractiv.sk/section/energetika/news/domacnosti-a-firmy-si-chcu-vyrabat-vlastnu-energiu-stat-a-distribucky-sa-musia-prisposobit/
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