

Residential Prosumers in the European Energy Union

EAHC/2013/CP/04

Mapping the legal and regulatory framework in the 28 Member States, Iceland and Norway

Norway



This study is part of the mapping of the legal and regulatory framework for residential prosumers in the 28 Member States, Iceland and Norway, within the project on Residential Prosumers in the European Energy Union EAH/2013/CP/04, and carried out by Milieu Ltd (Belgium), Chaussée de Charleroi, 112, B-1060 Brussels, tel: +32 (0)2 506 1000; web address: www.milieu.be

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National report on the regulatory framework for residential prosumers: Norway

General Description of the national legal and regulatory framework

General

Energy specific legislation – hydropower / water resources management

- Hydropower plays a crucial role in the Norwegian resource base and is subject to public regulation and control.
- Act No 16 of 14 December 1917 relating to acquisition of waterfalls, mines and other real property, etc. (the Industrial Licensing Act) (*Lov om erverv av vannfall*).
 - The Act, as amended, regulates the ownership, acquisition and use of waterfalls for electricity production in Norway. Its primary objective is to ensure that hydropower resources are managed in the best interests of the public through public ownership of hydropower resources at national, county and municipal levels (§1). It defines a concession regime for the exploration of waterfalls for power production in Norway. It also provides rules as to the limit put in private ownership. The Act applies to waterfalls which, in connection with water regulations, can deliver more than 4000 natural horsepower (NHP).
- Act No. 17 of 14 December 1917 relating of watercourses (the Watercourse Regulation Act) (*Lov om vasdragsreguleringer*, so-called *vassdragsreguleringsloven*).
- The Act completes the Industrial Concession Act, as it defines licensing obligations for the use of the water in a regulation reservoir for power generation. The action of transferring water from a water course also requires a licence. The aim of the Act is to protect both public and private interests in the water course, as well as to ensure a balance of interests when building the project. If conditions are met, the completion of the project may lead to expropriate of properties, with compensation. Act No 82 of 24 November 2000 relating to river systems and groundwater (the Water Resources Act) (*Lov om vassdrag og grunnvann*, so-called *vannressursloven*).
 - The Act covers smaller power plants which are not regulated and which do not require a licence under the Water Course Regulation Act, but that can be subject to licensing obligation under this Act. Under the Water Resources Act, is required to acquire a licence anyone who performs activities on water course that may affect public interests in water courses or the sea. The ultimate goal of the Act is to ensure a socio-economically prudent use and management of river systems and ground water.

Energy specific legislation – energy sector regulation

- Act No 50 of 29 June 1990 relating to the generation, conversion, transmission, trading, distribution and use of energy, etc. (the Energy Act) (*Lov om produksjon, omforming, overføring, omsetning, fordeling og bruk av energi*) The Energy Act is the central act regulating the power sector in Norway. It covers both physical and financial aspects, and covers the whole value chain, i.e. generation, conversion, transmission, trading, distribution and energy consumption.
- The Act defines the licensing regime for entities involved in generation, transmission and distribution of electric energy. The Act defines as a key objective that all those activities are to be performed in a socio-economically efficient manner, including taking into account relevant public and private interests.
- Relevant implementing acts to the Energy Act for the purpose of this study:
 - Regulations No. 959 of 7 December 1990 pursuant to the Energy Act (*Forskrift om produksjon, omforming, overføring, omsetning, fordeling og bruk av energi*).
 - This is the implementing regulation to the Energy Act, containing detailed provisions for the purpose of implementation.

- Regulations No 302 of 11 March 1999 governing financial and technical reporting, income caps for network operations and transmission tariffs (the Control Regulations) (*Forskrift om kontroll av nettvirksomheten – kontrollforskriften*).
 - This regulation sets the rules for tariffs setting and income caps for grid operators as well as reporting obligations. It contains the detailed provisions applying to prosumers.
- Regulations No. 301 of 11 March 1999 governing metering, settlement and coordinated action in connection with electricity trading and invoicing of network services (Regulations on power trading and grid services) (*Forskrift om måling, avregning, fakturering av netttjenester og elektrisk energy, nettselskapets nøytralitet mv.*).
- Regulations No. 1607 of 16 December 2002 relating to energy planning.
- Regulations No. 448 of 7 May 2002 relating to the system responsibility in the power system.
- Regulations No. 1652 of 14 December 2007 relating to the guarantees of origin for generation of electrical energy (*Forskrift om opprinnelsesgarantier for produksjon av elektrisk energy*).
- Regulation No. 1557 of 30 November 2004 on the quality of supply in the electricity market (*Forskrift om leveringskvalitet i kraftsystemet*).
- Offshore Renewable Energy Production Act No. 21 of 4 June 2010 (Offshore Energy Act).
 - The Act applies in the Norwegian territorial waters outside the baselines and in the exclusive economic zone, but certain provisions of the Act can also be applied in the coastal waters inside the baselines – the inner waters (Section 1-2, para.7).
 - The Act applies to all forms of renewable energy production at sea. It regulates the production of offshore renewable energy, the transformation and the transmission of the electricity produced offshore, including the installations related to those operations.
 - The purpose of the Act is to facilitate exploitation of offshore renewable energy resources in accordance with the goals of society. The Act is also intended to ensure that energy facilities are planned, built and managed in a manner that takes into account considerations related to energy supply, the environment, safety, and commercial and other interests.

Support schemes for renewable energy generation:

- Regulations No. 39 of 21 June 2011 relating to electricity certificates (Elcertificates Act)
 - The purpose of the Act is to ensure increased production of electric energy from renewable energy sources. The Act establishes a Norwegian scheme for electricity certificates which, from 1 January 2012, has been linked to the Swedish electricity certificate market.
- Regulations No. 1377 of 10 December 2001: Regulations governing the payment of a levy on the grid tariff into the Energy Fund (Energy Fund Regulations) (*Forskrift om innbetaling av påslag på nett tariffen til Energifondet*).

General legislation applicable to all sectors:

- Planning and Building Act (Ministry of Local Government and Modernisation).
- Nature Diversity Act (Ministry of Climate and Environment).
- Competition Act (Ministry of Government Administration, Reform and Church Affairs).
- Consumer Purchases Act (Ministry of Justice and Public Security).
- Pollution Control Act (Ministry of Climate and Environment).
- Public Administration Act (Ministry of Justice and Public Security).
- Act No. 2 of 9 January 2009 relating to the Control of Marketing and Contract Terms and Conditions, etc. (the Marketing Control Act).

1. What types of residential prosumers are there in your country on the basis of type of RES used and size of the installation?

Type of RES for prosumer installations

The Norwegian legislation does not distinguish between different types of prosumers based on the source of energy for the purpose of electricity generation. The only distinction made is the threshold for being a prosumer.¹ This means that all sources of energy used for generating electricity are covered – even non-renewable sources – although the use of non-renewable source for the production of electricity is very unlikely to happen. This also means that all sources of renewable energy are covered, and that the scheme is technology neutral.

In the summary of the public hearing,² the energy regulator NVE (Norwegian Water Resources and Energy Directorate, NVE) explains that the new prosumer regime applicable as of 1.1.2017 is not meant as a support scheme for renewable energy. The objective of the change in legislation is to provide a clearer legal basis for prosumption, i.e. enabling some consumers who are generating their own electricity to sell the excess of production. Prosumers are now defined as separate customer category. The amendments precise further prosumers' rights and duties, and the thresholds applicable to prosumers (see next paragraph on the "size of the installation") as well as the possible exemptions from general obligations related to the payment of grid tariffs. On that point, it clarifies and harmonises the DSOs' duties towards prosumers. Consequently, the measure is not meant as a support measure for RES generation but instead as both a codification of currently practice (worked on the basis of an exemption to the general legislation) and a further development of the regime, including rights for prosumers and payment of tariffs.

In practice, because of the particular patterns of the energy mix in Norway, it is expected that most part of the prosumers will generate RES- electricity. However, electricity generation in Norway is almost totally based on renewable energy sources, and mostly hydropower (95.8% in 2016), followed by wind power (2.1%) and thermal power (2.1%).³ This means that the motivation for increasing the share of prosumption in Norway is not directly link to a desire to become "greener".⁴ The price of electricity for end-users is also relatively low, which does not make it either a strong motivation in favour of presumption. The registered demand in relation to presumption relate almost exclusively to solar panels so far.

Size of the installation

The legislation contains several criteria determining when we are before a prosumer. Among them is the 'input power' (electricity fed into the grid) at the connection point, which shall never exceed 100kW.

In addition to this criterion, the new law provides for the absence of concession. During the hearing process of the new law amendments on prosumers, certain stakeholders were of the opinion that it would not be necessary to have this double criterion of absence of concession and 100 kW input power, and that the absence of concession would be sufficient. However, the energy regulator was of the opinion that it is important to keep a threshold (of 100 kW) in order to limit how big a prosumer can be.

A foreseeable consequence of defining a threshold is that construction companies will adapt their

¹ See question 3.3 below.

² Endringer i kontrollforskriften vedrørende plusskundeordningen, Oppsummering av høringsuttalelser og endelig forskriftekst, Rapport 47-2016, Norwegian Water Resources and Energy Directorate, NVE. Available at http://publikasjoner.nve.no/rapport/2016/rapport2016_47.pdf.

³ Source: Statistics Norway, SSB, <https://www.ssb.no/en/energi-og-industri/statistikker/elektrisitet>.

⁴ This comes also from interviews conducted by researchers in the report by 'Power from the People? Prosuming conditions for Germany, the UK and Norway', Fridtjof Nansens Institutt, FNI Report 5/2016. Note that this report does not integrate the latest legislative development in Norway.

building projects based on that threshold.

As the threshold is set relatively high, it is foreseeable that other than households will be eligible to become prosumers, even if they still must not be subject to concession requirements (e.g., certain small commercial consumers).

During the public hearing of the new law amendments, certain stakeholders pointed out that not all the parts of the grid may support an input power of 100 kW. Defining this threshold input power will result indirectly in setting a specific requirement for grid operators in terms of grid dimension.⁵

In addition, a prosumer cannot possess an installation which requires a concession behind the connection point or any concession for sale of electricity back the connection point.

A criticism expressed during the public hearing is that the new definition does not fit very well with the situation for apartment buildings (*boligblokker*), although this could represent a large number of prosumers. The reason for that is that residential consumers in an apartment building will generally generating electricity jointly – e.g., on the roof of the building –, while the meters are individual.⁶

Overview of the number of prosumers in Norway

There are no reporting requirements, so it is difficult to know of many prosumers there are in Norway. Based on data from the major DSOs, the Norwegian TSO reported that by the beginning of 2017 only 500 Norwegian households had registered as prosumers. The biggest DSOs – Hafslund, Lyse, Trønderenergi, Norgesnett and Agder Energi – are counting approximately 370 prosumers all together.⁷

The only reporting obligation is under the green certificates scheme (elcertificates), if prosumers want to get elcertificates for their generation. It is not expected that residential prosumers would be interested in applying for these, because the application fees are relatively high, too high for making it economically interesting for them. However, commercial prosumers that fall under the definition of prosumers are expected to be interested in becoming prosumers and apply to the elcertificates schemes. Recent released data shows that the announcement in 2015 that it would be possible to get elcertificates and becoming a prosumers has encouraged the installation of solar panels in the year 2016, mostly at the benefit of more commercial actors.⁸

2. What is the institutional framework & division of competences regarding residential prosumers in your country?

The Parliament (*Stortinget*)

The **Storting** sets the framework for the energy activities in Norway, including by adopting legislation. Major development projects and issues involving fundamental principles must be deliberated in the **Storting**. The **Storting** also reviews the Government and public administration. However, some important aspects of implementation are delegated to the Government, such as regulatory powers.

⁵ Endringer i kontrollforskriften vedrørende plusskundeordningen, Oppsummering av høringsuttalelser og endelig forskriftekst, Rapport 47-2016, NVE. Available at:

http://publikasjoner.nve.no/rapport/2016/rapport2016_47.pdf.

⁶ See question 7.5 below. See also Rapport 47-2016, NVE, p. 11.

⁷ '500 selger egen strøm', Statnett: <http://www.statnett.no/Samfunnsoppdrag/Fremtiden-er-elektrisk/500-selger-egen-strom/>. Last visited 28.2.2017.

⁸ 'Det er flere tak å ta av, vi har så vidt bare skrappt litt i overflaten', Teknisk Ukeblad, 27 February 2017, at <https://www.tu.no/artikler/norsk-solkraftutbygging-naer-firedoblet-i-2016-vi-har-savidt-skrappt-i-overflaten/377031>.

The Government

The Government exercises executive authority over, *inter alia*, energy policy, and answers to the **Storting** as regards policies. To carry out its policies, the Government is assisted by the ministries, underlying directorates and supervisory authorities. It is common that directorates have delegated powers to adopt regulations and decisions. The Ministry in charge will usually be the appellate body to the Directorate's decisions.

Ministry of Petroleum and Energy (MPE)

The Ministry of Petroleum and Energy is responsible for resource management and the sector as a whole.

The NVE

NVE is a Directorate under the Ministry of Petroleum and Energy. It is the Norwegian Energy Regulator. NVE's mandate is to ensure an integrated and environmentally sound management of Norway's water resources, promote efficient energy markets and cost-effective energy systems and contribute to efficient energy use. Pursuant to the Regulations to the Energy Act, NVE has delegated powers to adopt some legislative acts, such as in the case of the Regulations to the Energy Act itself (see § 9-1).

ENOVA SF

Enova SF was established in 2001. It is a public enterprise that is owned by the Ministry of Petroleum and Energy. ENOVA's action focuses on energy efficiency and renewables, with various financial support programmes in place, including for households. It manages the Energy Fund (approved by the EFTA Surveillance Authority, ESA).⁹ The Energy Fund is financed via a small additional charge to electricity bills. In addition, the Energy Fund has been also allocated the proceeds from 'The "Green Fund for Climate, Renewable Energy and Energy Efficiency Measures'.

More indirectly:**Ministry of Finance**

It is responsible for any matters related to taxation, including in the energy sector. This includes power plant taxation, any taxation applicable to energy and the management of state's expenditures. However, the state ownership in production and network companies is under the responsibility of the Ministry of Trade, Industry and Fisheries.

Directorate of Taxes (Skattedirektoratet)

The Norwegian Tax Administration is an agency under the authority of the Ministry of Finance. The agency consists of the Directorate of Taxes and five tax regions. The Directorate is responsible for the supervision of the taxation policy, including tax on produced electricity (elavgift).

Consumer Ombudsman (Forbrukerombudet)

The Consumer Ombudsman is an independent administrative body with the responsibility of supervising measures in the market and of protecting consumers from abusive marketing and selling practices. It seeks to compel traders to observe the regulatory framework. The Consumer Ombudsman considers cases upon complaints from consumers and traders, but will also at his own initiative look at marketing measures. The Consumer Ombudsman carries out supervision of the Marketing Control Act, which covers the marketing of electricity sale to customer. The Consumer Ombudsman and the Market Council have authority to issue decisions banning unlawful marketing and contract terms and conditions in standard contracts when deemed necessary for pursuing the interests of consumers.

⁹ The EFTA Surveillance Authority (ESA) monitors compliance with the Agreement on the European Economic Area (EEA Agreement) in Iceland, Liechtenstein and Norway, enabling those States to participate in the Internal Market of the European Union. Website: <http://www.eftasurv.int/>.

The Electricity Appeal Board (Elklagenemnda)

The Electricity Appeal Board was established in accordance with an agreement between the Norwegian Electricity Industry Association (Energi Norge) and the Norwegian Consumer Council. The Board was approved by the cabinet in March 2007. The Norwegian Employers' Organisation for Locally owned Enterprises (KS Bedrift) has entered the agreement. The Board deals with complaints that have their origin in contract conditions between energy companies (both suppliers and grid operators) and consumers. Energy company here means grid company and end-user company. The Board consists of two representatives appointed by the Norwegian Consumer Council and two representatives appointed by electricity companies. The Board is run by a judge.

Directorate for building quality (Direktoratet for byggkvalitet)

The Directorate falls under the supervision of the Ministry of Local Government and Modernisation. It is the central organ in charge of monitoring the legislation concerning building legislation, including technical requirements in buildings. Therefore it is decided to introduce new provisions, such as building criteria in relation to the prosumers' buildings, it may fall within the competence of the Directorate.

Specific Questions on the regulatory framework for residential prosumers**3. What is the regulatory framework for residential prosumers in your country?****General**

NVE has adopted amendments to the Regulations governing financial and technical reporting, income caps for network operations and transmission tariffs (the Control Regulations)¹⁰. This is the only act containing specific provisions on prosumers. Otherwise, the general legal framework for energy production, transport and consumption listed above applies.

3.1. What is the existing legislative framework regulating Renewable Energy Projects in your country?

First it must be recalled that electricity generation in Norway is almost exclusively based on renewable energy, and primarily hydropower.¹¹ This means that all energy legislation referred to above will apply to renewable energy projects. Some distinctions have to be made according to the source of production (specific legislation for hydropower and water courses) and the size of the plants (small water courses versus big water courses or reservoirs, or other renewable energy sources). General legislation applies otherwise to both renewable and non-renewable sources.

Renewable energy projects, as energy projects in general, will be subject to the following legislation (see above for details):

- Industrial Concession Act and Watercourse Regulation Act (primarily for hydropower developments)
- Energy Act
- Regulations on the Energy Act
- Offshore Renewable Energy Production Act
- Elcertificates Act
- Nature Diversity Act

¹⁰ Regulations No 302 of 11 March 1999 governing financial and technical reporting, income caps for network operations and transmission tariffs (the Control Regulations) (*Forskrift om kontroll av nettvirksomheten – kontrollforskriften*)

¹¹ See answer to question 1.

- Pollution control Act
- Plan and Building Act, some parts.

3.2. Does the Renewables National Action Plan include any objectives for residential prosumers (if so, please specify)

The National Action Plan¹² does not include any specific objectives for residential prosumers.

In 2016, the Government adopted a White Paper on Energy Policy¹³. **The document refers only to prosumers in relation to deployment of smart metering**¹⁴. Other parts of the document are meanwhile relevant for the future of prosumers policy in Norway, such as the wish to limit the number of DSOs, which is extremely high in Norway (approx.135 DSOs). This goes meanwhile against the trend which consists in increasing the number of actors at the end of the grid and promote decentralised generation. It also raises political questions as to grid ownership (public vs private), and grid tariff regulation.

The legislation does not define any target in terms of prosumers.

3.3. Is there a definition (legal or regulatory) of residential prosumers (or self-consumption) in your country? If so, state it and describe the elements of this definition?

Legislation has been recently amended in order to include a definition of “prosumer”.

From March 2010 to 1 January 2017, a first regime for prosumers was in place through derogation to the legislative provisions¹⁵.

This exemption, initially given through a decision, is now codified and adjusted, since the Regulation itself has been amended.

The definition of prosumers is contained in § 1-3 of the Regulations No 302 on reporting, income and tariffs in connection with grid activity (the so-called Control Regulations)¹⁶, as amended.

Such Sections define prosumers as the end-users with consumption and production behind the connection point, where input power at the connection point at no time exceeds 100kW. A prosumer cannot possess an installation which requires a concession behind the connection point or any concession for sale back the connection point.¹⁷

Interpretation

There are three main criteria in the definition. Those three are reviewed below.

¹² The national Plan is available at https://ec.europa.eu/energy/sites/ener/files/documents/dir_2009_0028_action_plan_norway_nreap.pdf (last accessed 01.02.2017).

¹³ Energimelding (Meld. St. 25 (2015–2016), available at <https://www.regjeringen.no/no/dokumenter/meld.-st.-25-20152016/id2482952/> (last accessed 02.02.107).

¹⁴ *ibid.*, p.144.

¹⁵ Decision on exemption from the Regulations on reporting, income and tariffs in connection with grid activity, of 16.03.2010.

¹⁶ Forskrift om økonomisk og teknisk rapportering, inntektsramme for nettvirksomheten og tariffer) - FOR-1999-03-11-302.

¹⁷ Original version: ‘Plusskunde: Sluttbruker med forbruk og produksjon bak tilknytningspunkt, hvor innmatet effekt i tilknytningspunktet ikke på noe tidspunkt overstiger 100 kW. En plusskunde kan ikke ha konsesjonspliktig anlegg bak eget tilknytningspunkt eller omsetning bak tilknytningspunktet’.

i. “end-user with consumption and production behind the point of connection”

The prosumer must be an end-user. An end-user is defined in Norwegian legislation as “someone who buys electric energy but does not re-sell it afterwards.” (“*kjøper av elektrisk energi som ikke selger denne videre*» (§1-3) (Regulation on the measurement, calculation, billing of grid services and electric energy, grid operators’ neutrality, etc., *Forskrift om måling, avregning, fakturering av netjtjenester og elektrisk energi, nettselskapets nøytralitet mv.*)

The connection point is the physical point of connection to the grid operators’ grid. The connection point is defined in the Regulations on control of grid operations, § 1-3 as “the point in the electric network where electricity is fed in or fed-out, or where there is electricity exchange between grid companies.”

The sector has also developed joint guidelines containing technical definitions, including one for connection point. For example, the connection point is there defined as the point in the distribution grid where a decentralized generation (generation unit or transformer) unit is connected to the grid operators’ grid.

ii. “where the electricity fed into the grid (input power) at the connection point at no time exceeds 100kW”

During the adoption of the new prosumer definition, a main discussion topic was the choice between input production (*innmatet produksjon*) and input power (power fed into the grid, *innmatet effekt*). After negotiations with stakeholders, it has been decided to choose “input power” (*innmatet effekt*) as the key criteria. The purpose is first to define how much power a prosumer can feed into the grid. Indeed, a client does not feed “production” into the grid, but “power” (*effekt*). The other reason is that measuring installed production would require measuring power capacity at each prosumer facility/house. Norwegian authorities are of the opinion that it would be easier to implement for the distribution companies to introduce a requirement based on the reading of metering data at the connection point.

There is no requirement as to the measurement of the net generation. Therefore it was felt necessary to amend the Regulations on the measurement of electric energy.

What happens if the prosumer feed more than 100 kW into the grid? It is the responsibility of each prosumer to maintain itself within the threshold limit. If the DSO discovers that the prosumer has fed more than 100 kW into the grid, the prosumer will lose its status (and will be obliged to pay all grid tariffs). Meanwhile, if the producer who lost its prosumer status applies measure to come back under the 100 kW-threshold, then may regain its prosumer status and be treated as such (NVE, 47/2016). In case of disagreement, grid operators and producers can bring the case before NVE which will reach an administrative decision.

iii. “A prosumer cannot possess an installation which requires a concession behind the connection point or any concession for sale back the connection point.”

- This means that it does not need any balancing agreement or concession, as required for other production or transmission/distribution installations. The installation has to be exempted from licensing requirements.
- This also means that prosumers cannot carry activities requiring otherwise a concession. No trade is allowed behind the connection point.

General comments:

- i. Distinction between “prosumers” and “plusskunder” / self-consumption
Several provisions in the Norwegian legislation argue for making a distinction between:
 1. end-user consumer who generate electricity that they consume themselves without feeding it into the grid, a kind of “positive/self consumer” (NVE has sometimes used to wording ‘plus customer’).
 2. end-user consumer who generate electricity and, in addition to consuming it itself, feeds the surplus into the grid.
 Depending on the situation, the legal regime will vary. This is also the understanding from the Norwegian energy regulatory authorities that the regime in force since 1 January 2017 is not a full prosumer regime as it can be encountered in other legislation. The implementation of any definition for prosumer at EU level will be followed closely.
- ii. The prosumer regime consists almost only in an exemption to the general rule on grid tariffs = §16-3, para. 3. As noted at several times below, the rest of the obligations (permitting, connection, access to the grid, taxation, etc. are not specific to prosumers). The main incentive is therefore the exemption given through that provision.

The new provisions entered into force on 1 January 2017.

4. What are the permitting requirements for each type of residential prosumer?

General

As mentioned above, there is only one type of residential prosumer.

There is no specific concession required for prosumers under the Energy Act (generation, trade) as long as the installation is below a certain threshold, which will be the case for most prosumers situation. The particular situation of block housing is addressed below (see question 7.3-7.4). This means that the prosumers’ facilities are in principle exempted from the obligation of a concession according to section 3- 1 in the Energy Act. They will follow general permitting rules for installations exempted from a concession pursuant to the Energy Act and be subject to the provisions of the Plan and Building Act.

The only thing they need to do is to take contact with the distribution company. They will fill in a voluntary application to the grid company that will then take the necessary measure to make sure that they can operate as prosumers.

4.1. Does your country recognize certain forms of self-consumption and subject prosumers to certain

- requirements,
- application fees and
- one-off costs

in order to give them a **permit or licence to generate energy?**

Prosumers need to notify the grid distribution operator of their willingness to become a prosumer. This is however not regulated in the legislation and is subject to private arrangement with the distribution company. Similarly, if the prosumer want to sell its electricity to an electricity supplier of its choice, it is subject to provide arrangement. The only novelty to that respect is that the prosumer has obtained the right to become prosumer after 1 January 2017.

Note that the distribution system operator can itself require the payment of grid investment contribution (*anleggsbidrag*) for the investments that the grid operator would need to make in order to connect the prosumer (new production facility or reinforcement of existing production

facility (§ 17-5, Regulations on control of grid operations). How much a system operator can ask for that purpose is however regulated by law (Chapter 8, Regulations on the control of grid operations) and by the Energy Regulator NVE.

4.2. Does the national legal/regulatory framework determine the **contractual conditions under which prosumers are allowed to feed or sell their surplus back** into the grid or to other consumers?

The legislation does not determine contractual conditions. The prosumer agreement between the prosumer and the grid company is voluntary. However, conditions for setting tariffs in general are regulated. (Regulations on control of grid operations)

Similarly, in terms of electricity sale, both the agreement between the prosumer and the grid company and the agreement with the supplier (who buys the electricity if the prosumer chooses that alternative instead of selling it to the grid operator) are subject to private arrangements.

Meanwhile, the sale of electricity or other related services will fall under the provisions of the Marketing Act. The latter will apply. The Consumer Ombudsman and the energy industry have also developed joint guidelines for the marketing of electricity which will apply to the relationship between prosumers and their grid operator / supplier.

5. **What are the rules applicable to the access to the grid?**

General

The legislation applicable to the grid connection is:

- Energy Act, No. 50
- Implementing Regulations No. 959 pursuant to the Energy Act
- Regulations No. 302 on reporting, income and tariffs in connection with grid operations
- Regulation No. 301 on the measurement, calculation, billing of grid services and electric energy, grid operators' neutrality, etc.
- Regulation No. 1557 on the quality of supply in the electricity market

A specificity of the Norwegian grid is that it is split into three grid levels: the national, regional and distribution grids. The national grid corresponds to the transmission grid, and is under the responsibility of the TSO, Statnett. The regional and distribution grids are encompassed both by the concept of distribution grid. The regional grid makes the link between the transmission and distribution grids, and consists of power grids of 66kV to 132kV. The Norwegian distribution grid corresponds to local power grids. It normally deliver electricity to end-users at a voltage of up to 22kV. This means that prosumers, as defined under Norwegian legislation, may be connected to regional or distribution grid, the latter situation being the most likely one.

Chapter 3 of the Energy Act defines the regime for access to the grid.¹⁸ Pursuant to §3-3 of the Act, the holders of a concession for installations of 22 kV or less (i.e., distribution grid) shall provide electricity to all consumers within the geographic area covered by its concession. Pursuant to §3-4, all entities holding a concession according to §3-1 and 3-2 (network and production facilities) of the Energy Act shall connect new electricity generation installations as well as new installations for electricity consumption. The grid connection obligation applies for new facilities covers all necessary network installations from the point of connection to the point of supply to consumers. The MPE may under exceptional circumstances provide from exemption to this

¹⁸ See in particular §§ 3-3 to §3-5 of the Energy Act.

principle (§3-5). The further relationship between the grid operator and the consumer will be regulated in a contractual agreement.

The Implementing Regulations No. 959 pursuant to the Energy Act define further the conditions of application of the grid connection requirement. § 3-4 of the Regulations require that:

- The connection obligation applies where it is the most rational to connect the generation facility;
- If the connection requires further investments in the main part of the concessionaire's grid, this must be in principle covered by the concessionaire;
- The concessionaire must put forward a schedule for the connection;
- Access shall be provided at non-discriminatory and objective terms and conditions;
- Any request for exemption must be handed over to NVE.

In addition, a general requirement of quality of electricity supply applies, pursuant to the Regulations No. 1557 on the quality of supply in the electricity market. The regulations define the technical criteria for supplying electricity into the grid. Those criteria will be applied by the grid operator when electricity is fed into the grid. Those conditions will apply to prosumers. If the electricity supplied to the grid by the prosumers do not comply with those technical standards, the grid operator may refuse access to the grid as it will threaten electricity system management. Until general technical standards are adopted by the sector, several DSOs have indicated that they will apply the existing technical standard 'VDE-AR-N 4105:2011-08'.¹⁹

5.1. What is the inter-connection configuration used for each type of residential prosumer?

Again, note that in Norway, and unlike in most European continental countries, the grid is divided into three different levels: the central grid, the regional grid and the local grid. In most cases, prosumers will be connected to the local grid. The regional and local grid fall under the definition of 'distribution' pursuant to the Electricity Directive. There are numerous distribution operators (around 150) and most of them are publicly owned. A recent committee report ordered by the Government²⁰ has advised the consolidation of the sector through the creation of larger companies instead of those numerous grid operators. The effect of any consolidation of the grid operation sector on the development of presumption has not yet been assessed by public authorities.

The procedure for connecting new consumers to the electricity grid is managed directly by the grid operator. The consumer is free to choose its electricity supplier.

When a prosumer intends to be connected to the grid, he will first take contact with an installer and an electricity supplier. Together, they will assess the prosumer's facility and submit an application to the grid operator. The application will contain several documents, including: notification on installation work (*Melding om installasjonsarbeid*, MOI); declaration of connection (*erklæring om tilkobling*).²¹ If the application is approved by the DSO, and following the different connection requirements defined by law, the DSOs will proceed to the connection. The connection will be subject to a private contractual arrangement between the prosumer and the DSO.

¹⁹ <https://www.vde-verlag.de/normen/0102017/vde-ar-n-4102-anwendungsregel-2012-04.html>

²⁰ Reiten-utvalget, *A better organised electricity network*, 2013.

²¹ See as a matter of example the process describe on the website of one of the main DSOs: <https://www.eidsivanett.no/plusskunder/>

5.2. Does the competence to determine the inter-connection configuration lie at State level or at a regional/lander level?

The Ministry of Petroleum and Energy (MPE) and the Energy Regulator (NVE) – both at state level – will be the competent authorities to determine the inter-connection configuration.

5.3. Are there any rules to ensure that prosumers are inter-connected to the distribution network/the grid?

Distribution operators shall possess a concession pursuant to the Energy Act in order to operate (Chapter 3).

Pursuant to the Energy Act (Chapter 3), grid operators are, as a general rule, obliged to provide access to their grid to all customers. The concession defines several duties and conditions, including the rules for providing access to the grid at non-discriminatory and objective terms and conditions.

The obligation applies to physical delivery (§3-3) and connection to the grid (§3-4). Distribution companies are required, pursuant to the local area licences given pursuant to the Energy Act §3-3, to connect the customers within their grid area to their network, and ensure that the same customers are supplied with electricity from their grid. This requirement applies to all permanent households and industrial customers connected to networks carrying a voltage up to 22 kV.

In the case of prosumers, § 3–4 on the grid connection obligation is of particular relevance. Pursuant to that provision, electricity generation units have a right to access the grid, which includes grid connection and grid use. The background for that provision (which entered in force on 1 January 2010) was to support the increase of new renewable energy generation, and in particular small scale generation. This is direct implementation of EU requirements on access to the grid (Electricity Directive).

In conclusion, all holders of a concession under Chapter 3 have the legal obligations to connect prosumers, as any consumers, if those fulfil the technical requirements defined in the legislation and in technical standards for electricity supply quality.

5.4. What are the grid access and grid use principles and rules for the energy generated by each type of residential prosumer?

The legislation does not make any distinction specific to prosumers, and general rules apply.

The provisions of the Energy Act are supplemented by the provisions of the Implementing Regulations pursuant the Energy Act No. 959, §3–4. The Regulations make clear that the obligation apply both to input and output of electric energy. When the grid connection entails new investments for the grid operator, the grid operator still has an obligation to provide access, but certain exemptions apply. The grid operator shall provide for a time schedule for handling the application for connection and for the connection itself. When there is disagreement as to the alternative available grid investments, the case can be brought before the Energy Regulator NVE, which will reach a decision.

Meanwhile, the legislation provides for some exemptions to the grid access obligation. Distribution grid operators may be exempted from the obligation to provide access to the grid and to make the appropriate investments to ensure grid developments if it is not socio-economically efficient (Energy Act §3-3). The Regulations detail further the applicable procedure in such

situation: the operator (licensee) must apply for an exemption from its connection obligation and grid investment obligation in relation to new/reinforced generation to be connected. As of today, there is no practice relative to the application of these provisions to the situation of prosumers.

5.5. What are the **network costs** and **charges** for each type of residential prosumer?

The general rule

The network company sets the tariffs, and shall provide information about tariffs and conditions for the use of the transmission and distribution grid on its own initiative, and is obliged to give customers information upon request about the calculation of tariffs and conditions that are relevant for the customer. The revenue of the networks shall give a reasonable return on capital invested, given efficient operation and investments. The tariff shall facilitate an efficient utilization and development of the network.

In accordance with section 4-1, subsection 2, No 4 of the Energy Act, the setting of tariffs may be further stipulated in regulations and concessions. The tariffs shall be designed in a way that, to the greatest possible extent, provides signals for efficient utilization and development of the grid. Further rules governing the financial and technical reporting, income caps for network operations, and transmission tariffs were issued by NVE in Regulation No 302, issued on 11 March 1999 (the Control Regulation).

According to the Energy Act Regulation section 4-4(b), NVE specifies yearly income caps for each individual concessionaire. Over a period of time, the revenue shall cover the costs of operation and depreciation of the grid, while giving a reasonable rate of return on invested capital assuming efficient operation, use, and development of the grid. The income caps shall be determined in a manner which provides that the income over time covers operational costs and grid depreciation as well as a reasonable return on invested capital, given efficient operation, utilization, and development of the grid²².

The provisions for the determination of the income caps are set out in more detail in chapter 8 of the Control Regulations. The individual income caps are partly based on the company's costs and partly on how the individual company performs compared to other network companies. The network company's income, which derives mainly from network tariffs, must not be higher than the maximum permitted level determined by NVE. This system is intended to ensure that network companies do not make unreasonable monopoly profits, and that cost reductions benefit their customers.

The exemption regime for prosumers

The main rule is that all production shall pay the tariff for feeding into the grid (*innmatingstariff*). As of 1 January 2017, under § 16-2, para. 3 of the Regulation on control of grid operations, prosumers are exempted from the payment of other tariff elements for feed-in electricity into the grid. This is the main financial incentive for them to become prosumers compared to other producers.

6. What are the incentives (e.g through taxes or tariffs) for each type of residential prosumers?

General

There is no general support scheme for prosumers in Norway.

²² Cf section 7- 2 of Regulation 11 March 1999 No 302.

However, there are some indirect measures applicable to them such as the exemption from payment of a part of the grid tariffs in case when the prosumer is feeding into the grid; financial support through the state enterprise Enova which manages the Energy Fund; getting revenues from the sale of certificates if the prosumer has registered under the scheme.

6.1. Does your country apply specific tariffs to prosumers

- to charge them for the electricity they draw from the grid for consumption?
- or to compensate them for the electricity they feed back into the grid?

No, there is no specific tariff applicable to prosumers. The general regime applies.

6.2. Does your country

- tax prosumers in a specific way?
- allocate to them a certain part of the cost to upgrade the grid to accommodate the extra generation they feed into the grid?

No specific rules applied to prosumers. Only general requirements. There are no tax rebate or additional taxes related to presumption.

The fact that general requirements apply may be an indirect hinder to the development of prosumers.

As to cost to update the grid to accommodate extra generation, the DSO can require prosumers to pay some costs for grid expansion or grid reinforcement.

7. What are the conditions that may encourage or act as barriers for residential prosumers (to entry into activity or during functioning)?

General

The adoption of the recent amendments to the legislation (entered into force on 1 January 2017) is a first step. The adjustments were necessary to ensure that energy generated by prosumers would be fed into the grid.

Meanwhile, the legislation as it is may not support sufficiently the development of residential prosumers at a large extent, including for groups of prosumers such as a cooperative or a joint housing. Indeed, the national financial support schemes for presumption are few and are under the competence of Enova (direct grant for the installation of appliances at home, such as solar panels).²³ The local support schemes are also few and depend on municipal decisions as they are of the competence of the municipalities.

As for the barriers, not all the situations of presumption are necessarily envisaged by the legislation, and certain situations will need further interpretation and/or clarification of the applicable legal framework (ex: housing blocks and cooperatives).

²³ For an overview of the different grants provided by Enova to households, see <https://www.enova.no/privat/>

- 7.1. What are the metering systems for each type of residential prosumer? Do these systems provide adequate conditions for prosumers integration in the market?

Answer:

There is no specific metering obligations applicable only to prosumers: general rules apply.

The Norwegian legislation does not define 'metering obligation' where there is no concession requirements. This means that not all the electricity production is metered in Norway.

However, if the prosumers apply for and require elcertificates for their production, then they will need to install a new meter, which is also an indirect cost for prosumers.

Deadline for the roll-out of smart meters in Norway is for January 2019.

During the drafting of the new legislation, it has been discussed to which extent it should be permitted to install joint meters for housing units (e.g. apartments in a housing block). The Energy Regulator NVE changed the legislation in 2010 on joint metering with the purpose to ensure that all households, including the ones living in housing blocks, will get access to the electricity market and will have free choice of electricity provider. NVE deems that this is still a valid reason for not amending the Regulations for control of grid operations § 14-3 (joint metering allowed if so required and if individual metering results in unfair additional costs for the end-user).

- 7.2. What are the billing conditions for each type of residential prosumer?

General rules apply and there are no special billing conditions for prosumers.

- 7.3. Are there measures to encourage the creation of energy communities at municipal level, or other schemes to encourage inclusive development of the market?

Norway does not have specific schemes or policies to promote the creation of energy communities at municipal level or their inclusion into the market. The forthcoming Elhub, which will enable aggregating the data of several consumers from different metering point, may enable such inclusive development. However, the Norwegian authorities have no policy in the matter for the moment.

- 7.4. Are there rules facilitating the creation of energy cooperatives to provide a legal entity to energy communities? Are there measures facilitating other type of schemes and if so which ones?

There is not national policy in favour of energy cooperatives. Certain actors benefit from simplified procedures, such as farmers, but this is an extremely limited practice.

- 7.5. What are the procedures/provisions for establishing cooperatives for prosumers? Are they more simple/less costly than those for other schemes?

As mentioned above, there are no specific procedures for the establishment of cooperatives in general or cooperatives for prosumers in particular.

A criticism expressed during the public hearing is that the new definition does not fit very well

with the situation for apartment buildings (*boligblokker*).²⁴ Several stakeholders are of the opinion that the legislation, as it stands, excludes *borettslag*, *sameier* o.l. (*boligselskap*), i.e., housing cooperatives and joint properties. Those housing cooperatives and joint properties often possess large areas on the roof, which suit swell the purpose of electricity generation through, for example, solar PV panels. However, the meters are usually individual ones, for each consumption entity.

The solution provided by the energy regulator is to wait until the introduction of the Elhub. The solution envisaged is that the Elhub (data hub).²⁵ NVE has assigned the Norwegian TSO, Statnett, the task of establishing a so-called data hub that will encompass all metering data for electricity in Norway. The purpose of Elhub is to establish an economically efficient IT-infrastructure for the retail market for electricity in Norway. Delayed several times, the new entry into function for the Elhub is fixed to 23 October 2017.²⁶ In relation to the entry into function of the Elhub, it is expected that housing cooperatives in apartment buildings as well as joint properties will get easier access to the status of prosumers. NVE could adopt further guidance on that matter by the end of 2017.

8. Other questions on the regulatory framework

8.1. What are the complaint handling procedures for each type of residential prosumer?

Again, general rules and procedures apply, without distinction between prosumers or consumers. For any grid issues, the Energy Regulator NVE will be the competent authority.

In addition, the board of the Electricity Appeal Board (*Elklagenemnda*) deals with complaints that have their origin in contract conditions between energy companies (both suppliers and grid operators) and consumers. Grid access is one of the issues dealt with by the Board.

8.2. Are there any specific redress procedures available only to residential prosumers?

No.

²⁴ Endringer i kontrollforskriften vedrørende plusskundeordningen, Oppsummering av høringsuttalelser og endelig forskriftekst, Rapport 47-2016, NVE. Available at: http://publikasjoner.nve.no/rapport/2016/rapport2016_47.pdf, p.11.

²⁵ Rapport 47-2016, NVE, p.11

²⁶ Further information on the Elhub are available at: <http://elhub.no/>

Country fiche (Summary and ranking)

The **country fiche** below summarises the information from the report and ranks the **level of favourable impact** of measures in relation to its favourable impact to the take up of residential prosumers.

Country fiche	Ranking Low/Medium/High
General Description of the national regulatory framework - Types of residential prosumers The Norwegian legislation does not distinguish between different types of prosumers and does not distinguish between the different sources of energy for the purpose of electricity generation. - Institutional framework The institutional framework is the general one. There is no specific organ for prosumers. The management and control of the implementation of the provisions, as well as the development of prosumer policy, is integrated into the regular tasks of the competent authorities. Due to the limited market share and interest for prosumption in Norway, this is not seen as a major barrier. However, in the situation where the government adopts a more ambitious policy, the institutional framework may need to be adapted with, for example. The Norwegian administrative is usually seen as transparent and effective. - Applicable legislation, plans and objectives The Norwegian authorities do not have high ambitions in terms of prosumption. The latest changes in legislation represent both a codification of previous practices (exemption regime) and a slight improvements of rights and duties of prosumers and DSOs. - Definition of residential prosumers Recent legislative amendments have resulted in the adoption of a legal definition for prosumers in the legislation. This is to be considered as a major improvement, although this is a minimum definition.	Medium Medium to High Low Medium
Specific Questions on the regulatory framework for residential prosumers	
Permitting requirements for each type of residential prosumer - There is only one type of residential prosumer. - There is no specific concession required for prosumers under the Energy Act (generation, trade) as long as the installation is below a certain threshold, which will be the case for most prosumers situation in the current state of the market. - The particular situation of block housing may require regulatory improvements. This situation may however require additional interest within prosumers group and public support in favour of prosumption. - Prosumers' facilities are in principle exempted from the obligation of a concession according to section 3- 1 in the Energy	Medium

Act. They will follow general permitting rules for installations exempted from such and be subject to the provisions of the Plan and Building Act.	
Rules applicable to the access to the grid - The rules applicable to access to the grid as similar for prosumers than for other consumers. - The procedure is based on general criteria defined in the legislation. IN practice for prosumers, it is based on an assessment and then an application to the DSOs. DSOs may find ground to ask to payment for grid investment in the case of prosumers, as for other consumers or producers. - Further standardisation of technical requirements (e.g. quality of electricity supply) or contracts (specific to prosumers) may be required in order to ensure a wider practice of prosumption.	Medium to low
Incentives (e.g. taxes and tariffs) for each type of residential prosumers - There is no specific tariffs applicable to prosumers. The general regime applies. - The prosumer regime consists almost only in an exemption to the general rule on grid tariffs = §16-3, para. 3. The rest of the obligations (permitting, connection, access to the grid, taxation, etc. are not specific to prosumers). The main incentive is therefore the exemption given through that provision. As of 1 January 2017, under § 16-2, para. 3 of the Regulation on control of grid operations, prosumers are exempted from the payment of other tariff elements for feed-in electricity into the grid. This is the main financial incentive for them to become prosumers compared to other producers. - As to cost to update the grid to accommodate extra generation, the DSO can require prosumers to pay some costs for grid expansion or grid reinforcement. - The legislation as it is may not support sufficiently the development of prosumers at a large extent, including for groups of prosumers such as a cooperative or a joint housing. Indeed, the national support schemes for prosumption are few and are under the competence of Enova. The local support schemes are also few and depend on municipal decisions as they are of the competence of the municipalities.	Medium to low
Conditions encouraging or acting as barriers for residential prosumers - What are the metering systems for each type of residential prosumer? There is no specific metering obligations applicable only to prosumers: general rules apply. - What are the billing conditions for each type of residential prosumer? General rules apply and there are no special billing conditions for prosumers. - What are the measures to encourage the creation of energy communities at municipal level?	Medium Low Low

Norway does not have specific schemes or policies to promote the creation of energy communities at municipal level or their inclusion into the market. The forthcoming elhub, which will enable aggregating the data of several consumers from different metering point, may enable such inclusive development. However, the Norwegian authorities have no policy in the matter for the moment. What are the rules facilitating the creation of energy cooperatives? Are they more simple/less costly than those for other schemes? Are cooperatives the most common legal status for energy communities? There is not national policy or legal provisions in favour of energy cooperatives.	Low
Other questions on the regulatory framework - Complaint handling procedures for residential prosumer General rules and procedures apply, without distinction between prosumers or consumers. This is for the moment no practice. - Redress procedures available only to residential prosumers No. General rules for residential consumers will apply.	Medium to low Medium to low

Executive Summary

The development of prosumers legislation in Norway is still at an **early stage**, with still a **very limited market share**. However, interest is growing. **The relevant legislation** has been **recently amended** to clarify the regime applicable to prosumers (entry into force on 1.1.2017). Based on the evolution of the market, further legislative developments and institutional changes could be expected, although the main driver for regulatory change will most probably be the adoption of new requirements on prosumers at EU level in the Clean Energy for All Europeans package, then to be incorporated into the EEA Agreement for being implemented in Norway.

The Norwegian legislation does not define any target in terms of prosumers in general or residential prosumers in particular. The latest changes in legislation represent both a codification of previous practices (based on an exemption regime) and a slight improvement of prosumers' rights and duties, as well as DSOs' commitments. A major improvement is the fact that the concept of "prosumers" is now defined in law, as a separate customer category. The legislation does not distinguish between different types of prosumers and does not distinguish between the different sources of energy for the purpose of electricity generation. There is only **one type of residential prosumer**. As long as the installation falls below a certain threshold –e.g. input power at the connection point at no time exceeds 100kW. – there is no specific **concession** required under the Energy Act or any other legislation. The only market evolution which may push for regulatory change in the short term is presumption at the level of **block housing**.

There is no specific **institutional framework**, **financial incentives** (besides support to installation or exemption to pay grid tariffs for feed-in electricity into the grid) or **grid access rules** for prosumers. General rules apply. A main conclusion is that the legislation today may not support sufficiently the development of prosumers at a large scale, including for groups of prosumers such as joint housing or energy cooperatives (the latter ones are not common in Norway). If the market develops further, this will require legal clarification and regulatory adjustments.