



Consumer study on “Pre-contractual information and billing in the energy market – improved clarity and comparability”

Annex

EUROPEAN COMMISSION

Produced by Consumers, Health, Agriculture and Food Executive Agency (Chafea) on behalf of the European Commission Directorate-General for Justice and Consumers

E-mail: EC-JUST-CONSUMER-ENERGY@ec.europa.eu

*European Commission
B-1049 Brussels*

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Annex

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Glossary

Country codes

AT	Austria	IT	Italy
BE	Belgium	LT	Lithuania
BG	Bulgaria	LU	Luxembourg
CZ	Czech Republic	LV	Latvia
CY	Cyprus	MT	Malta
DE	Germany	NL	Netherlands
DK	Denmark	PL	Poland
EE	Estonia	PT	Portugal
EL	Greece	RO	Romania
ES	Spain	SE	Sweden
FI	Finland	SI	Slovenia
FR	France	SK	Slovakia
HR	Croatia	UK	United Kingdom
HU	Hungary		
IE	Ireland	IS	Iceland
		NO	Norway

Annex 1 Supplementary tables

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
AT	<ul style="list-style-type: none"> Electricity Act 2010, Art. 76 Gas Act 2011, Art. 123 	<ul style="list-style-type: none"> Ensures consumers may terminate the supply contracts by giving two weeks' notice, without the need to adhere to any particular deadlines for giving notice. Furthermore: Switching suppliers shall not give rise to any additional cost for consumers The supplier switching process shall take no longer than three weeks from the system operator's being informed of the switch 	<ul style="list-style-type: none"> General terms and conditions or the contract forms between suppliers and customers shall at least specify early contract termination, the term of the contract, services and of the contract and the existence of any right of withdrawal Following a change in price of an amendment to the general terms and conditions, users are free to object and request termination Maximum duration of a contract with an energy supplier in Austria is one year with the option to renew
BE	<ul style="list-style-type: none"> Electricity Law 29/04/1999, Art. 18, §2/3 	<ul style="list-style-type: none"> The electricity network provider guarantees to his consumers the right to purchase electricity from the supplier of their choice, and to change suppliers without compromising the duration and modalities of the contract within a maximum of three weeks 	<ul style="list-style-type: none"> Ensures the residential customer has the right to terminate at any time a contract for the continuous supply of electricity, whether for a fixed term or for an indefinite period, provided that a notice period of one month is respected When the residential customer makes use of his/her right to terminate a contract, no compensation can be charged to him Any contractual clause that is prejudicial to this right is null and void Unless otherwise expressly agreed, the supplier with whom the residential customer enters into a contract for the continuous supply of electricity is presumed to be mandated to exercise the right referred to in paragraph 1
BG	<ul style="list-style-type: none"> Energy Act, 09/12/2003 Art. 38a, 38b and 95(2)/(3) 	<ul style="list-style-type: none"> Ensures the energy suppliers provide to energy service customers information about the procedure for switching to a new supplier and information that energy service customers do not pay additional charge for switching The operator of the network shall make the switching three weeks after receipt of the client's written request The change of supplier, subject to contractual terms, is not accompanied by additional obligations for the client 	<ul style="list-style-type: none"> The contract with users of energy services must include the contract duration, conditions for temporary termination, the termination of the service and the contract The conditions for the unilateral termination of the contract by the energy services user, including the change in the contract conditions and fees and the possibility to terminate such contract without additional fees
CY	<ul style="list-style-type: none"> Market in electricity law, 211(I)/2012, Art. 91(1), §1 	<ul style="list-style-type: none"> Ensures when customers wish to change supplier in accordance with the terms of the contracts, the change will be made by the supplier concerned within three weeks Customers are entitled to receive all relevant information on their consumption. These rights are granted to all customers without discrimination in terms of cost, effort or time No specific requirements are included in the national legislation on switching fees, considering these are not applicable 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
CZ	<ul style="list-style-type: none"> Energy Act, 458/2000 Coll., 28/02/2005, Art. 28 (Switching) Energy Act, 458/2000 Coll., 28/02/2005, Art. 62 (Contracts) 	<ul style="list-style-type: none"> The eligible customer shall be entitled: To a free change of the electricity supplier in compliance with the Electricity Market Rules To change the gas supplier free of charge; details shall be laid down in the Gas Market Rules 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees
DE	<ul style="list-style-type: none"> Energy Industry Act, last amended 2013, Art. 20 (Switching) and Art. 41 (Contracts) 	<ul style="list-style-type: none"> In the event of a supplier change, the new supplier must immediately confirm to the final consumer in writing whether and at what time he can receive a delivery requested by the final consumer The procedure for changing supplier shall not exceed three weeks from the date of receipt by the new supplier of the application for grid use by the network operator to whose network the exit point is connected. The network operator is obliged to document the time of access. A longer procedure period deviating from sentence 1 is only permissible if the application for network usage refers to a delivery date which is more distant in the future The change of supplier may not involve any additional costs for the final consumer 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees
DK	<ul style="list-style-type: none"> Electricity Supply Act 1329/2013, Chap. 2. Para. 6 (Switching) and Para. 3 (Contracts) 	<ul style="list-style-type: none"> Ensures switching is free of charge Ensures switching is put into effect at most 10 working days after the consumer's request has been done, unless otherwise specified by the consumer 	<ul style="list-style-type: none"> The consumer is entitled to terminate the contract with effect from the entry into force of the amendment if the consumer does not accept the significant or non-material changes. The electricity trading company must, in connection with the notification pursuant to subsection 1 and 3 inform the consumer of his right to terminate the contract No specific requirements are included in the national legislation on contract termination fees
EE	<ul style="list-style-type: none"> Electricity Market Act, Art. § 90 Law of Obligations, 26/09/2001, Act § 13 AND 234 and 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on switching procedures and fees 	<ul style="list-style-type: none"> A contract may be amended or terminated by agreement of the parties or on another basis prescribed by the contract or law A consumer may cancel a network contract for a specified term or for an unspecified term provided he gives at least 30 days' notice of the intention to cancel. This provision shall not apply in the case specified in subsection 5 of the section No specific requirements are included in the national legislation on contract termination fees
EL	<ul style="list-style-type: none"> Law 4001/2011, Para. 1 and 3, Art. 46-51 	<ul style="list-style-type: none"> Ensures that consumers may terminate their contracts by giving 14 days' notice, unless a longer period is agreed Switching suppliers does not have any charges for consumers The supplier switching process shall take no longer than three weeks from the time the system operator is informed of the switch 	<ul style="list-style-type: none"> General terms and conditions or the contract forms between suppliers and customers shall at least specify early the contract termination, the rights and obligations of both suppliers and customers, the issues related to the protection of consumers against unfair and misleading selling method Suppliers are required to disclose, at least on their website, the terms and conditions contained in their contacts and their price lists

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
	<ul style="list-style-type: none"> From the stakeholder consultation 	<ul style="list-style-type: none"> A Customer may change Supplier only following a request for the termination of the Supply Contract in writing. The request for termination may be submitted either by the Customer himself or by the new Supplier providing he is given written authorisation by the Customer. Existing arrears due to non-payment of the current Supply Contract do not prohibit the Customer's right to change Supplier The new Supplier is obliged to submit a Meter Representation Declaration Form to the relevant Operator, in accordance with the relevant Codes, within fifteen (15) days from the Contract signature. Especially in the case of Contract signature from a distance, the Supplier submits the relevant form only if the Customer did not withdraw within the minimum time period envisaged by law, and, at the latest, within three (3) days following the deadline expiry. In any case, the submittal of the Meter Representation Declaration Form must follow the request to terminate the Contract with the previous Supplier 	<ul style="list-style-type: none"> The contract specifies the duration of the agreement between the supplier and the customer
ES	<ul style="list-style-type: none"> Law 24/2013, Art. 44.1(k) (Switching) RDL 1/2007 covering consumer protection, Art. 62 and 71 (Contracts) 	<ul style="list-style-type: none"> Consumers have the right to choose their supplier and switch suppliers without any cost Consumers shall receive the settlement of the account after any change of electricity supplier, within a maximum of 42 days from the date on which the change of supplier occurs 	<ul style="list-style-type: none"> The consumer and user will have a minimum period of fourteen calendar days to exercise the right of withdrawal The consumer and user may exercise their right to terminate the contract in the same manner in which it was concluded, without any sanction or onerous or disproportionate charges, such as the loss of the amounts paid in advance, the payment of amounts by services not actually rendered, the unilateral execution of the contract clauses that have been set contractually or the determination of compensations that do not correspond to the damages actually caused
FI	<ul style="list-style-type: none"> Law 588/2013, 09/08/2013, Part II, Ch. 4, §26 and §91 (Contracts) 	<ul style="list-style-type: none"> Ensures the system operator does not charge a separate fee for the performance of his electricity supplier replacement 	<ul style="list-style-type: none"> A retailer may not terminate an electricity distribution contract when the end user of a supply obligation is a consumer. A retailer of another electricity supply contract subject to a supply obligation may only be terminated if the maintenance of the contract is unreasonable in view of the change in legislation or the material change in circumstances The termination period for the electricity sales contract is two weeks for the end user and three months for the retailer If a consumer has been contracted for a term of two years longer than two years, the consumer may, after two years, terminate the contract in the same manner as an agreement for an indefinite period of time

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
			<ul style="list-style-type: none"> • No specific requirements are included in the national legislation on contract termination fees
FR	<ul style="list-style-type: none"> • Consumer Code, last amended 06/10/2017, Art. L121-89 (Switching) and L121-21 (Contracts) 	<ul style="list-style-type: none"> • Ensures the customer may change supplier within a period which may not exceed twenty-one days from the date of his request • In the event of a change of supplier, the contract terminates automatically on the effective date of a new energy supply contract. In other cases, the cancellation takes effect on the date requested by the consumer and, at the latest, thirty days from the notification of termination to the supplier. In all cases, the consumer receives the closing invoice within four weeks of the termination of the contract. The refund of the possible overpayment is made within a maximum of two weeks after the issue of the closing invoice • The supplier may only charge to the consumer the costs corresponding to the costs actually borne by the network operator as a result of the termination and provided that these costs have been expressly provided for in the offer. These must be duly justified • No other charges may be claimed from the consumer solely on the grounds that he changes supplier 	<ul style="list-style-type: none"> • It is prohibited for a professional to solicit or collect from a consumer collection costs in conditions contrary to the second paragraph of Article L. 111-8 of the Code of Civil Enforcement Procedures • No specific requirements are included in the national legislation on contract termination procedures and fees
HR	<ul style="list-style-type: none"> • Act on the Electricity Market, 11/01/2013, Art. 47 	<ul style="list-style-type: none"> • The change of the supplier shall be effected within a period of three weeks in accordance with the rules of supplier change • A change of supplier 's operation shall be carried out by the transmission system operator or operator of the distribution system • A change of supplier shall not be charged to the final purchaser 	<ul style="list-style-type: none"> • A supplier whose termination contract has been terminated shall be issued final settlement to the ultimate customer no later than six weeks after the occurrence change of supplier • No specific requirements are included in the national legislation on contract termination fees
HU	<ul style="list-style-type: none"> • Law on Electricity, 2007 evi LXXXVI, Article 47 and 62 § (4) 	<ul style="list-style-type: none"> • If the user wishes to switch to an electricity trader, the licensees concerned shall carry out the transaction free of charge and, in connection with that, the electricity retailer and the network licensee concerned shall not charge a fee to the user. For the purpose of conducting a trade change, the user may also act on behalf of the electricity trader with which the user concludes an electricity purchase contract • No specific requirements are included in the national legislation on switching fees 	<ul style="list-style-type: none"> • The user entitled to the universal service may terminate the electricity purchase contract for an unspecified term with a 30 day notice period in writing • Any contractual clause restricting or excluding the termination of the right of termination of the universal service is void • No specific requirements are included in the national legislation on contract termination fees
IE	<ul style="list-style-type: none"> • Statutory Instrument No. 463/2011, Art. 5(8) (a) ad 5(8)(c), Art. 6 and 8 	<ul style="list-style-type: none"> • Ensures suppliers: • Put in place procedures to facilitate customers, if they so wish, in changing supplier within 3 weeks of the supplier making the request to the distribution system operator • Put in place procedures in a non-discriminatory manner as regards costs, efforts and time 	<ul style="list-style-type: none"> • A customer charter shall, at a minimum, and where appropriate, provide that all household customer: (i) the conditions for renewal and termination of services or the contract or both including connection and disconnection of final customers; (ii) the existence of any right of withdrawal by either party and whether withdrawal from the contract without charge is permitted

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
		<ul style="list-style-type: none"> Ensure that household customers are not charged or penalised for changing to another supplier Provide customers with a final closure account no later than 6 weeks after the change of supplier has taken place 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees
IT	<ul style="list-style-type: none"> D.Lgs. 79/99, Art. 35(1) Deliberazione 25/06/2007, N. 144/07, Annex A, Art. 4 	<ul style="list-style-type: none"> If a customer intends to change supplier, the operator should make such change within three weeks ensuring, however, that the start of the supply coincides with the first day of the month 	<ul style="list-style-type: none"> If the contract between the supplier and the consumer does not specify how the contract can be terminated, the consumer can opt-out of the contract at any point in time, by giving one month notice to the supplier If the contract between the supplier and the consumer specifies contract termination procedures, the consumer may have to give, at most, one month notice to the supplier No specific requirements are included in the national legislation on contract termination fees
LT	<ul style="list-style-type: none"> Law on Electricity, 20/0/2000, Art. 45 	<ul style="list-style-type: none"> Ensures the consumer has the right to withdraw from the agreement with the public supplier without paying any charges 	<ul style="list-style-type: none"> The consumer must give a written notice of the termination of the agreement to the public supplier no later than three weeks before the date of termination and pay to the supplier for the consumed electricity in full before the date of termination of the agreement No specific requirements are included in the national legislation on contract termination fees
LU	<ul style="list-style-type: none"> Loi du 1er août 2007, Art. 19 (4) 	<ul style="list-style-type: none"> Ensures the change of supplier is free of charge Any change of supplier is not a cost to the end customers. Costs incurred at the network operators in case of change of supplier are integrated into network usage tariffs referred to in Article 20 	<ul style="list-style-type: none"> Electricity suppliers must provide the consumer with the duration of the contract, the conditions for renewal and interruption of the services and the contract, the existence of a right to terminate the contract
LV	<ul style="list-style-type: none"> Electricity Market Law, 01/07/2007, Art. 35 1° 	<ul style="list-style-type: none"> Ensures the customer has the right to change the electricity trader without any restrictions on the first day of each month The Cabinet shall determine the procedures by which the end user is entitled to change the electricity trader The relevant system operator shall ensure the switching of the electricity supplier within a time period not exceeding 14 days No specific requirements are included in the national legislation on switching fees 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees
MT	<ul style="list-style-type: none"> Consumer Rights Regulations 2013, Part III, Art.5(1); 	<ul style="list-style-type: none"> N/A – there is only one energy supplier in Malta 	<ul style="list-style-type: none"> The consumer shall have a period of fourteen (14) days to withdraw from a distance or off-premises contract, without giving any reason, and without incurring any costs other than those provided for in regulations 15(2) (i.e. the trader shall not be required to reimburse the supplementary costs, if the consumer has expressly opted for a type of delivery other than the least expensive type of standard delivery offered by the trader) and 16 (applicable for goods)

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
NL	<ul style="list-style-type: none"> Electricity Act 1998, Art. 86g and 95 m 	<ul style="list-style-type: none"> Every producer and consumer of electricity has the freedom of choice of supplier No specific requirements are included in the national legislation on switching fees 	<ul style="list-style-type: none"> A customer as referred to in Article 95a, first paragraph, can terminate any agreement to supply electricity with due observance of a term of thirty days Stipulates that in the case of a contract for a certain period of time, the supplier may include in this agreement that the customer is required to pay a reasonable compensation at the time of termination of the agreement. If there is an agreement for an indefinite period, such compensation may not be included in the agreement
PL	<ul style="list-style-type: none"> Energy Law, 10/04/1997, Art. 4j. 6 Energy Law, 10/04/1997, Art. 3 and 3a Code of Conduct for Electricity Suppliers of 25 December 2014 	<ul style="list-style-type: none"> Consumers have the right to switch energy suppliers Switching ought to be cost free, but there are penalties and administrative charges for cancelling fix-term contracts to the contracts themselves (Article 4j.3a of the Energy Law) 	<ul style="list-style-type: none"> Stipulates that the final customer may terminate the contract without incurring costs by submitting a written declaration to the energy undertaking. The customer who terminates the contract is obliged to pay for the gas or energy consumed and the services provided for the transmission or distribution of gaseous fuels or energy The final consumer may terminate the contract for a fixed period of time, on the basis of which the energy company supplies that customer with gaseous fuel or energy, without incurring costs and damages other than those resulting from the contract, by submitting a written declaration to the energy undertaking The transmission system operator and the distribution system operator shall be obliged to allow the recipient of gas or electricity to change the seller not later than within 21 days of informing the relevant operator of the contract of sale or of the comprehensive contract with the new seller
PT	<ul style="list-style-type: none"> Decree Law n°29/2006, 15/02/2006, Art. 53 §2 	<ul style="list-style-type: none"> Ensures consumers are entitled to the supply of electricity in compliance with the following principle: absence of payment for the act of change of supplier (switching is free of charge) 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees
RO	<ul style="list-style-type: none"> Law 123/2012, last amended 2014, Art. 62 (1) h) Procedure of the change of the electricity supplier by the final customer, Section 1, General Conditions 	<ul style="list-style-type: none"> Ensures switching is free of charge Ensures the consumer notifies the supplier of its willingness to switch, at least 21 days in advance 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees
SE	<ul style="list-style-type: none"> Electricity act (1997:857), Chap. 11 §16 and 19 Distance agreement and agreement outside of business premises §10 and §12 	<ul style="list-style-type: none"> Ensures switching is free of charge When replacing the electricity supplier, the consumer must receive a final invoice within six weeks from the date of termination of the supplier's discontinued electricity supplier 	<ul style="list-style-type: none"> The consumer is entitled to withdraw from the agreement (right of withdrawal) by leaving or sending a notice to the trader within 14 days from the date specified in Section 12 (Refusal). If the consumer leaves the message on the trader's website, the trader shall promptly acknowledge receipt of the message in a legible and durable form that is available to the consumer If the consumer has provided or sent a notice pursuant to the first paragraph at the right time and in an effective manner, the notice may be invoked even if it is delayed, distorted or not disclosed

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
			<ul style="list-style-type: none"> If the consumer exercises his right of withdrawal and, as a result of the agreement, a related agreement has been concluded regarding services provided by the trader or by another due to an agreement between that trader and the trader, the related agreement shall cease to apply without the consumer being charged no penalty for this
SI	<ul style="list-style-type: none"> Energy Act, 22/03/2014, Art. 40 Energy Act, 22/03/2014, Art. 48 	<ul style="list-style-type: none"> A final customer who wishes to replace a supplier shall forward a request for replacement to the operator of the system to which it is connected. In the name and for the account of the final customer, a new supplier may also provide the request on the basis of the authorization The electricity operator who has received the request must take all necessary steps to enable the final customer to enforce the contract for the supply of electricity with the new supplier no later than 21 days after the submission of the complete request. For the final customers, the change of supplier may not be charged The electricity operator may refuse to change the supplier if the new supplier does not meet the requirements laid down by the Energy Act and the regulations issued on the basis thereof, and the general acts for the exercise of public authority The final customer shall receive a final account after each change of supplier no later than six weeks after the start of the supply of electricity by the new supplier No specific requirements are included in the national legislation on switching procedures and fees 	<ul style="list-style-type: none"> A household customer may withdraw from the delivery contract without payment of contractual penalties, damages, compensation or any other payment from the cancellation of the contract before the set deadline, if the cancellation takes effect at least one year after the conclusion of the contract As a result of the change of supplier, the household customer may resign from the delivery contract without notice. If, in the case referred to in the preceding paragraph, the assignment takes effect less than one year after the conclusion of the contract, the customer shall bear the consequences which the contract shall provide for the early withdrawal from the supply contract
SK	<ul style="list-style-type: none"> Act 251/2012, section 35 and section 64 	<ul style="list-style-type: none"> Ensures switching is free of charge Ensures switching is put into effect at most 3 weeks after the consumer's request has been done, unless otherwise specified by the consumer The distribution network operator shall upon request of a gas supplier acting in the name of the gas consumer to allow, free of charge, the allocation of an offtake point of the gas consumer to a new gas supplier in a three week period upon delivering the request; the contractual obligations of a gas consumer towards the gas distribution network and previous gas supplier are not affected thereby; if the original or new gas supplier does not ask the gas distribution network for data on the status of a determined meter, determination of data on gas supply shall be made at the time of change of a gas supplier based on data specified by a type diagram of a supply or data reported by gas consumer 	<ul style="list-style-type: none"> A household consumer shall be informed on the duration of the contract and the conditions under which the contract may be terminated, including information about fees for termination of the contract or information that the contract may be terminated without a fee No specific requirements are included in the national legislation on contract termination fees (only regarding the fact suppliers shall inform consumers about it)

Table 1: Overview of requirements on fees and procedures in relation to switching and contract termination set in the national legislation

	Legal framework	Switching procedures and fees	Contract termination procedures and fees
UK	<ul style="list-style-type: none"> Standard conditions of electricity supply licence, Condition 14A (Customer Transfer) and Condition 24 (Termination of Domestic Supply Contracts) Electricity and Gas acts, Art. 24.8(b) 	<ul style="list-style-type: none"> Ensures the licensee takes all reasonable steps to complete a Supplier Transfer within 21 days of the Relevant Date unless: The Customer requests that the Supplier Transfer be completed at a later date The Customer notifies the licensee that he does not wish the Supplier Transfer to take place Ensures switching is free of charge In relation to each Fixed Term Supply Contract, the licensee must ensure that: <ul style="list-style-type: none"> Unless the Domestic Customer has already entered into a new Fixed Term Supply Contract, a Domestic Customer is entitled to switch to any other Electricity Supplier at any time during or after the Switching Window without having to pay a termination fee A domestic customer is not required to give any form of notice to switch supplier 	<ul style="list-style-type: none"> The licensee may include a term in a Domestic Supply Contract requiring a Domestic Customer to pay a termination fee to end that contract except in any of the following circumstances: <ul style="list-style-type: none"> The contract is of an indefinite length The contract allows for both a fixed term period and a period of indefinite length and it is brought to an end during the period of indefinite length The licensee must ensure that any notice period for termination of any Evergreen Supply Contract is no longer than 28 days In relation to any Evergreen Supply Contract, the licensee must ensure that the Domestic Customer is entitled to give notice to terminate the Evergreen Supply Contract at any time In relation to each Fixed Term Supply Contract, the licensee must ensure that: <ul style="list-style-type: none"> A domestic customer is entitled to take steps to facilitate changing to any other Electricity Supplier (but not complete the process of changing supplier) at any time without having to pay a termination fee A domestic customer is not required to give any form of notice to terminate a Fixed Term Supply Contract
IS	<ul style="list-style-type: none"> Regulation 1050/2004, Art. 9 Regulation 1040/2005, Art. 25 	<ul style="list-style-type: none"> Distribution options are not allowed to charge a fee due to a dealer's switch. The cost of such a switch shall be borne by the distribution network and shall be taken into account when setting income limits 	<ul style="list-style-type: none"> Customers may terminate an electricity sales agreement with one to three months' notice No specific requirements are included in the national legislation on contract termination fees
NO	<ul style="list-style-type: none"> FOR-1999-03-11-301, chapter 2 §2-1 	<ul style="list-style-type: none"> Ensures switching is put into effect at most one month after the consumer's request has been done No specific requirements are included in the national legislation on switching fees 	<ul style="list-style-type: none"> No specific requirements are included in the national legislation on contract termination fees

Source: Main Task 1 (Survey of regulators and desk research)

Table 2: Minimum requirements set in the national legislation on billing that go beyond the applicable EU legislation

	Legal framework	Minimum requirements in national legislation that go beyond EU requirements
AT	<ul style="list-style-type: none"> Electricity Act 2010, Art. 81 Gas Act 2011, Art. 126 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> The allocation of the customer facilities to the system levels The contracted and/or purchased extent of system utilization in kW The meter point administration numbers (electricity) or counting point names and stops used for the settlement (gas) The meter readings used for billing Information about how meters have been read Information on the option of meter reading by the customer Telephone numbers for incidents and failures The charging combustion value kWh / m³ used for conversion from volume to energy
BE	<ul style="list-style-type: none"> Law of 29/04/1999 'Loi relative à l'organisation du marché de l'électricité' Law of 12/05/1965 	<ul style="list-style-type: none"> Regulates the organisation of the electricity market (Law of 29/04/1999) Regulates the transmission of gaseous and other products by pipeline impose the following minimum requirements on billing (Law of 12/05/1965) According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> The e-mail address, telephone and fax numbers of the energy supplier's customer service department The address for all correspondence The period covered by the bill The VAT rate and the amount of VAT Detailed calculation of the amount payable The tariff applicable to transmission The tariff applicable to distribution The deductions made by all public authorities, grouped according to category The hyperlink towards the official tariff comparison tool of the competent regional regulator
BG	<ul style="list-style-type: none"> Energy Act, Art. 38b Consumer Protection Act, Art. 4 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers and the payment methods According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Ways of payment, disconnection and reconnection rates, charges for maintenance services, and charges for other services related to the licensed activity Procedure for switching to a new supplier and information that energy service customers do not owe additional charge for said switching Drawing up of final closure account in the event of each switching of supplier Frequency of billing
CY	<ul style="list-style-type: none"> 211(I)/2012 Electricity Market law, Art. 91 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers and the payment methods According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Ways to optimise the use of electricity
CZ	<ul style="list-style-type: none"> Energy Act 210/2011 Coll. Act 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers, the payment methods and the conditions of reimbursements of overpayment According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Customer service contact details
DE	<ul style="list-style-type: none"> EnWG, StromGKV, Art. 40-42 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers, the consumer rights as to receive clear information on one's energy contract before signing, and to be informed in advance if any changes are made to the contract (Article 41) According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Bill layout Frequency of billing Payment methods Price format Price breakdown Information on switching

Table 2: Minimum requirements set in the national legislation on billing that go beyond the applicable EU legislation

	Legal framework	Minimum requirements in national legislation that go beyond EU requirements
DK	<ul style="list-style-type: none"> Executive Order 1400/2015, Sections 2 & 4 Statement 937/2006, Sections 3, 5 & 8 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers This Executive Order gives consumers the possibility to receive a simplified bill. The purpose of this order is to give consumers a better understanding of the price elements and an incentive to be active on the energy market According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Pricing type Last payment date, billing period and date Customer and account numbers Binding price reduction Contract termination date Installation addresses, quotation numbers or Measurement Point ID and access to key self-service or internet service
EE	<ul style="list-style-type: none"> Electricity Market Act, Art. 75 Natural Gas Market Act, Art. 9 	<ul style="list-style-type: none"> Regulate the energy bills for electricity and gas suppliers According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Consumer details Proportion of electricity purchased from a power exchange in the financial year preceding the period of the sale
EL	<ul style="list-style-type: none"> Electricity Supply Code, annex II Art. 1 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers, the payment methods, as well as the conditions of reimbursement of overpayment According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> The customer's details (name, site address, billing address, contact details, tax number) The Meter Registration number and the Meter Asset number The number, issue date and type of bill (based on actual metered demand certified by the relevant Operator (ACTUAL), based on estimated demand (ESTIMATED) or based on meter reading by the Customer or the Supplier (ACTUAL- CUSTOMER READING), as well as information regarding procedure for providing a meter reading The Basic or Special Customer Category (Domestic or Non-domestic / Commercial, connection voltage, etc.) and indication of the applied Tariff The dates for the previous, current and next meter reading provided that these are made available by the relevant Operator The period that the bill covers Meter Data, such as the energy, peak demand, voltage level etc. according to the applied Tariff, as recorded at the beginning and at the end of the billing period, provided that these are made available by the relevant Operator Analytical presentation of the charges applied, indicating the net price and the tax for each charge, the unit prices for the Supply Charges and the total amount charged per group of charges: supply charges (i.e. the charges for the supply of electricity in accordance with the Supply Contract) and the regulated charges (i.e. the charges for the use of the Transmission System and the Operating cost of the Transmission System Operator) Any penalty charges or compensation credited to the Customer by the Network Operator for failure to provide guaranteed levels of service and indication of the respective infringement, in accordance with the Network Codes Any overdue amount from previous bills, a reminder about the Supplier's right to terminate the supply if the total amount due is not paid by the due date, an indication "termination of supply notice", subject to special regulations for Vulnerable Customers, a note that the termination notice should be disregarded if payment of amounts from previous bills have been settled following the issuing of the current bill The total amount due, including owed amounts from previous bills and taking into account any penalty charges or compensation credited to the Customer The procedure and deadline for submitting objections regarding the Bill, the set deadline upon which the payment of the Electricity Bill is due and payment options

Table 2: Minimum requirements set in the national legislation on billing that go beyond the applicable EU legislation

	Legal framework	Minimum requirements in national legislation that go beyond EU requirements
		<ul style="list-style-type: none"> The deposit amount paid
ES	<ul style="list-style-type: none"> Regulation of 23/5/2013 Resolution N.5655 of 23 May 2014 of the Ministry for the Industry, Energy and Tourism 	<ul style="list-style-type: none"> Regulate the energy bills for electricity and gas suppliers, the payment methods, as well as the conditions of reimbursement of overpayment According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements (Regulation of 23/5/2013): <ul style="list-style-type: none"> Breakdown of price (e.g. breakdown charges in consumer bills according to energy costs, network charges and taxes/levies) The resolution n. 5655 of 23/05/2014 lists the details of the information to be provided by the suppliers: <ul style="list-style-type: none"> Logo of the supplier Consumption period and invoice number Incentives for renewable energies Expiration date of the contract
FI	<ul style="list-style-type: none"> Energy Agency's Decree, Art. 4 Electricity Market Act (588/2013), Art. 57 	<ul style="list-style-type: none"> Regulate the energy bills for electricity and gas suppliers According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Content of the bill (e.g. number of pages, lay out) Frequency of the bill (at least four times a year) Payment methods (energy suppliers must accept cash and checks) Breakdown of price (e.g. breakdown charges in consumer bills according to energy costs, network charges and taxes/levies)
FR	<ul style="list-style-type: none"> Ministerial Order of energy billing 18 April 2012, Art. 4 Code de la consommation, Art. L.224-1 Code de l'énergie, Art. R.333-1 	<ul style="list-style-type: none"> Regulate the energy bills for electricity and gas suppliers, the payment methods, as well as the conditions of reimbursement of overpayment According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Contact details to reach the suppliers customer service Contact details of the distribution network administrator Customer reference number Contact details of the customer Electricity bills: the consumption site delivery point number and the subscribed power and for natural gas: Name of your gas meter on the distribution network and estimation, as well as the annual reference consumption or the projected annual consumption used by the supplier for its estimations Reference number of the customer's meter Type of meter information transmitted by the distribution network administrator Reference number of the bill, its date of issue and its deadline of payment Estimated date of the next bill Period during which the customer can transmit indexes for consideration in the next bill forecast and the modalities of this transmission Terms of payment
HR	<ul style="list-style-type: none"> Energy Efficiency Act 127/14 of 23/10/2014, Art. 14 & 18 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers <ul style="list-style-type: none"> According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Information on switching Bill layout
HU	<ul style="list-style-type: none"> Law on Electricity (2007 evi LXXXVI törvény a villamos energiáról), Annex I 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers, the payment methods, as well as the conditions of reimbursement of overpayment According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Customer service details Period related to the bill TVA rate and amount Product or service Length of the contract including starting date (and end date if applicable)
IE	<ul style="list-style-type: none"> Statutory Instrument 426/2014, Art. 6 and 7 	<ul style="list-style-type: none"> The Statutory Instrument 426/2014 delegates the regulation of energy bills for electricity and gas suppliers to the Commission for Energy Regulation

Table 2: Minimum requirements set in the national legislation on billing that go beyond the applicable EU legislation

	Legal framework	Minimum requirements in national legislation that go beyond EU requirements
		<ul style="list-style-type: none"> The Irish Regulator complements the national legal framework by requiring suppliers to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Account number The period to which your bill relates, the date of issue and the date when payment is due The meter reading upon which the bill is based. This should indicate whether the reading is based on an actual reading or an estimated meter read A calculation of the amount due for electricity supplied Any levies applied to the bill A list of payment options
IT	<ul style="list-style-type: none"> D.Lgs 93/11 Art. 43(2) L 125/07 Art. 1(6) and Art. 1(5) 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers, the payment methods, as well as the conditions of reimbursement of overpayment According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> The services provided The service quality levels offered The time for the initial connection The types of maintenance service offered The means by which up-to-date information on all applicable tariffs and maintenance charges may be obtained The duration of the contract The conditions for renewal and termination of services and of the contract and whether withdrawal from the contract without charge is permitted Any compensation and the refund arrangements which apply if contracted service quality levels are not met, including inaccurate and delayed billing
LT	<ul style="list-style-type: none"> Law on Energy of the Republic of Lithuania No. IX-884 Law on Electricity of the Republic of Lithuania No VIII-1881 	<ul style="list-style-type: none"> Regulate the energy bills for electricity and gas suppliers According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Customer details Services offers VAT rate The sum of VAT
LU	<ul style="list-style-type: none"> Amended law of 1 August 2007 relating to the organization of the gas market, Art. 12 Luxembourg Consumer Code of 28 December 2016 	<ul style="list-style-type: none"> Regulate the energy bills for electricity and gas suppliers. In particular According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Bill layout Price format Information on switching Frequency of billing Payment methods Breakdown of price
LV	<ul style="list-style-type: none"> Provision on information for end users of electricity and natural gas (09/03/17 N. 55 (5882)), Art. 2 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers and the conditions of reimbursement of overpayment According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Name of the product Breakdown of price (with fees) Where to find information on: how to request consumption information in the last 24 months, energy mix, environmental impact, dispute resolution tools
MT	<ul style="list-style-type: none"> Electricity Market Regulations (S.L. 545.16), Art. 8(3) 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers According to the national legal framework, bills issued by Enemalta Corporation, Malta's electricity supplier, needs to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Information on available energy efficiency improvement measures
NL	<ul style="list-style-type: none"> Electricity Act, Art. 95 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> The period that the bill in question concerns The fixed costs, such as fixed supply costs and grid operation costs The energy tax rebate The total amount that the customer will receive or needs to pay after deduction of the instalment payments so far

Table 2: Minimum requirements set in the national legislation on billing that go beyond the applicable EU legislation

	Legal framework	Minimum requirements in national legislation that go beyond EU requirements
		<ul style="list-style-type: none"> • More generally, the bill must be easily comparable with the accepted offer
PL	<ul style="list-style-type: none"> • Act on VAT, art. 106e.1 	<ul style="list-style-type: none"> • Regulates the energy bills for electricity and gas suppliers • According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> • Date of the bill • Type of service supplied • Dates of service • Number identifying the bill • Name of the recipient • Tax identification of the recipient • Tax rates • The total taxes with breakdown for different tax rates
PT	<ul style="list-style-type: none"> • Code of Commercial Relations (RRC) in the Electricity Market, Art. 129 to 131 for electricity and Art. 115 for gas 	<ul style="list-style-type: none"> • Regulates the energy bills for electricity and gas suppliers • According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> • Content of the bill (complete, clear and understandable) • Frequency of billing (monthly) • Payment method (2 or more) • Breakdown of price (standard)
RO	<ul style="list-style-type: none"> • Law on Energy Efficiency Electricity and Natural Gas no. 123/2012, Art. 11 and Annex 5 	<ul style="list-style-type: none"> • Regulates the energy bills for electricity and gas suppliers • However, no requirements set in the national legislation go beyond the applicable EU legislation
SE	<ul style="list-style-type: none"> • Electricity Act (1997:857) Chapter 3 Section 10 a, Section 23 Chapter 8, Section 12, Chapter 8 Section 14-18, Chapter 11 Section 13, Chapter 11 Section 17-18 • General requirements which applies to all types of invoicing can be found in Swedish Companies Act, Bookkeeping Act and VAT Act 	<ul style="list-style-type: none"> • Regulates the energy bills for electricity and gas suppliers, • According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> • Frequency of billing • Payment methods • Price format • Breakdown of price • Information on switching
SI	<ul style="list-style-type: none"> • Energy Act (Articles 42, 48, 162, 172) • Consumer Protection Act (Articles 25b, 43b) 	<ul style="list-style-type: none"> • Regulates the energy bills for electricity and gas suppliers, • According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> • Comparison of consumption with same user category if possible
SK	<ul style="list-style-type: none"> • Act No. 251/2012 Coll. 	<ul style="list-style-type: none"> • Regulates the energy bills for electricity and gas suppliers, the payment methods, as well as the conditions of reimbursement of overpayment • According to the national legal framework, suppliers need to deliver an electricity bill that contains the following minimum requirements: <ul style="list-style-type: none"> • Unit price for: the purchase of electricity or gas including sales activity of the supplier of electricity or supplier of gas, the transmission of gas, the distribution of electricity including transmission, or the distribution of gas, the storage of gas, losses upon the transmission of electricity and distribution of electricity, system services in the power sector, operation of the system in the power sector • The customer should be able to choose an indiscriminate form and method of payment • When setting the level of advance payments, the electricity supplier or gas supplier will take into account the level of the advance payments for the same period of the preceding billing period
UK	<ul style="list-style-type: none"> • National legislation through the Electricity Act and Gas Act (Art. 21B & 31A) 	<ul style="list-style-type: none"> • Regulates the energy bills for electricity and gas suppliers • According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> • Estimated annual costs • Any terms which it is reasonable in all the circumstances for that person to be required to accept • Switching and contract termination information (including termination fees) • Start and end date of the contract • Moreover, the trade association for the UK energy industry, "Energy UK", published a practical guide aimed at driving improved standards of performance and providing a common

Table 2: Minimum requirements set in the national legislation on billing that go beyond the applicable EU legislation

	Legal framework	Minimum requirements in national legislation that go beyond EU requirements
		framework around which energy suppliers can build better processes and controls for billing their customers
IS	<ul style="list-style-type: none"> Regulation Electricity Exchange and Measurement Regulation 1050/2004 on electricity and gas bills 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Breakdown on price (unit price, charges for transport, distribution services) In the bills of customers in areas where a rural tariff is in force, information about the amount of the contribution to the reduction of distribution costs shall be provided
NO	<ul style="list-style-type: none"> FOR-2015-06-12-705, -Art. 7-2 "Forskrift om endring i forskrift om måling, avregning og samordnet opptreden ved kraftomsetning og fakturering av nettsjenester" 	<ul style="list-style-type: none"> Regulates the energy bills for electricity and gas suppliers According to the national legal framework, suppliers need to deliver an energy bill that contains the following minimum requirements: <ul style="list-style-type: none"> Switching procedures Link to the regulator's PCT The invoice should be transparent and easy to understand

Source: Main Task 1 (Survey of regulators and desk research)

Table 3: Minimum requirements for presenting consumption data (national legislation)

	Legal framework	Minimum requirements in national legislation
AT	<ul style="list-style-type: none"> Electricity Act, Art. 81 & 82 Gas Act, Art. 126 & 127 	<ul style="list-style-type: none"> Ensure that consumers receive at least one annual statement presenting their consumption Energy suppliers shall provide consumers, free of charge, an information sheet enclosed with the bill once a year
BE	<ul style="list-style-type: none"> Law of 29/04/1999 Art.18 Law of 12/05/1965 	<ul style="list-style-type: none"> Ensure that the consumers receive at least one annual statement presenting their consumption
BG	<ul style="list-style-type: none"> Energy Act, Art. 38b Art. 4 of the 'Consumer Protection Act 	<ul style="list-style-type: none"> Ensure that the consumers receive at least 4 quarterly statements presenting their consumption
CY	<ul style="list-style-type: none"> 211(I)/2012 Law, Art. 91 	<ul style="list-style-type: none"> Ensures that consumers receive statements "quite often" presenting their consumption
CZ	<ul style="list-style-type: none"> 210/2011 Coll. Act 	<ul style="list-style-type: none"> Ensures that the consumers receive at least one annual statement presenting their consumption
DE	<ul style="list-style-type: none"> EnWG, StromGVV, Art. 40-42 	<ul style="list-style-type: none"> Ensures that consumers receive monthly, quarterly or semi-annual billing informing the consumer of the contribution of each energy source used, of the impact on the environment (CO₂ emissions and radioactive wastes from electricity production) and of consumers rights regarding litigation and complaint handling
DK	<ul style="list-style-type: none"> Electricity Supply Act 1329/2013 Section 72a Statement 937/2006, Section 4 	<ul style="list-style-type: none"> Ensures that the consumers receive an energy bill at least four times a year and no later than two months after the end of a three-month period (Section 72a of the Electricity Supply Act 1329/2013) Ensures consumers receive an annual statement summarizing their energy consumption and costs (e.g. cost of electricity, gas and breakdown of prices) Ensures that consumers receive an annual statement containing information about the measurement number, measurements for the start and end of the settlement period, consumption for the period according to meter and corrected consumption (Section 4 of the Statement 937/2006)
EE	<ul style="list-style-type: none"> Electricity Market Act, Art. 75 Natural Gas Market Act, Art. 9 	<ul style="list-style-type: none"> Ensure that the consumers receive a monthly energy bill presenting their consumption and cost (e.g. cost of electricity, gas and breakdown of prices)
EL	<ul style="list-style-type: none"> Electricity Supply Code, annex II Art. 1 	<ul style="list-style-type: none"> Ensures that periodically, at least once a year, the Supplier informs the consumers through a relevant letter or flyer attached to or as part of the Electricity Bill, regarding the following: (i) Consumption data and total electricity supply cost for the previous year; estimated consumption and supply cost for the current year, as well as a reminder about the Customer's right to change Supplier; (ii) information regarding the contribution of each energy source in the total fuel mix during the previous year, in accordance with paragraph 2, Article 13 of the current Code.
ES	<ul style="list-style-type: none"> The regulation does not specify at which frequency the consumers should receive statements presenting their consumption 	
FI	<ul style="list-style-type: none"> Energy Agency's Decree, Art. 4 The Electricity Market Act (588/2013), Art. 57 	<ul style="list-style-type: none"> Ensures the consumers receive billing at least four times a year The electricity supplier must send the final electricity bill to the consumer within six weeks after the electricity supply termination On demand, customers can change their frequency of billing
FR	<ul style="list-style-type: none"> Regulation 18/04/2012 	<ul style="list-style-type: none"> Ensures that the consumers receive at least one annual statement presenting their consumption
HR	<ul style="list-style-type: none"> Energy Efficiency Act, Art. 14 & 18 	<ul style="list-style-type: none"> Ensures that the consumers receive a yearly energy bill presenting their consumption and cost with a comparative graphical representation with last year consumption (Art. 14) Ensures that billing information are provided to end customers twice a year, or at the request of the end customer must be delivered or sent in electronic form at least every three months (Art. 18)
HU	<ul style="list-style-type: none"> Law on Electricity (2007 evi LXXXVI törvény a villamos energiáról) 	<ul style="list-style-type: none"> Ensures that the consumers receive at least one statement every year presenting their consumption
IE	<ul style="list-style-type: none"> The regulation does not specify at which frequency the consumers should receive statements presenting their consumption 	
IT	<ul style="list-style-type: none"> Decreto Legislativo 93/11, Art. 43(2) 	<ul style="list-style-type: none"> Ensures that the consumers receive statements four times a year presenting their consumption
LT	<ul style="list-style-type: none"> Stated by the Regulator National Commission for Energy Control and Prices (NCECP) 	<ul style="list-style-type: none"> According to the regulator, consumers have to submit their consumption of energy on a monthly basis to their suppliers Agreements can be made between consumers and their suppliers in order to change the frequency of declaration of consumption
LU	<ul style="list-style-type: none"> Amended law of 1 August 2007 relating to the organization of the electricity market, Art. 49 	<ul style="list-style-type: none"> Ensures that the consumers receive a yearly energy bill presenting their consumption and cost (e.g. cost of electricity, gas and breakdown of prices) On demand, customers can receive information regarding their bills at least once per trimester

Table 3: Minimum requirements for presenting consumption data (national legislation)

	Legal framework	Minimum requirements in national legislation
LV	<ul style="list-style-type: none"> Provision on information for end users of electricity and natural gas (09/03/17 N. 55 (5882)) 	<ul style="list-style-type: none"> Ensures that the consumers receive at least one annual statement presenting their consumption
MT	<ul style="list-style-type: none"> Electricity Market Regulations (S.L. 545.16), Art. 8(3) 	<ul style="list-style-type: none"> Ensures that the consumers receive a statement of actual consumption at least once a year and that billing information is available at least quarterly Consumers also receive at least two bills per year based on actual readings showing consumption, with calculation including tariffs, and the amount to be paid. In addition, consumers are provided with smart meters bills with the aforementioned information every 60 days On demand, customers can also receive the information and documents above
NL	<ul style="list-style-type: none"> Electricity Act, Art. 95 	<ul style="list-style-type: none"> Ensures that the consumers receive at least one annual statement presenting their consumption and monthly invoices
PL	<ul style="list-style-type: none"> Regulation of the Minister of Economy of 18 August, paragraph 32 and 35 Regulation of the Minister of Economy of 23 June 2013, paragraph 37 	<ul style="list-style-type: none"> The data on actual consumption must be provided to consumers with each bill. Frequency of bills depends on the tariff but for most electricity consumers it has to be at least every two months, and for gas consumers at least every 12 months
PT	<ul style="list-style-type: none"> Code of Commercial Relations (RRC) in the Electricity Market, Art. 129 to 131 for electricity and Art. 115 for gas 	<ul style="list-style-type: none"> Ensures that bills must be released on a monthly basis, but that the periodicity can also be changed upon agreement between the consumer and the supplier. The bill must contain details on energy consumption The frequency can be agreed between the consumer and the energy supplier. According to the Regulator, the most common is bi-monthly and annual (for consumers who opt to receive one bill per year and pay a fix amount per month). Once a year, consumers must receive a bill summarizing energy consumption and breakdown of price
RO	<ul style="list-style-type: none"> Law no. 123/2012 on electricity and natural gas, with subsequent amendments and supplements - Art. 57 and 14(4) ANRE Orders no. 64/2014 - chapters 7 and 8, 88/2015 - annex on bill layout, 96/2015 and 29/2016 - section 4 	<ul style="list-style-type: none"> Ensures the consumers receive at least one annual statement presenting their consumption It also mentions that the same information must be available at least quarterly in case of electronic invoices, and twice a year otherwise The legislation mentions that the billing period is usually monthly or contractually agreed, but cannot exceed 3 months
SE	<ul style="list-style-type: none"> Electricity Act, Ch. 8, Section 18 	<ul style="list-style-type: none"> Ensures that the consumers receive an energy bill at least quarterly, presenting their consumption and cost According to the Regulator, consumers receive a monthly energy bill, including the meter reading at each monthly change, the annual consumption and the consumption statistics for the past 13 months On demand, consumers can change the frequency of their bills
SI	<ul style="list-style-type: none"> Energy Act (Articles 42, 48, 162, 172) Consumer Protection Act (Articles 25b, 43b) 	<ul style="list-style-type: none"> Ensures that the consumers receive a statement once a month presenting their consumption On demand, customers can receive information regarding their bills (Art. 355 of the Energy Act)
SK	<ul style="list-style-type: none"> The regulation does not specify at which frequency the consumers should receive statements presenting their consumption 	
UK	<ul style="list-style-type: none"> Electricity Act and Gas Act (Art. 21B & 31A) 	<ul style="list-style-type: none"> Ensures that the consumers receive at least twice a year (or quarterly on demand) energy bill presenting their consumption and cost (e.g. cost of electricity, gas and breakdown of prices) (Art. 21B.5 of both the Electricity Act and Gas Act) Ensure that on demand, consumers can receive a bill containing the amount of electricity or gas supplied, how much it has been estimated by the supplier, the premises to which the supply was made and the Meter Point Administration Number (MPAN) (Art. 21A.1 of both the Electricity Act and Gas Act)
IS	<ul style="list-style-type: none"> The regulation does not specify at which frequency the consumers should receive statements presenting their consumption 	
NO	<ul style="list-style-type: none"> The regulation does not specify at which frequency the consumers should receive statements presenting their consumption 	

Source: Main Task 1 (Survey of regulators and desk research)

Table 4: Proportion of participants comparing alternative deals and choosing the cheapest deal, by treatment, country group and potentially vulnerable groups

	Bill design					Comparison prompt		Exit fees		Standardisation of language on PCT		Real effort		Average
	Best Practice bill version 1	Best Practice bill version 2	Best Practice bill version 3	Best Practice bill version 4	'Current Market' practice	Comparison prompt on page 1	No comparison prompt on page 1	Participants do not pay exit fees to leave their contract early	Participants pay exit fees to leave their contract early	Language on PCT standardised with respect to bill	Language on PCT not standardised relative to bill	No Real effort to view alternative deals	Real effort to view alternative deals	
Comparing alternative deals														
Proportion of participants comparing alternative deals or choosing the cheapest deal (%)														
Country group														
EU15	59	63	56	58	60	59	60	59	59	-	-	64***	54	59
EU13	57	57	58	58	62	59	58	59	57	-	-	62***	55	58
Age														
Below 65 years	60	62	59	59	61	60	61	61	60	-	-	65***	56	60
65 years and over	52	57	46	49	59	54	51	53	52	-	-	56**	48	52
Economic activity														
Economically active	59	61	61	59	62	60	60	60	60	-	-	65***	56	61
Economically inactive	68	66	54	62	56	57*	66	63	60	-	-	67**	57	60
Educational level														
Medium or high education	59	62	57	58	62	60	60	60	60	-	-	64***	55	60
Low education	50	47	51	48	47	48	49	53	53	-	-	53	45	49
Subjective income														
No difficulty making ends meet	61	63	59	58	64	62	61	62	60	-	-	65***	57	58
Difficulty making ends meet	57	58	55	59	56	56	58	56	58	-	-	62***	52	59
Use of internet														
Low	49	46	45	47	56	48	50	50	47	-	-	51*	46	49
Medium	61	66	61	60	61	62	62	62	62	-	-	67***	57	62
High	67	69	62	71	68	66	69	68	67	-	-	70	65	67
Choosing the cheapest deal														
Proportion of participants comparing alternative deals or choosing the cheapest deal (%)														
Country group														
EU15	51	48	51	49	52	50	51	50	50	51	49	56***	45	50
EU13	50	49	51	50	55	50	52	51	51	50*	53	54***	48	51

Table 4: Proportion of participants comparing alternative deals and choosing the cheapest deal, by treatment, country group and potentially vulnerable groups

Age														
Below 65 years	50	48	51	50	53	50	51	50	51	50	51	55***	46	50
65 years and over	50	48	53	50	53	49	52	52	49	52	49	55***	46	51
Economic activity														
Economically active	50	49	50	51	53	51	51	51	51	50	51	56***	46	51
Economically inactive	50	49	56	48	49	47	54	50	50	51	50	55*	46	50
Educational level														
Medium or high education	50	49	51	50	53	50	51	50	50	50	51	55***	46	50
Low education	50	45	56	50	51	50	51	49	51	49	52	54	46	50
Subjective income														
No difficulty making ends meet	51	49	52	50	53	50	52	52	50	50	52	55***	47	51
Difficulty making ends meet	48	47	50	50	52	48	50	48	51	50	49	55***	44	49
Use of internet														
Low	55	49	54	50	53	53	52	53	52	54	51	56***	48	52
Medium	48	47	50	50	53	49	51	49	50	48	51	55***	45	50
High	51	52	49	48	49	48	52	49	51	51	48	53	46	52

Note: Online behavioural experiment was conducted with 10,134 participants in France, Germany, Greece, the Netherlands, Poland, Romania, Slovenia, Spain, Sweden and the UK. The table indicates rows where participants shown the 'best practice' bill answered questions correctly significantly more or less frequently than participants shown the 'current market practice' bill. ***=99%. **=95%. *=90%.

Behavioural experiment

Table 5: Objective comprehension on energy consumption information, by price breakdown presentation, infographics, country group and potentially vulnerable groups

	Energy consumption information location		Energy consumption detail		Price breakdown presentation		
	Energy consumption on page 1	Energy consumption on page 2	Energy consumption presented in aggregate for the quarter	Energy consumption presented in detail for each month	Simplified presentation	More detailed presentation	Average
What was your energy usage for the past 12 months? Proportion of participants correctly answering (%)							
Country group							
EU15	45	42	45	43	45	42	44
EU13	52	49	49	52	51	50	51
Age							
Below 65 years	47	45	46	46	47	45	46
65 years and over	50**	43	46	47	47	46	47
Economic activity							
Economically active	47	45	47	46	47	45	46
Economically inactive	50	43	43	50	48	45	46
Educational level							
Medium or high education	47	45	46	46	47**	45	46
Low education	52	45	54*	44	45	52	49
Subjective income							
No difficulty making ends meet	49	46	47	48	48	46	47
Difficulty making ends meet	46	44	45	45	46	44	45
Use of internet							
Low	45	41	45	41	40**	46	43
Medium	49	46	47	47	50***	44	47
High	47	47	45	49	47	47	47
What was your energy usage for the period July 2016 – October 2016? Proportion of participants correctly answering (%)							
Country group							
EU15	49	48	49	48	51***	46	48
EU13	46	45	47	44	50***	41	46

Table 5: Objective comprehension on energy consumption information, by price breakdown presentation, infographics, country group and potentially vulnerable groups

Age							
Below 65 years	48	48	49	48	51***	45	48
65 years and over	47	45	47	46	50**	42	46
Economic activity							
Economically active	48	48	49	47	51***	45	47
Economically inactive	48	45	40	44	49	44	48
Educational level							
Medium or high education	48	47	49	47	51***	45	48
Low education	42	45	44	43	50***	37	43
Subjective income							
No difficulty making ends meet	48	48	49	47	53***	44	48
Difficulty making ends meet	49	46	48	46	48	46	47
Use of internet							
Low	44	42	43	43	47***	39	43
Medium	49	50	50	48	53***	46	49
High	49	43	49	43	45	47	46

Note: Online behavioural experiment was conducted with 10,134 participants in France, Germany, Greece, the Netherlands, Poland, Romania, Slovenia, Spain, Sweden and the UK. The table indicates rows where participants shown the 'best practice' bill answered questions correctly significantly more or less frequently than participants shown the 'current market practice' bill. ***=99%, **=95%, *=90%.

Behavioural experiment

Table 6: Intention to manage energy consumption, by treatments, price breakdown presentation, country group and potentially vulnerable groups

	Energy consumption information location		Energy consumption detail		Energy consumption benchmark		Price breakdown presentation		Average
	Energy consumption on page 1	Energy consumption on page 2	Energy consumption presented in aggregate for the quarter	Energy consumption presented in detail for each month	Energy consumption presented relative to same time last year	Energy consumption presented relative to average household	Simplified presentation	More detailed presentation	
Thinking about your household's energy usage, would you say that you will take more steps to manage your energy consumption in the future?									
Proportion of participants responding 'very likely' or 'rather likely' (%)									
Country group									
EU15	69	68	68	69	69	69	69	69	69
EU13	70	68	70	68	70	68	69	69	69
Age									
Below 65 years	70	68	69	69	69	69	69	69	69
65 years and over	67	68	69	66	71**	64	70	66	68
Economic activity									
Economically active	71	68	69	70	69	70	69	70	69
Economically inactive	69	69	71	67	69	69	71	67	69
Educational level									
Medium or high education	70	68	69	69	70	69	69	69	69
Low education	62	68	65	65	67	63	64	65	65
Subjective income									
No difficulty making ends meet	71	69	71	70	71	70	71	70	70
Difficulty making ends meet	69	68	68	69	69	68	68	69	69
Use of internet									
Low	56	56	58	54	58	55	56	56	56
Medium	73	72	72	73	73	72	73	72	73
High	83	78	78	82	81	79	79	81	80

Note: Online behavioural experiment was conducted with 10,134 participants in France, Germany, Greece, the Netherlands, Poland, Romania, Slovenia, Spain, Sweden and the UK. The table indicates rows where participants shown the 'best practice' bill answered questions correctly significantly more or less frequently than participants shown the 'current market practice' bill. ***=99%. **=95%. *=90%.

Behavioural experiment

Table 7: Subjective assessment of fuel mix presentation, by treatment, country group and potentially vulnerable groups

	Salience of share of renewables		Comparison group						Average
	Share of individual fuels marked (less salient)	Aggregate share of renewables marked (more salient)	I: supplier mix	II: supplier mix + supplier mix at national level	III: supplier mix + supplier mix at level of supply undertaking	IV: supplier mix at national level + national fuel mix	V: supplier mix + supplier mix at level of supply undertaking + national fuel mix	VI: supplier mix + supplier mix at national level + supplier mix at level of supply undertaking	
What was your opinion of the presentation of the fuel mix?									
Proportion of participants indicating that the bill is 'very clear and understandable' or 'rather clear and understandable' (%)									
Country group									
EU15	67	72***	70	68	71	70	71	66	69
EU13	70	71	76	68**	69**	67***	71	72	71
Age									
Below 65 years	69	72	72	69	72	70	71	69	70
65 years and over	67	66	71	67	60*	68	72	62	67
Economic activity									
Economically active	70	72	73	68*	72	71	72	70	71
Economically inactive	68	73	75	73	74	66	66	68	70
Educational level									
Medium or high education	68	72***	72	69	71	69	71	68	70
Low education	68	68	71	65	67	69	66	71	68
Subjective income									
No difficulty making ends meet	73	75	75	72	75	73	75	74	74
Difficulty making ends meet	64	67	69	64	66	65	66	62*	65
Use of internet									
Low	61	65	68	57	67	59	66	61	63
Medium	71	73	73	72	70	72	72	70	72
High	77	79	77	76	84	84	74	74	78

Table 8: Intention to find out fuel mix and switch to a greener tariff, by treatment, country group and potentially vulnerable groups

	Salience of share of renewables		Comparison group						Average
	Share of individual fuels marked (less salient)	Aggregate share of renewables marked (more salient)	I: supplier mix	II: supplier mix + supplier mix at national level	III: supplier mix + supplier mix at level of supply undertaking	IV: supplier mix at national level + national fuel mix	V: supplier mix + supplier mix at level of supply undertaking + national fuel mix	VI: supplier mix + supplier mix at national level + supplier mix at level of supply undertaking	
Thinking about your own household's energy usage, how likely are you, after this survey, to try to find out what the fuel mix is of the electricity you consume?									
Proportion of participants indicating 'very likely' or 'rather likely' (%)									
Country group									
EU15	59	62	64	60	61	61	58	60	60
EU13	53	55	53	57	55	55	55	50	54
Age									
Below 65 years	57	60	60	59	60	59	58	56	59
65 years and over	55	55	59	56	51	56	52	57	55
Economic activity									
Economically active	58	60	58	60	61	59	59	56	60
Economically inactive	58	61	69	58	59	60	55	57	59
Educational level									
Medium or high education	57	60	60	58	59	58	56	57	58
Low education	56	59	54	64	55	58	60	53	57
Subjective income									
No difficulty making ends meet	57	60	59	58	59	58	60	58	58
Difficulty making ends meet	58	60	60	61	60	60	54	56	59
Use of internet									
Low	46	50	48	45	50	47	46	51	48
Medium	59	62	63	63	60	61	59	57	60
High	76	69	72	66	79	77	74	69	73

Table 8: Intention to find out fuel mix and switch to a greener tariff, by treatment, country group and potentially vulnerable groups

In the future how likely are you to switch to a tariff with more renewable energy in its fuel mix? Proportion of participants indicating 'very likely' or 'rather likely' (%)									
Country group									
EU15	52	54	54	50	54	52	53	55	53
EU13	46	49	47	48	46	46	49	47	47
Age									
Below 65 years	51	53	52	51	53	52	52	53	52
65 years and over	42	47	51	40*	39*	42	50	47	45
Economic activity									
Economically active	58	60	58	60	61	59	59	56	60
Economically inactive	58	61	69	58	59	60	55*	57	59
Educational level									
Medium or high education	51	53	53	50	52	50	52	53	52
Low education	40	44	39	39	39	47	48	44	42
Subjective income									
No difficulty making ends meet	51	53	53	47	52	52	56	53	52
Difficulty making ends meet	49	53**	50	53	51	48	48	54	51
Use of internet									
Low	37	40	42	31	37	33	46	42	39
Medium	52	55	54	55	54	54	52	54	54
High	69	65	63	59	72	73	64	70	67

Note: Online behavioural experiment was conducted with 10,134 participants in France, Germany, Greece, the Netherlands, Poland, Romania, Slovenia, Spain, Sweden and the UK. The table indicates rows where participants shown the 'best practice' bill answered questions correctly significantly more or less frequently than participants shown the 'current market practice' bill. ***=99%. **=95%. *=90%.

Behavioural experiment

Annex 2 Methodology for Main Task 1 (Regulatory review and stakeholder consultation)

A2.1 Literature review and desk research

A **literature review at EU level** was performed between December 2016 and February 2017. This review focused on the EU regulatory framework that is relevant for the energy market (e.g. Electricity and Gas Directives, Energy Efficiency Directive, Renewable Energy Directive and other relevant Directives). Additional desk research, looking into various studies, academia literature, market research and behavioural studies was conducted for relevant aspects related to pre-contractual information, billing, requirements on switching and exit fees, and certification schemes for Price Comparison Tools (PCTs) in the energy sector.

A 2nd stage literature review was performed at **the national level** for the countries in scope of the study. This review focused on analysing studies, reports and publications at the national level on the applicable rules that regulate the countries' national energy market as well as on the countries' national current practices. This task was conducted between February 2017 and September 2017.

A2.2 Stakeholder consultation

A stakeholder consultation was organised between April and September 2017 across the 30 countries in scope of the study. The **main activities** of the consultation were:

- **Survey of national energy regulators/national regulatory authorities (NRAs);**¹
- **Survey of PCT manager**² – covering PCTs run by the Regulator, stakeholder owned/funded PCTs and independent PCTs;
- **Communication requests to energy suppliers**³ - covering retail energy supply companies, “green energy” suppliers and new entrants on the energy market; and
- **Communication requests to consumer associations, Consumer Protection Agencies (CPAs), Consumer Authorities and Alternative Dispute Resolution (ADR) bodies.**⁴

Moreover, as to ensure adequate response rates and data collection, **additional stakeholder consultation activities** were conducted:

- **Phone interviews with national energy regulators** – limited to those regulators who did not complete the regulator survey; and
- **Phone interviews with stakeholders in the field of energy active at the EU level.**

¹ Stakeholders were identified through at least the following sources:

https://ec.europa.eu/energy/sites/ener/files/documents/National_regulatory_Authority.pdf;
<https://www.energy.eu/directory/regulatory.html>; https://www.ceer.eu/eeer_about/members

² PCTs were identified through desk research and based on the PCT exercise in this study where a sample of up to five PCTs was identified per country (where feasible).

³ Energy suppliers were identified through desk research and based on the PCT exercise where a sample of up to six energy suppliers was identified per country (where feasible).

⁴ Stakeholders were identified through at least the following sources:

http://ec.europa.eu/consumers/eu_consumer_policy/consumer_consultative_group/national_consumer_organisations/index_en.htm; <http://www.beuc.eu/beuc-network/our-members>; [http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52016XC0930\(03\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52016XC0930(03)&from=EN);
https://ec.europa.eu/energy/sites/ener/files/documents/Alternative_asdisputeResolution.pdf; additional desk research (e.g. actors in the energy market shared also contacts of colleagues and / or other experts in their network that could contribute to the study).

A2.2.1 Surveys of national energy regulators and PCT owners

Invitations to participate in the survey were sent to 33 national energy regulators and 105 PCT managers, which were identified through desk research in collaboration with the European Commission. Fieldwork took place between 20 April and 20 September 2017.

Design of the surveys

Survey questions were designed based on desk research and literature review. The surveys included a mix of open-ended and closed questions. Each survey included separate questions customised for the target group. The design aimed at including as many quantitative questions as possible (i.e. either binary responses (Y/N) or scales) enabling the study to cover a wider variety of topics and most importantly, to increase the comparability between responses. The open-ended questions gave the respondents the opportunity to provide specific explanations on a given issue or a specific situation related to the country and to refer to additional information or documents.

The survey targeting **national energy regulators** aimed at understanding the existing practices at national level and the regulators' views on how these practices are contributing to a better energy market from a consumer perspective. The questions included in the regulators survey were structured around the following categories:

- Information on billing;
- Pre-contractual information;
- Functioning and monitoring of PCTs owned by the regulator and private PCTs; and
- Switching.

The survey targeting **PCT managers** aimed at better understanding the overall functioning of PCTs in terms of the content provided by PCTs and the PCTs' business models. The questions included in the PCTs survey were structured around the following main categories:

- Consumer choice;
- Information provision;
- Business operating model; and
- Certifications.

Deployment of the stakeholder surveys

The surveys were sent to the stakeholders on 20 April 2017 by email. The invitation email included a brief introduction to the study and an URL link to the questionnaire to be completed in an online survey tool. Up to three reminders were sent to the stakeholders. The table below presents the number of contacted regulators and PCT managers per country and the number of completed surveys per country and stakeholder group.

Table 9: Number of respondents in the regulators' survey and PCT survey per country

Country	Number of regulators contacted	Number of regulators who completed the survey	Number of PCTs contacted	Number of PCTs who completed the survey
Austria	1	1*	4	0
Belgium	3	0	10	0
Bulgaria	1	0	1	0
Croatia	1	0	3	0
Cyprus	1	0	1	0
Czech Republic	1	0	6	0
Denmark	1	1	1	1
Estonia	1	1	2	1
Finland	1	1	4	0
France	1	1	6	1
Germany	1	1	5	0
Greece	1	0	2	1
Hungary	1	0	1	0
Iceland	1	0	1	0
Ireland	1	0	3	0
Italy	1	0	7	0
Latvia	1	0	1	0
Lithuania	1	1	1	0
Luxembourg	1	1	1	1
Malta	1	1	1	0
Netherlands	1	0	13	0
Norway	1	0	3	0
Poland	1	0	5	0
Portugal	1	1	1	0
Romania	1	1	1	0
Slovakia	1	0	3	1
Slovenia	1	1	2	0
Spain	1	0	6	1
Sweden	1	1	4	0
UK	1	1*	16	0
Total	33	14*	105	7

Note: *The regulators in Austria and the UK did not complete the survey via the online tool, but information was collected through phone interviews.

A2.2.2 Communications addressed to energy suppliers, consumer associations, Consumer Protection Agencies (CPAs), Consumer Authorities and ADR bodies

Another group of stakeholders was contacted via e-mail and was invited to participate to the study. Communications were tailored to the stakeholder group. Hence, each stakeholder was requested to share specific data and documents that pertains to the field of research. The table below presents the type of stakeholders, the number of contacted stakeholders and the number of obtained responses by stakeholder group.

Table 10: Number of respondents to the communications per stakeholder group			
Stakeholder group	Requested information	Number of PCTs contacted	Number of received responses
Energy suppliers	<ul style="list-style-type: none"> • Sample copy of an electricity and gas bill (paper bill) as issued to the customers • Examples of the most common used energy contracts for household electricity, gas and additional services (e.g. bundled contract) 	150	2
Consumer associations, Consumer Protection Agencies (CPAs), Consumer Authorities and ADR bodies	<ul style="list-style-type: none"> • Studies and documents released by the targeted industry representatives and consumer organisations on the following topics: <ul style="list-style-type: none"> ○ <i>Independence of PCTs</i> ○ <i>Consumer feedback and satisfaction in relation to the study topics</i> ○ <i>Best and poor practices in the energy market regarding pre-contractual information, billing, PCTs and switching</i> ○ <i>National and EU legislation with respect to the energy market</i> ○ <i>Market functioning and competition</i> 	181	10

A2.2.3 Phone interviews

Phone interviews were conducted with national energy regulators and stakeholders active at the EU level. These interviews were organised between June and October 2017.

Interviews with energy regulators

National energy regulators of the countries that did not participate in the regulator survey were invited by e-mail to participate in a phone interview. The interviews mainly focused on collecting qualitative responses through open questions. The questions in the phone interview were largely in line with those of the survey to ensure comparability and consistency of data. In total, three interviews were organised. The interviews were conducted in English and took approximately one hour.

Interviews with stakeholders active at EU level

Interviews were conducted with stakeholders representing relevant energy areas at the European level – being, BEUC (the European Consumer Organisation) and NEON (the National Energy Ombudsmen Network).⁵ The questions addressed during the interviews with consumer organisations were similar to the topics addressed through the communications and allowed to assess the overall functioning of the energy market in terms of:

- Best and poor practices in the energy market in relation to pre-contractual information, billing, PCTs and switching;

⁵ NEON represents the European network of ombudsmen, ADR bodies and mediation services active in the energy sector.

- Consumer feedback and satisfaction – e.g. complaints regarding energy suppliers, PCT functioning, etc.; and
- National and EU legislation with respect to the energy market – e.g. strengths and loopholes of the current EU legal framework.

A2.3 Design of 'country fiches' presenting existing national rules

The data collected through the data collection methods described in the previous sections was integrated in a 'country fiche' template. The activity partly relied on the same approach as the one used in the second Electricity Market Study⁶ with additions and modifications agreed with the Commission. Hence, the applicable EU and national legislation to the energy market integrated in the second market study was used as a first basis for the country fiches and was updated where needed based on the data obtained from the stakeholder consultations and the desk research.

Design country fiche template

The country fiche template (PowerPoint) was designed in September 2017. The template integrates specific sections, sub-sections and icons that allow to easily compare the current practices and legal framework in relation to pre-contractual information, functioning of the PCTs and energy bills. The table on the next page presents the topics and sub-topics addressed in the country fiche and provides for each topic that the data sources used.

⁶ European Commission, 2016. Second consumer market study on the functioning of the retail electricity markets for consumers in the EU. Available at: http://ec.europa.eu/newsroom/just/item-detail.cfm?item_id=53331

Table 11: Country fiche data integration

Topics addressed in the fiche	Sub-topics addressed in the fiche	Data presented per sub-topic	Data sources
1. Key take-aways	<ul style="list-style-type: none"> • Pre-contractual information covering offers, switching fees and contract termination fees • PCTs • Energy bills 	<i>The key take-away summarise the main findings per sub-topic.</i>	<i>The key take-away summarise the main findings per sub-topic.</i>
2. Pre-contractual information	<ul style="list-style-type: none"> • Legal requirements 	<ul style="list-style-type: none"> • Legal requirements for the content of offers and provision of pre-contractual information • Language in which offers are presented • Minimum mandatory requirements imposed by the national legislation to energy suppliers as to the content of offers 	<ul style="list-style-type: none"> • Regulator survey • Analysis communications received • Interviews • Additional desk research • PCT exercise
	<ul style="list-style-type: none"> • Offers and green energy offers studied 	<ul style="list-style-type: none"> • Number of offers provided by the energy suppliers (sample of max. 6 energy suppliers) in terms of household electricity offers, household natural gas offers, household mix electricity and gas offers, '100% green offers' and self-generation tariffs 	
	<ul style="list-style-type: none"> • Bundled offers 	<ul style="list-style-type: none"> • Number of bundled offers provided by the energy suppliers (sample of max. 6 energy suppliers) 	
	<ul style="list-style-type: none"> • Switching fees and contract termination fees 	<ul style="list-style-type: none"> • Legal requirements as to switching fees, contract termination fees and administrative burdens • Indication whether a ban on switching is implemented • Initiatives undertaken at the national level as to inform consumers about switching and as to promote switching 	
	<ul style="list-style-type: none"> • Practices in the energy market in relation to switching 	<ul style="list-style-type: none"> • Number of suppliers studied that apply switching fees • Number of suppliers studied that provide information regarding switching on their website 	
	<ul style="list-style-type: none"> • Initiatives, non-binding measures and guidance documents 	<ul style="list-style-type: none"> • Information collected regarding initiatives, non-binding measures and guidance documents at the national level 	
3. PCTs	<ul style="list-style-type: none"> • Market coverage 	<ul style="list-style-type: none"> • Market coverage of the regulator PCT • Market coverage of the other PCTs 	<ul style="list-style-type: none"> • Regulator survey • Analysis communications received • Interviews
	<ul style="list-style-type: none"> • Business model 	<ul style="list-style-type: none"> • Business model in terms of the PCTs independence, how the website is run, quality assessment, etc. 	

	<ul style="list-style-type: none"> • Information presentation on the PCT website in terms of ranking, additional information presented, first results pages, etc. 	<ul style="list-style-type: none"> • Filters that can be used to rank offers (minimum and additional filters) • Information on what is displayed on the first result pages of the PCT 	<ul style="list-style-type: none"> • Additional desk research • PCT exercise
	<ul style="list-style-type: none"> • Non-price elements 	<ul style="list-style-type: none"> • Comparison of the non-price elements displayed on offers on the PCT websites (minimum and additional elements mentioned) 	
4. Energy bills	<ul style="list-style-type: none"> • Legal requirements 	<ul style="list-style-type: none"> • Minimum legal requirements in relation to energy bills as indicated in the national legislation 	<ul style="list-style-type: none"> • Regulator survey • Analysis communications received • Interviews • Additional desk research • PCT exercise
	<ul style="list-style-type: none"> • Frequency of consumption statement 	<ul style="list-style-type: none"> • Frequency of the consumption statement as indicated in the national legislation 	
	<ul style="list-style-type: none"> • Content of energy bills 	<ul style="list-style-type: none"> • Indication whether the Regulator complements the national legal framework by requiring energy bills to mention additional elements • Elements consumers can amend in their energy bills • Key aspects mentioned in the sampled bills • Indication whether the energy suppliers that provide example bills display elements required for switching on their bills 	
5. EU and national Regulatory framework	<ul style="list-style-type: none"> • EU and national Regulatory framework 	<ul style="list-style-type: none"> • Applicable European Directives transposed at the national level • Applicable national laws • ADR • Soft laws 	<ul style="list-style-type: none"> • Regulator survey • PCT survey • Analysis communications received • Interviews • Additional desk research • PCT exercise
6. Main bodies	<ul style="list-style-type: none"> • Main bodies (national level) and the contact details 	<ul style="list-style-type: none"> • Contact details and indication of the energy regulator, the singly point of contact, the PCTs, the body responsible for competition, Alternative Dispute Resolution body and other relevant bodies and consumer organisations 	<ul style="list-style-type: none"> • Regulator survey • PCT survey • Additional desk research • PCT exercise

Annex 3 Methodology for Main Task 2 (Consumer surveys)

A3.1 Target population

The target population for the consumer surveys were energy consumers, responsible (or jointly responsible) for paying the energy bills in their household. Consumers who did not receive energy bills, e.g. because energy costs are included in their rent, were excluded from the survey.

A3.2 Pilot study and translation

A pilot study was conducted to test the length of the questionnaire and to identify if respondents had any difficulties answering the questions. The pilot was conducted in the UK as the master documents were designed in English. Quotas were set on age, gender, region and education (based on the general online population aged 18 years old or over) to ensure that a broad range of respondents took part in the pilot survey.

In total, 104 respondents completed the pilot questionnaire. The average time to complete the pilot questionnaire was 12 minutes. Based on the pilot results, and in consultation with the Commission, Ipsos implemented a limited number of changes to improve the consumer questionnaire for the main stage.

A3.3 Translation of the questionnaire

After the changes in the main questionnaire were agreed upon and all the materials from the survey were signed off, the questionnaire was translated in the local language(s) of each country. Unique "country and language" versions were produced.

Table 12 (on the next page) presents the list of countries with their corresponding language(s).

Table 12: Language(s) used in each country	
AT	German (Austrian)
BE	French (Belgium) & Dutch (Belgium)
BG	Bulgarian
CY	Greek (Cyprus)
CZ	Czech
DE	German (Germany)
DK	Danish
EE	Estonian & Russian
EL	Greek
ES	Spanish
FI	Finnish
FR	French (France)
HR	Croatian
HU	Hungarian
IE	English
IT	Italian
LT	Lithuanian
LU	Luxembourgish & French (Luxembourg)
LV	Latvian & Russian
MT	Maltese & English
NL	Dutch (Netherlands)
PL	Polish
PT	Portuguese
RO	Romanian
SE	Swedish
SI	Slovenian
SK	Slovakian
UK	English
IS	Icelandic
NO	Norwegian

A3.4 Fieldwork execution and panel

Interviews were carried out via an online methodology.⁷ The “on the ground” execution of the online fieldwork was carried out by the Ipsos Interactive Service Bureau (IIS). All the work conducted by IIS was managed centrally, with one scripting, data collection and data delivery process.

The main stage fieldwork was conducted using Ipsos’ online panels where possible. In some countries, partner panels were used, either due to Ipsos not currently having a panel in that country, or the Ipsos panel being too small to achieve the required number of interviews. All selected polling institutes are well known for the quality of their network

⁷ In Cyprus, no high-quality online access panels is yet operational and a telephone survey was conducted.

and are involved in numerous multilingual and multinational surveys. All are ESOMAR members as well. To prevent scripting errors, the same script was used by all panel partners.

CAWI quality processes

Ipsos has developed an internal four-stage data quality process called iPi4 (Ipsos Panel Integrity). One of these processes is based at the survey level, and implemented whether we use our own or partner sample. The four components are detailed below.

iPi Pre-panel stage: Before becoming panel members, applicants are scrutinized by a complex validation system. No one can join the panel without successfully passing all of the checks. These include checking for duplicates, CAPTCHA security code, screening out individuals who work in market research, validating personal and geographical details.

The external panels have similar processes at panellists' registration. Duplicate detection is implemented on all panels, as are CAPTCHA security codes and de-duplicating against a black list. A double opt in recruitment ensures that email and personal details are verified.

iPi Early-panel stage: Shortly after joining the panel, new members are tested again with a short survey. New panellists who are most likely to make intentional or unintentional errors on future surveys are deactivated at an early stage. This survey checks anomalies in answers and detects fraudulent behaviour. Respondents who obtain high anomaly scores or provide a large number of errors are removed from the panel.

The iPi Survey module: This module identifies low engagement behaviour during a survey. The quality of answers is ensured by measures such as duplicate detection using the RelevantID digital fingerprinting, geo-IP validation and speeding. These survey standards are implemented on all surveys IIS manages, no matter the sample source.

- RELEVANTID® removes duplicates from live surveys, based on digital fingerprinting criteria. The module is applied on all surveys conducted by IIS, including those where mixed/external panel sources are used. This ensures that each respondent will only be selected once for a survey, even if they are a member of more than one panel.
- COUNTRY GEO-IP validation ensures the panellist is in the country we expect them to be in.
- iPi SPEEDERS are monitored for every survey and respondent experience is measured.

iPi Ongoing panel stage: IIS monitors and track panellists' behaviour history across all surveys. IIS employs purging procedures based on behaviour history to remove bad and inactive panellists from our active panel. Reasons for removal include: hard bounce emails, inactivity, fraudulent and inconsistent data.

Our partners perform many similar checks and cleaning procedures on their panels; they purge respondents with hard bounce emails, inactive respondents and track and monitor inconsistencies which are flagged and removed as appropriate.

All surveys managed by IIS (no matter the sample source) are hosted in Rackspace, a managed hosting facility. The servers and network infrastructure and physically located in the UK. Rackspace guarantees' recovery of hardware failure within one hour, ensures zero downtime, its facility security is strictly managed and power back up is guaranteed.

A3.5 Fieldwork period and number of interviews

Table 13 gives a country-by-country overview of the completed number of interviews and the fieldwork period. In total, 20,244 interviews were carried out between 11 September and 13 November 2017. Respondents were randomly drawn from the online panel based on the available profile data in terms of gender, age and geographic region; quota (i.e. subgroup sample sizes) were set based on official population statistics published by Eurostat.

Table 13: Number of completed interviews and fieldwork period			
EU28	19,239	11.09.17	13.11.17
EU15	11,097	11.09.17	11.11.17
EU13	8,142	13.09.17	13.11.17
AT	505	12.09.17	19.09.17
BE	503	11.09.17	22.09.17
BG	506	13.09.17	22.09.17
CY	501	24.10.17	13.11.17
CZ	508	14.09.17	20.09.17
DE	1,017	25.10.17	01.11.17
DK	511	12.09.17	21.09.17
EE	507	18.09.17	27.09.17
EL	1,008	03.11.17	11.11.17
ES	1,006	27.10.17	01.11.17
FI	507	12.09.17	20.09.17
FR	1,007	27.10.17	01.11.17
HR	505	13.09.17	19.09.17
HU	505	13.09.17	21.09.17
IE	505	12.09.17	22.09.17
IT	502	13.09.17	21.09.17
LT	505	15.09.17	25.09.17
LU	505	12.09.17	23.09.17
LV	507	18.09.17	27.09.17
MT	515	23.10.17	06.11.17
NL	1,007	27.10.17	03.11.17
PL	1,008	26.10.17	02.11.17
PT	503	12.09.17	16.09.17
RO	1,045	31.10.17	06.11.17
SE	1,007	31.10.17	07.11.17
SI	1,025	25.10.17	02.11.17
SK	505	15.09.17	26.09.17
UK	1,004	12.10.17	18.10.17
IS	500	14.09.17	25.09.17
NO	505	15.09.17	20.09.17

A3.6 Interview duration

The following table (Table 14) presents the average duration of the interviews by country. In 10 countries, the survey questionnaire was combined with a behavioural experiment (see Annex 5 for more details). In these countries, the average duration presented in the table is the combined duration of the survey and experiment.

Table 14: Language(s) used in each country	
Survey countries	
AT	13 min
BE	12 min
BG	15 min
CY	14 min
CZ	16 min
DK	13 min
EE	15 min
FI	12 min
HR	15 min
HU	14 min
IE	12 min
IT	12 min
LT	15 min
LU	15 min
LV	13 min
MT	10 min
PT	12 min
SK	16 min
IS	13 min
NO	12 min
Countries with survey and behavioural experiment	
DE	29 min
EL	26 min
ES	23 min
FR	23 min
NL	24 min
PL	28 min
RO	25 min
SE	24 min
SI	29 min
UK	24 min

A3.7 Sample composition and structure of the questionnaire

The consumer survey focussed on consumers' experiences with electricity and gas suppliers. More specifically, the survey looked at:

- Consumers' evaluation of the bills they receive from their energy supplier (gas and/or electricity);
- Consumers' evaluation of pre-contractual information and offers provided by energy suppliers (gas and/or electricity); and
- Consumers' experiences with Price Comparison Tools (PCTs) for comparing electricity and gas offers.

Across the EU28, 61% of consumers surveyed replied that they used both electricity and mains gas in their residence,⁸ while 40% only used electricity. Among the former respondents, those who used the same supplier for both electricity and mains gas outnumbered those using different suppliers (35% vs. 26%).

Structure of the questionnaire and composition of the sample

In the first part of the questionnaire, respondents were asked a set of questions about their energy bills, focussing on bill characteristics, bill content and respondents' evaluation of these bills in terms of understandability and clarity. Respondents received questions about their electricity bill, gas bill or energy bill (depending on their household's situation):

- Respondents who used both electricity and mains gas in their residence, but had a different supplier for gas and electricity, were randomly assigned to one of two groups: group 1 received questions about their electricity bill and group 2 received questions about their gas bill.
- Respondents who used both electricity and mains gas in their residence, and used the same supplier for gas and electricity, were asked whether they received one combined bill for gas and electricity or not. Those who received one combined bill were asked questions about their "energy bill", while those who received separate bills were again randomly assigned to one of two groups (answering questions about their electricity bill vs. their gas bill).
- Respondents who only used electricity in their household, received questions about their electricity bills.

A small set of questions in the survey asked respondents to report on their experiences with exit fees. Respondents who only used electricity in their household, received questions about their electricity supplier, and consumers who used the same supplier for electricity and mains gas received questions about their "energy" supplier. Consumers who used a different supplier for mains gas and electricity were randomly assigned to one of two groups: group 1 responded to their experiences with exit fees charged by their electricity supplier, while group 2 replied to questions about their gas supplier.

⁸ The survey only focussed on mains gas (or piped gas) and excluded the use of gas in bottles or tanks.

Table 15: Number of completed interviews by response group (type of supplier and type of bill)

	Total	Type of supplier (response group)			Type of response group (response group)		
		Electricity supplier	Gas supplier	Energy supplier	Electricity bill	Gas bill	Energy bill
EU28	19,239	12,183	2,211	4,845	13,402	3,426	2,411
EU15	11,097	6,570	813	3,714	7,340	1,574	2,183
EU13	8,142	5,613	1,398	1,131	6,062	1,852	228
AT	505	337	24	144	373	71	61
BE	503	195	20	288	230	56	217
BG	506	469	21	16	474	27	5
CY	501	501	0	0	501	0	0
CZ	508	237	80	191	310	156	42
DE	1,017	664	102	251	744	186	87
DK	511	436	49	26	447	56	8
EE	507	437	45	25	446	48	13
EL	1,008	856	116	36	870	130	8
ES	1,006	526	118	362	640	231	135
FI	507	474	4	29	483	16	8
FR	1,007	707	92	208	768	152	87
HR	505	360	91	54	388	114	3
HU	505	266	171	68	292	206	7
IE	505	335	35	135	392	72	41
IT	502	181	97	224	274	188	40
LT	505	323	50	132	377	100	28
LU	505	321	49	135	380	107	18
LV	507	358	113	36	373	130	4
MT	515	515	0	0	515	0	0
NL	1,007	113	13	881	147	47	813
PL	1,008	577	296	135	632	352	24
PT	503	266	50	187	287	71	145
RO	1,045	521	335	189	611	424	10
SE	1,007	967	9	31	974	17	16
SI	1,025	817	83	125	860	126	39
SK	505	232	113	160	283	169	53
UK	1,004	192	35	777	331	174	499
IS	500	499	1	0	499	1	0
NO	505	458	7	40	465	20	20

Annex 4 Methodology for Main Task 3 (Data collection exercise on information provision in energy offers and bills, switching and exit fees, and energy PCTs)

The approach of the price collection exercise on information provision in energy offers and bills, switching and exit fees, and energy PCTs focused on the following activities:

- **Online data collection / the “price collection” exercise** – collecting information available on the websites of energy suppliers, energy regulators and PCTs; and
- **Offline data collection** - comparison of information provided in energy offers and energy bills in both offline and online documents.

Main task 3 was performed for the EU28 Member States, plus Iceland and Norway.

A4.1 Objectives

The objective of Main Task 3 was to compile a comprehensive, representative and comparable set of data across Member States on information provision on the websites of energy suppliers, on PCTs and by the national energy regulator as to understand current practices with respect to information disclosure in energy offers and bills. The exercise included:

- Collecting prices for green energy offers, brown energy offers, etc.;
- Comparing information in energy offers and bills;
- Collecting data on switching and exit fees;
- Reviewing the functioning of PCTs;
- Conducting research on additional aspects related to pre-contractual information, contracts, energy bills, presentation of information, etc. by consulting the websites of energy suppliers, energy regulators and PCTs; and
- Comparing information on offers and bills in both offline and online documents.

A4.2 Online data collection

For the online data collection, three stakeholder groups were defined:

1. **National energy suppliers (sample of max. six suppliers per country):** the energy suppliers selected in the sample included three to five major market players and one to three new market entrants, covering at least 60% of the market share;
2. **PCTs at the national level (sample of max. five PCTs per country);** and
3. **National energy regulators’ websites** and, if available, **the regulator’s PCT to compare energy offers.**

The data per stakeholder group was collected online via **a price collection matrix** (spreadsheet file) between February 2017 and June 2017. To obtain a comparable dataset for each country, native speaking researchers were requested to complete the matrix, by collecting available online information on the topics defined in the table on the next page.

Table 16: Topics for online data collection

Data collection from a sample of energy suppliers	Data collection from energy regulators (and the regulators' PCTs)	Data collection from a sample of PCTs
Pre-contractual information	Information available on the regulator's website	Type of data requested from the user to start using the PCT
Information on bills	List of tariffs displayed on the website of the energy regulator	List of tariffs displayed on the website of the PCT
Evaluation of the energy supplier's website (i.e. the perception of the researcher)	Additional information available on the regulator's PCT	Additional information available on the website of the PCT
	Evaluation of the regulator's PCT (i.e. the perception of the researcher)	Evaluation of the PCT's website (i.e. the perception of the researcher)

An extract of the price collection template used in this study is presented in the figure below (extract from the energy suppliers' data entry).

Figure 1: Extract from the price collection template

ENERGY SUPPLIERS		Energy supplier #1
NAME OF THE ENERGY SUPPLIER	Name	Verbund AG
PRE-CONTRACTUAL INFORMATION		Data entry Comment (if, "specify")
<p>What are the language options?</p> <p>How many tariffs for electricity are offered to households?</p> <p>How many tariffs for gas are offered to households?</p> <p>How many tariffs for electricity and gas are offered to households?</p> <p>What information is given about the renewable energy sources ?</p> <p>How many tariffs of 100% green energy sources are offered to households?</p> <p>How many tariffs for self-generation are offered to households?</p> <p>How many bundled tariffs are available for households?</p> <p>What type of bundles are they e.g. products for self-generation, maintenance services, unrelated services (telecoms)?</p> <p>Does the supplier offer personalised advice to their customers on how to optimize the tariffs according to their needs?</p> <p>are, what are they?</p> <p>Does the supplier have special tariffs for energy prosumers?</p> <p>Is there any information on complaint handling procedure?</p> <p><i>Please, take the cheapest green tariff.</i></p> <p>Insert tariff name</p> <p>Is the price displayed?</p> <p>If yes, please give the price:</p> <p>In which unit is the price?</p> <p>If fixed: for how many months?</p> <p>Is the price broken down on its elements?</p> <p>Which price elements are displayed?</p> <p>Are there any discounts mentioned?</p> <p><i>Please, take the cheapest offer for a consumption of ca 2,500-3,500 kWh</i></p> <p>Insert tariff name</p> <p>Which type of energy source?</p> <p>Is the price displayed?</p> <p>If yes, please give the price:</p> <p>In which unit is the price?</p> <p>If fixed: for how many months?</p> <p>Is the price broken down on its elements?</p> <p>Which price elements are displayed?</p> <p>Are there any discounts mentioned?</p> <p>Please, select how the discount is applied</p>	<p>One choice</p> <p>Number</p> <p>Number</p> <p>Number</p> <p>Specify</p> <p>Number</p> <p>Number</p> <p>Number</p> <p>Specify</p> <p>Yes/No</p> <p>Specify</p> <p>Yes/No</p> <p>Yes/No</p> <p>Name</p> <p>Yes/No</p> <p>Price</p> <p>One choice</p> <p>Months</p> <p>Yes/No</p> <p>Mult choice</p> <p>Yes/No</p> <p>Name</p> <p>One choice</p> <p>Yes/No</p> <p>Price</p> <p>One choice</p> <p>Months</p> <p>Yes/No</p> <p>Mult choice</p> <p>Yes/No</p> <p>One choice</p>	<p>Screenshot of the offer</p> <p>Screenshot of the offer</p>

A4.3 Offline data collection

The price collection exercise for information disclosure in energy bills was extended from electronic bills (e-bills – collected through online data collection) to paper bills (information collected through offline data collection).

The objectives of the paper energy bill collection were to analyse energy bills on different parameters and to verify whether the energy bills in paper format objectively communicate the tariff information being applied, adequately present the consumption data in the bills, etc. and show the real design used by energy suppliers.

Paper energy bills were collected and analysed between February and September 2017 through the following methods:

- Through the EU network of Deloitte employees, native speaking researchers for the countries in scope were asked to gather a sample of anonymised bills from energy suppliers in their country; and
- By sending an email request to energy suppliers asking for a sample of energy contracts and bills for household consumers.

Energy bills were collected for 20 out of 30 countries. For some countries, bills from different energy suppliers were collected and analysed. In total, 30 energy bills were analysed in terms of the frequency of consumption data (based on actual consumption) as presented in their bills

Annex 5 Methodology for Main Task 5 (Behavioural experiment)

This chapter summarises the behavioural experiment methodology. The behavioural experiment was conducted for 10,134 participants in conjunction with the consumer survey in 10 countries. These are France, Germany, Greece, the Netherlands, Poland, Romania, Slovenia, Spain, Sweden and the UK. The behavioural experiment lasted for 15 minutes, in addition to the time allocated for the consumer survey.

The online experiment was piloted in the UK for 105 participants. After the pilot, a number of minor changes were made to the experiment.

In addition, a laboratory experiment and focus group was carried out for 240 participants in Germany and Slovenia. The laboratory experiment groups included general groups as well as groups of vulnerable consumers e.g. consumers 65 years and over, economically inactive consumers younger than 65, lower education consumers etc. The focus groups were skewed towards vulnerable groups, since previous research has shown that vulnerable consumers have difficulty engaging in and understanding energy markets (see European Commission, 2016⁹).

A5.1 Components of the behavioural experiment

The experiment was designed to assess:

- 1) Objective choices which will look at actual behaviour change in the experiment;
- 2) Intentions to change behaviour in the future; and
- 3) Comparability.

The experiment was made up of the following stages, which are described in more detail below:

- 1) **Pre-contractual information and "Switch or Stay"**: this stage assessed the impact of clarity and comparability on consumers' ability to choose the optimal deal;
- 2) **"Willingness to Switch"**: this is a subjective choice stage which examines the impact of exit fees on consumers' willingness to switch to alternative deals;
- 3) **Billing stage**: this examines objective comprehension questions to test understanding and comparability, intentions to change behaviour in the future and perceptions about comparability;
- 4) **Fuel mix stage**: this stage assesses subjective perceptions of fuel mix presentation and examines intentions to switch to tariffs with more renewable energy in the future.

A5.2 "Switch or Stay" stage

The 'switch or stay' task tested the clarity and comparability of bills and pre-contractual material, as well as consumer switching behaviour.

Participants were given a mocked-up bill for a given energy consumption profile, and asked whether they would like to remain with their original deal or switch to an alternative deal which may be at a lower price. Below is the sequence of the switch or stay stage:

- 1) Participants were given information about their energy consumption profile, and instructed to choose the cheapest deal for their profile which could be the deal they were currently on or an alternative deal in the experiment.
- 2) Participants were shown a mocked-up bill, and asked whether they would like to compare alternative deals, or 'stay' with their original deal without switching. Each respondent was shown only one bill design in the switch or stay stage.

⁹ European Commission (2016), 2nd Retail Electricity Market Study

- 3) If participants chose to compare alternative deals they were shown a screenshot of a price comparison tool (PCT) with alternative deals.
- 4) Participants then decided whether they would like to 'stay' with their original deal, or 'switch' to one of the alternatives.

Before participants began the switch or stay stage, they were randomly allocated to one of the following treatments:

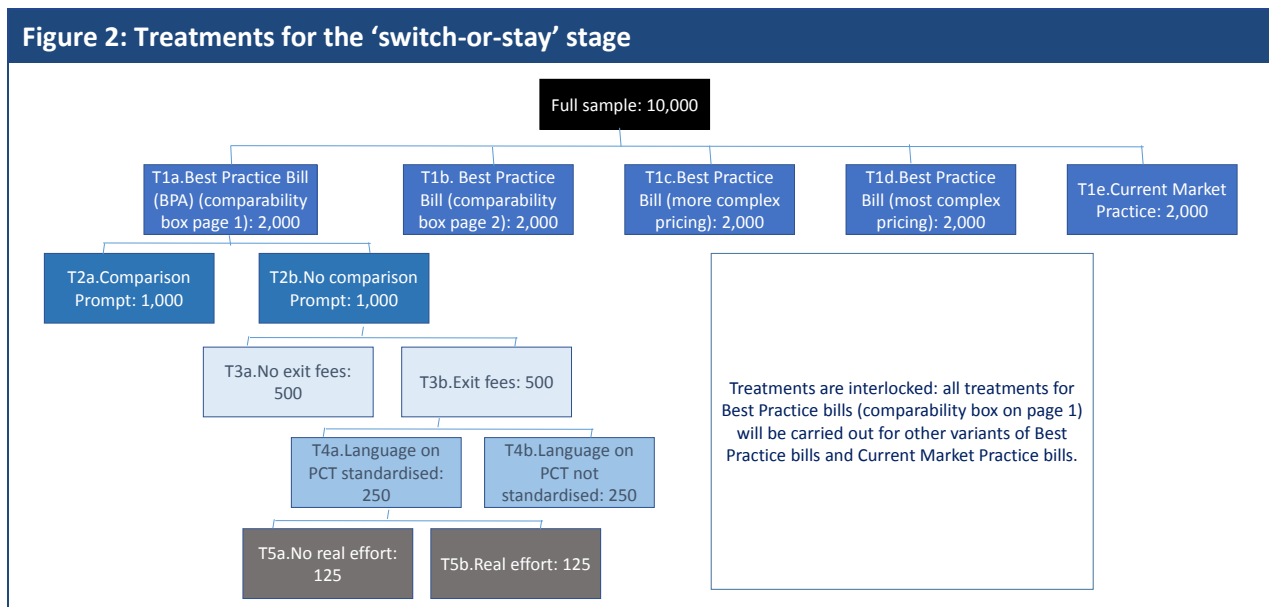
- Bill design: the behavioural experiment tested the following five bill design variants:
 - Best practice bill (BPA): with simple design, framing of key information, comparability box on page 1 with key information to compare and switch e.g. personal projection, energy consumption for last 12 months. The best practice bills are all based on examples of different bills found in the desk-based review, as well as consultation with EC DG JUST and the JRC.
 - 'Best Practice' bill version 2, which was the same as BPA but with comparability box on page 2
 - 'Best Practice' bill version 3 which was the same as BPA, but with salient information on total price and personal price projection, and the comparability box had a detailed price presentation that presents breakdown of all price components
 - 'Best Practice' bill version 4, which was the same as BPA, but with more complex price presentation and with total price and personal projection less salient in the comparability box. That is, with detailed price breakdown presented above the total price in the comparability box
 - 'Current Market' practice based on examples of bills found in the desk-based review: there is no comparability box i.e. information related to personal projection is NOT on first page; information is scattered through the bill; and complex price presentation. Please note that the 'Current Market' practice bill is based on a number of different bills, and is not meant to represent the bills of any particular supplier or Member State.
- Comparison prompt: participants were either shown a prompt to compare deals on page 1 of the bill, or not;
- Exit fees: participants were either allocated to deals where they had to pay exit fees to terminate their contract early, or exit fees were equal to zero;
- Standardisation of language on PCT: participants were either shown PCTs with standardised language/phrases compared to their bills, or PCTs with different language/phrases compared to their bills;
- Real Effort Task: participants were either shown alternative deals by clicking on a button (low real effort), or had to first answer a number of questions about their bill in order to be shown alternative deals (the 'high real effort' treatment). In addition, if participants were in the 'high real effort' treatment, they needed to answer all questions correctly in order to see alternative deals for their actual consumption profile, as opposed to deals for an estimated consumption profile. This design mirrors the real market where consumers can either provide an actual reading/usage for the last 12 months, or consumption is estimated using other characteristics (e.g. number of rooms or people living at the address).

In addition, participants were allocated to one of two randomisation groups: where it was optimal for participants to stay with their current deal, and one where it was optimal for participants to switch. This randomisation was used because in the 'real world', it will sometimes be optimal for consumers to remain with their current deals, and sometimes it is optimal for consumers to switch.

All treatments were fully interlocked i.e. the number of respondents who were shown bills with e.g. no exit fees was balanced across bill design treatments i.e. the number of respondents with no exit fees who were shown the 'best practice (BPA)' bill was the same as the number of respondents with no exit fees who were shown the 'current market practice' bill. In addition, as described earlier, the allocation was random. Therefore, on

average respondent characteristics would be expected to be balanced across treatments, and any differences in outcomes between treatment groups could reasonably be attributed to treatment effects.

The diagram below summarises the treatments and available sample split for the 'switch-or-stay' stage.



Treatments relating to bill design and comparison prompts

Desk-based review of billing and price comparison tool practices across Member States suggested that the **key to comparability and choice of cheapest deal** lies in how easily consumers can find their **energy consumption and personal projection**. This is because price comparison tools (e.g. *uswitch* in the UK) will use information regarding consumers' energy consumption in order to devise personal projections and therefore present deals to them. If consumers do not have their energy consumption at hand, it will be estimated. This means that if consumers do not know their energy consumption, they may not be directed to the cheapest deals for their particular consumption profile and thus may not make the optimal choice. In addition, it is often difficult for customers to find information on energy consumption for the same period needed to make a comparison with the price comparison website. For example, energy consumption for the past month may be displayed prominently on a consumer's bill, but price comparison websites may present deals to the consumer based on energy consumption for the past 12 months.

Therefore, for the purpose of the deal choice task, the bill design treatments varied on how easily consumers could find and understand their consumption profile, and their personal projection, and on how these differences impact comparability, switching and choice. Therefore, the following treatments were tested in the 'switch-or-stay' stage:

- Presence of comparability box with information relevant to comparison (in one place, or scattered across the bill);
- Location of comparability box (e.g. on first page or elsewhere);
- Design and content of comparability box:
 - Comparability box with a detailed price presentation that presents breakdown of all price components; and
 - More complex price presentation and with total price and personal projection less salient in the comparability box.


In addition, previous studies (e.g. European Commission's 2nd Consumer Market Study on the Functioning of Retail Electricity Markets for Consumers in the EU¹⁰) have found that inertia plays a substantial role in preventing consumers from searching for alternative deals and therefore choosing the cheapest deal.

Building on the findings of the 2nd retail electricity market study, the 'switch-or-stay' stage tested whether participants were likelier to search for alternative deals if they received switching prompts on their bill. These prompts were separate from the presence, location or content of a comparability box and were designed to test whether participants were likelier to compare deals if they receive a prompt to do so. For example, *households who compare the market save up to €X per year.*

¹⁰ Available at: http://ec.europa.eu/newsroom/just/item-detail.cfm?item_id=53331

For example, if participants were shown a bill with the comparability box and prompt to compare on page 1, the first page of the bill would look like the following:

Figure 3: Mock-up of page 1 of the bill: Comparability box and comparison prompt on page 1



Ecoelectricity

Customer name and address:
Ms SAMPLE EXAMPLE
18 Example Street, XY 11 23

Customer reference number:
11 23 58 13 21 34

Supply Number:
5589144342113

Bill date:
15 Oct 2016

Bill period:
13 Jul 2016 - 14 Oct 2016

Households like yours could **save up to €XX per year** by switching

Your electricity bill

You owe
€60.30

Due by
02 NOV

See next page for how your bill is calculated

Comparing your tariff with others	
Tariff name	Mytariff
Fixed or variable rate tariff?	Fixed
Payment method	Direct debit

Could you save money by switching?	
Your actual usage in the last 12 months	3000 kWh
Your 12 months personal projection ⓘ	€XX.XX
Amount you spent last year on electricity	€XX.XX

Information needed to switch	
Duration of your contract	2 years
End date of your contract	15 Dec
Exit fees (if you switch before the End date)*	€0.00
Advance notice for cancellation	15 Nov
Switching Code ⓘ	112358

*If you are thinking of switching suppliers, call us first at 0800 22 65 65

Getting in touch

To manage your account online visit (<http://www.ecolectricity.eu/your-account>) or call (0800 22 65 65 , open 24 hours a day)

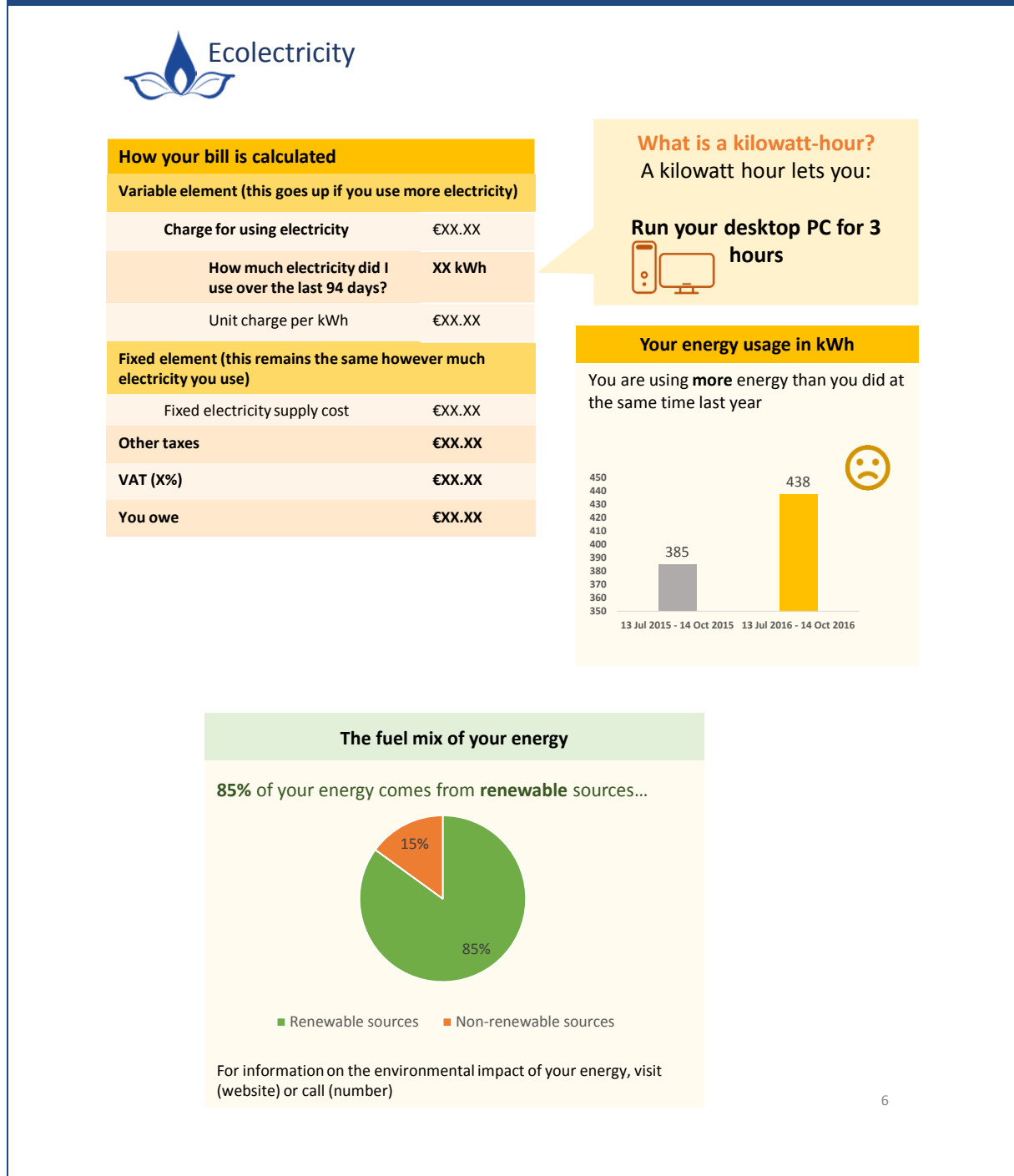
To submit a meter reading visit (<http://www.ecolectricity.eu/meter-reading>) or call (0800 22 65 65)

For more help visit (<http://www.ecolectricity.eu/help>) or call (0800 22 65 65)

To find out about your rights and settlement in the event of a dispute visit (<http://www.ecolectricity.eu/dispute>)


To make a complaint call (0800 22 65 65)

Figure 4: Mock-up of page 2 of the bill (comparability box and comparison prompt are shown on page 1 of this bill)



However, if the comparability box was not on page 1, and there was no comparison prompt, page 1 of the bill would look like this:

Figure 5: Mock-up of page 1 of the bill: No comparison prompt (and comparability box on page 2)



Customer name and address:
 Ms XXXX XXXXXXXX
 18 XXX XXXXXXXXXX,
 XXXXXXXXXX,
 POSTCODE

Customer reference number:
 XXXXXXXXXXXXXXXX

Supply Number:
 XXXXXXXXXXXX

Bill date:
XX MMM 2016

Bill period:
XX MMM 2016 – XX MMM 2016

Comparing your tariff with others

Tariff name	XXXX
Fixed or variable rate tariff?	Fixed
Payment method	XXXX

Your electricity bill

You owe

€60.30

Due by

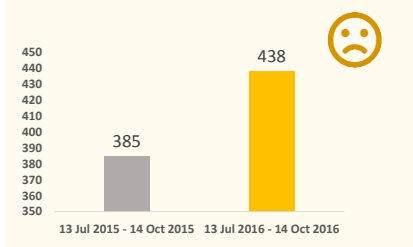
02 NOV

See next page for how your bill is calculated

Could you save money by switching? See next page

Your energy usage in kWh

You are using **more** energy than you did at the same time last year



Period	Usage (kWh)
13 Jul 2015 - 14 Oct 2015	385
13 Jul 2016 - 14 Oct 2016	438

Getting in touch

To manage your account online visit (website) or call (number, open 24 hours a day)


To submit a meter reading visit (website) or call ()

For more help visit (website) or call ()

For more information on your rights in the event of a dispute visit (website)

To make a complaint call (number)


Figure 6: Mock-up of page 2 of the bill: Comparability box on page 2 (no comparison prompt on page 1)



How your bill is calculated	
Variable element (this goes up if you use more electricity)	
Charge for using electricity	€XX.XX
How much electricity did I use over the last 94 days?	XX kWh
Unit charge per kWh	€XX.XX
Fixed element (this remains the same however much electricity you use)	
Fixed electricity supply cost	€XX.XX
Other taxes	€XX.XX
VAT (X%)	€XX.XX
You owe	€XX.XX

What is a kilowatt-hour?
A kilowatt hour lets you:

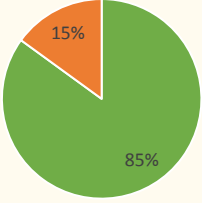
Run your desktop PC for 3 hours



Could you save money by switching?	
Your actual usage in the last 12 months	XXX.XX kWh
Your 12 months personal projection ⓘ	€XX.XX
Information needed to switch	
End date of your contract	DD MMM
Exit fees (if you switch before the End date)*	€0.00
Advance notice for cancellation	DD MMM
Switching Code ⓘ	XXXXX
*If you are thinking of switching suppliers, call us first at _____	

The fuel mix of your energy

85% of your energy comes from **renewable** sources...




■ Renewable sources
 ■ Non-renewable sources

For information on the environmental impact of your energy, visit (website) or call (number)

In the third 'best practice' treatment, with more detailed price presentation in the comparability box, page 2 of the bill was identical to the second page for the first 'best practice' bill (see Figure 4). Page 1 would look like the following:

Figure 7: Mock-up of page 1 of the bill: Comparability box on page 1, no comparison prompt, more detailed price presentation



Ecolectricity

Customer name and address:
 Ms XXXX XXXXXXXX
 18 XXX XXXXXXXXXX,
 XXXXXXXXX,
 POSTCODE

Customer reference number:
 XXXXXXXXXXXXXXXX

Supply Number:
 XXXXXXXXXXXX

Bill date:
XX MMM 2016

Bill period:
XX MMM 2016 – XX MMM 2016

Comparing your tariff with others

Tariff name	XXXX
Fixed or variable rate tariff?	Fixed
Payment method	XXXX

Your electricity bill

You owe

€60.30

Due by

02 NOV

See next page for how your bill is calculated

Could you save money by switching?

Your actual usage in the last 12 months	XXX.XX kWh
Your 12 months personal projection ⓘ	€XX.XX
Charge for using electricity	€XX.XX
Fixed Electricity Supply Cost	€XX.XX
Other taxes	€XX.XX
VAT (X%)	€XX.XX

Information needed to switch

End date of your contract	DD MMM
Exit fees (if you switch before the End date)*	€0.00
Advance notice for cancellation	DD MMM
Switching Code ⓘ	XXXXX


*If you are thinking of switching suppliers, call us first at _____

Getting in touch

To manage your account online visit (website) or call (number, open 24 hours a day)
 To submit a meter reading visit (website) or call ()
 For more help visit (website) or call ()
 For more information on your rights in the event of a dispute visit (website)
 To make a complaint call (number)

In the fourth best practice bill variant, with the most complex price presentation treatment, page 1 of the bill would look like this:

Figure 8: Mock-up of page 1 of the bill: Comparability box on page 1, no comparison prompt, most detailed price presentation



Ecolectricity

Customer name and address:
 Ms XXXX XXXXXXXX
 18 XXX XXXXXXXXXX,
 XXXXXXXXX,
 POSTCODE

Customer reference number:
 XXXXXXXXXXXXXXXX

Supply Number:
 XXXXXXXXXXXX

Bill date:
XX MMM 2016

Bill period:
XX MMM 2016 – XX MMM 2016

Comparing your tariff with others

Tariff name	XXXX
Fixed or variable rate tariff?	Fixed
Payment method	XXXX

Your electricity bill

You owe

€60.30

Due by

02 NOV

See next page for how your bill is calculated

Could you save money by switching?

Your actual usage in the last 12 months	XXX.XX kWh
Charge for using electricity	€XX.XX
Fixed Electricity Supply Cost	€XX.XX
Other taxes	€XX.XX
VAT (X%)	€XX.XX
Your 12 months personal projection ?	€XX.XX

Information needed to switch

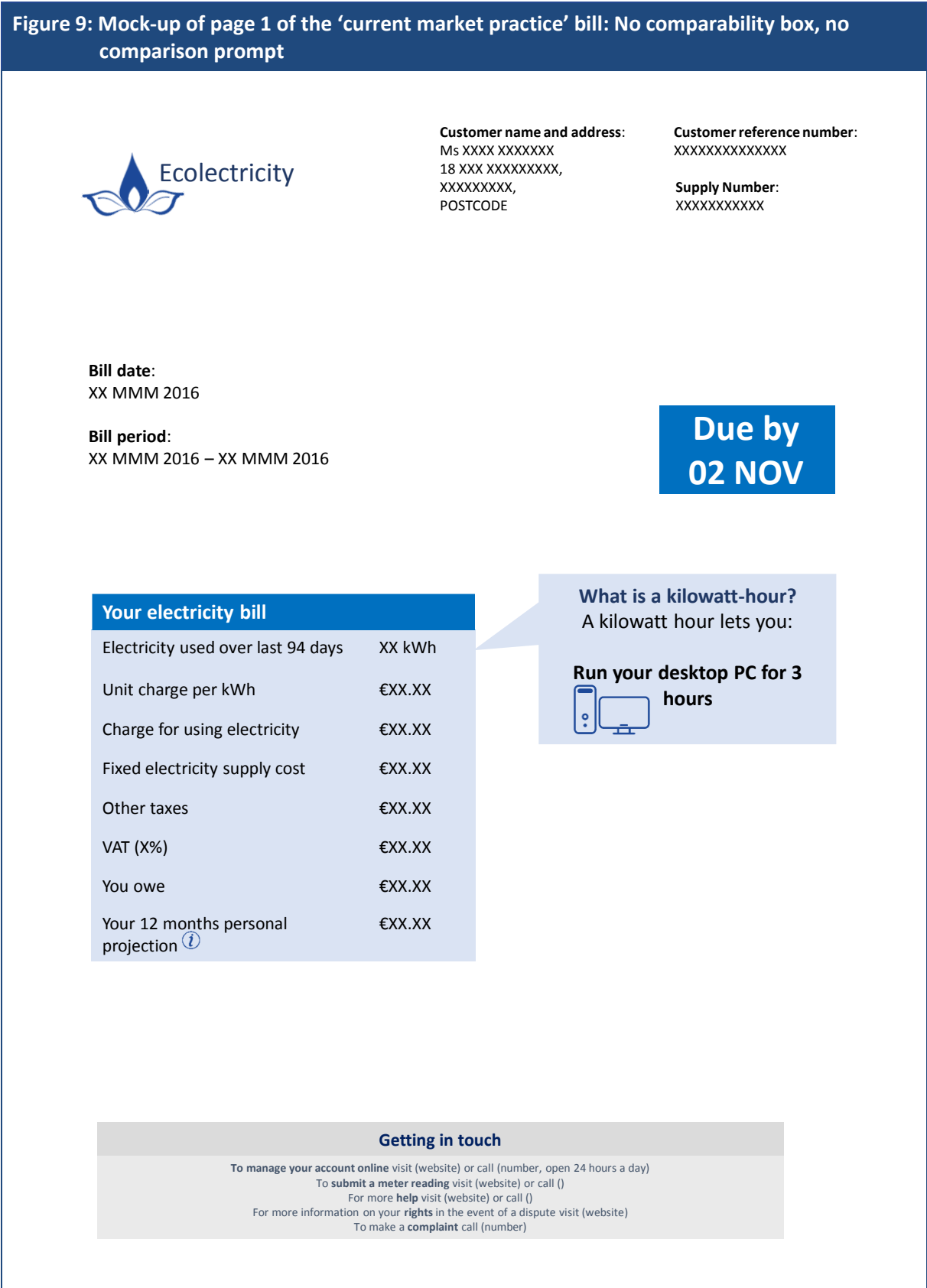
End date of your contract	DD MMM
Exit fees (if you switch before the End date)*	€0.00
Advance notice for cancellation	DD MMM
Switching Code ?	XXXXX

*If you are thinking of switching suppliers, call us first at _____

Getting in touch

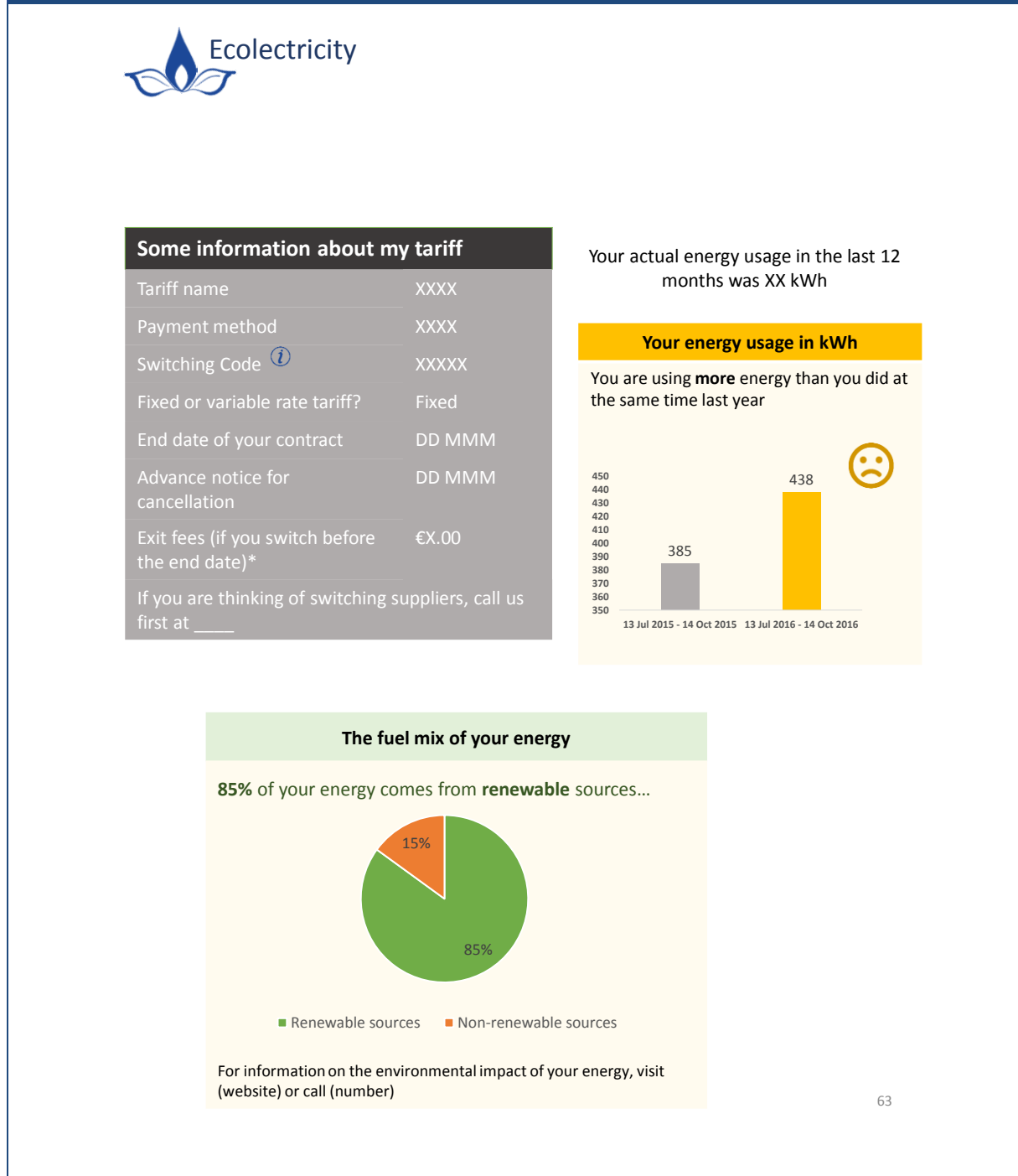
To manage your account online visit (website) or call (number, open 24 hours a day)
 To submit a meter reading visit (website) or call ()
 For more help visit (website) or call ()
 For more information on your rights in the event of a dispute visit (website)
 To make a complaint call (number)

The 'current market practice' bill was based on examples of current practice taken from desk research carried out by Deloitte. This bill had scattered information and no comparability box. Page 1 of the bill looked like the following:



Page 2 of the same bill would look like the following:

Figure 10: Mock-up of page 2 of 'current market practice' bill: No comparability box, no comparison prompt



Exit fees

Participants may also be dissuaded from comparing alternative deals if they are on a fixed-term contract with early termination fees. In the 'switch-or-stay' stage, half of the participants were shown a bill for a contract which had exit fees, and half were shown a bill for a contract with zero exit fees.

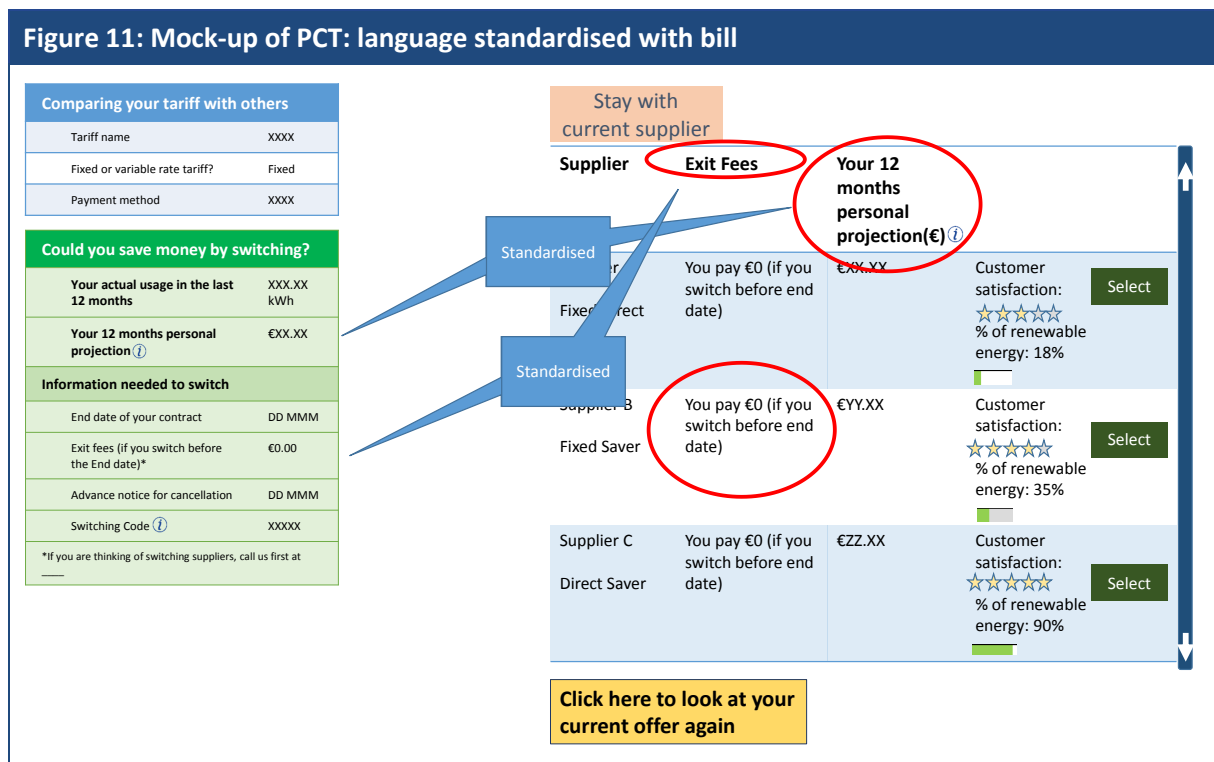
Treatments relating to Price Comparison Tools (PCTs)

PCTs vary along a number of dimensions, such as terminology used, amount of information provided etc. One feature is of particular relevance in the context of comparability between bills and PCTs: whether language on the price comparison tool is standardised relative to the bill.¹¹

Therefore, the following treatments were implemented for PCTs:

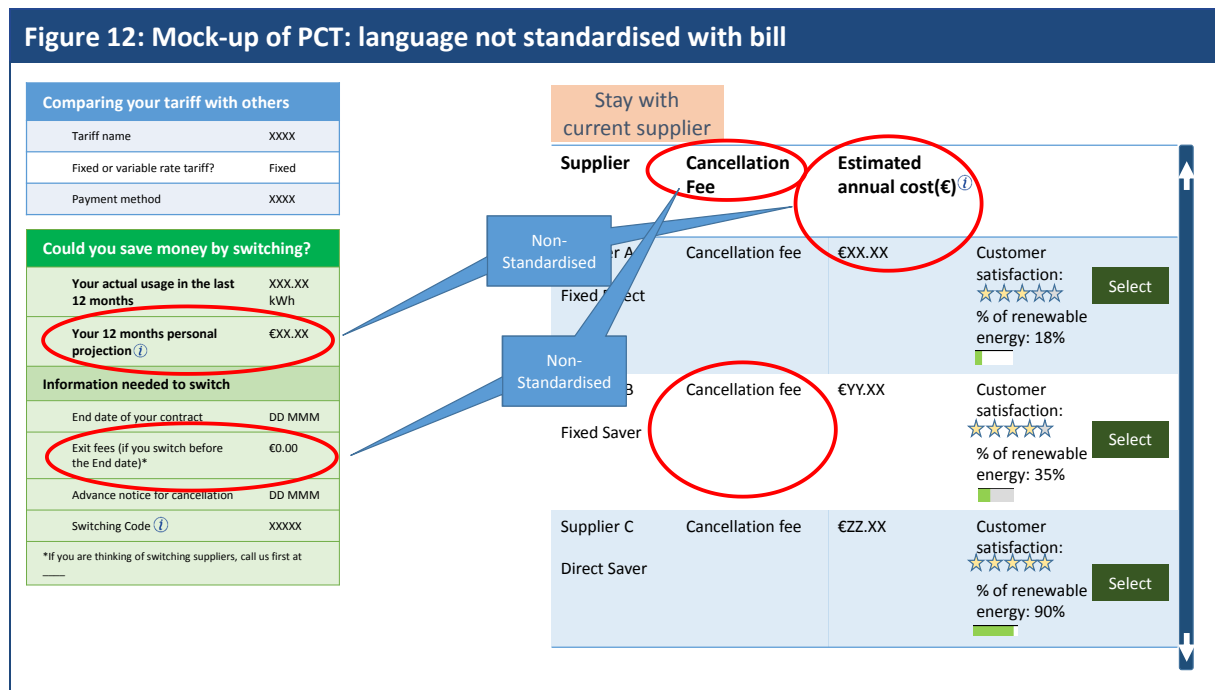
- 1) Where language between the bill and the PCT is standardised
- 2) Where language between the bill and the PCT is not standardised

For example, if language on the PCT was standardised with the bills, the PCT looked like the following:



¹¹ The study on the functioning of online price comparison tools has already examined ranking of offers so ranking may not be of much interest for the current study.

If language was not standardised with the bills, the PCT may look like the following:

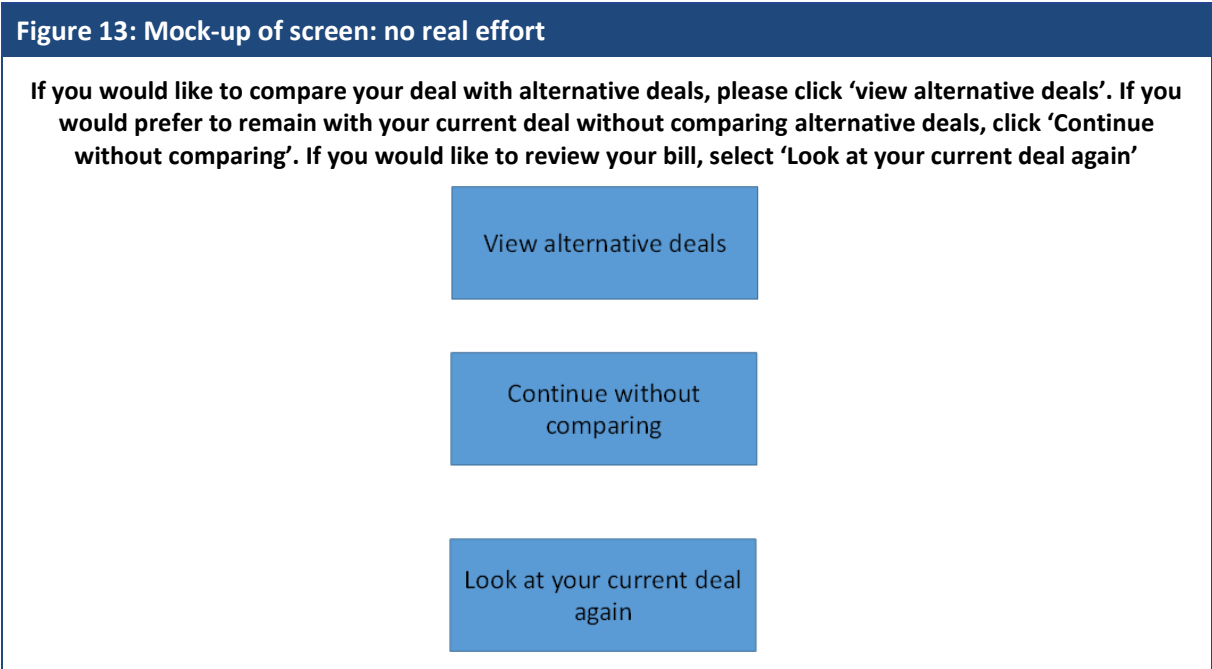


Treatments relating to Real Effort

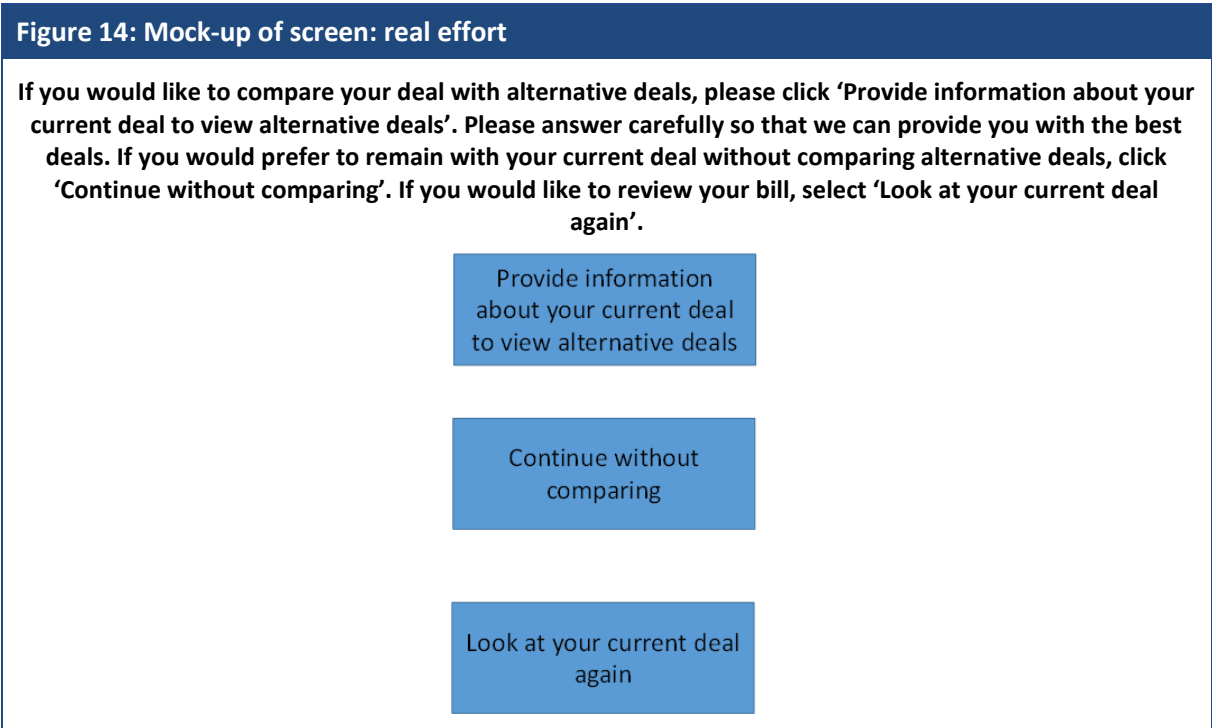
The following treatments were carried out, in order to simulate the real effort that consumers need to undertake in order to compare deals in the energy market. These were:

- In one case, consumers only needed to click a button to see alternative deals – that is, effort would be lower. This simulates the presumed lower search costs of a QR code app linked to a price comparison tool.
- In the other case, search would involve a real effort task. Participants had to find their energy consumption in the bill, their personal projection over the next 12 months, whether they were on a fixed or variable rate tariff, and their payment method and answer correctly in order to reveal alternative deals. This case simulates the present situation where consumers need to find and enter the relevant information in their bills in order to compare deals.

In the no real effort treatment, the screen looked like this:



In the real effort treatment, the screen looked like the following:



Follow-up questions – switch or stay stage

A set of follow-up questions were asked to participants in order to explore their reasons for making the choices that they did. This was done in order to assess to what extent participants' decisions to compare deals or switch are influenced by other factors such as real effort, exit fees, or features of a deal apart from monetary costs, such as customer satisfaction or percentage of renewable energy in fuel mix.

A5.3 Willingness to switch stage

The 'willingness to switch' stage tests the impact of exit fees on consumers' likelihood to switch supplier. Participants were told that they were on a fixed duration contract, and were informed of the amount they currently pay. They were also informed that there was an alternative deal on the market, to which they could switch but had to pay a fee upfront to leave their contract early. This stage assesses the amount that participants would be willing to pay to switch to the alternative deal.

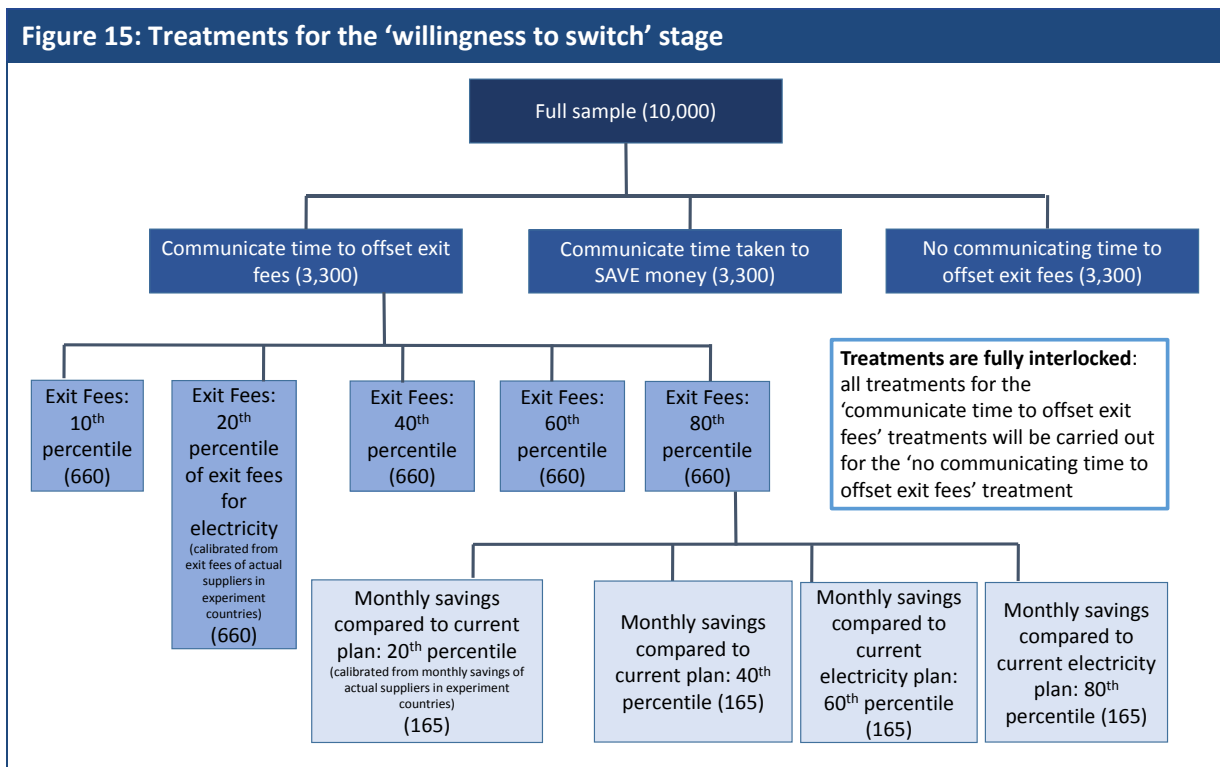
The approach used was Contingent Valuation, specifically Double Bounded Dichotomous Choice. Participants are asked whether they would be willing to pay €x to switch to the alternative deal. If participants say yes, then they are asked if they would pay €x+t to switch to the alternative deal. If participants refuse the initial deal, they are asked if they would pay €x-g to switch to the alternative (i.e. a lower exit fee and therefore higher savings). This technique elicits ranges of fees that participants would be willing to pay to switch.

The 'willingness to switch' stage included the following treatment groups. Participants were randomly allocated to one of the following groups:

- Whether and how participants were informed about their savings from switching:
 - *No communication;*
 - Whether participants were informed when the savings from switching would offset the upfront cost of the exit fee.
 - *Whether participants were more willing to switch if they were informed when they would start saving as a result of switching.*
- Levels of monthly savings for alternative deals compared to current deals.
- Levels of initial 'deals' of exit fees.¹²

¹² In the laboratory experiment, participants are allocated randomly and equally to one of the following groups: Communication group = No communication or Whether participants are more willing to switch if they are informed when they will start saving as a result of switching; Exit Fees = Minimum and Maximum exit fees. All participants are shown offers with monthly savings relative to current deal in the 40th percentile.

The following figure illustrates the treatments and sample split for the willingness to switch stage.



A5.4 Billing stage

The billing stage tested the impact of bill designs on participants' objective comprehension, intention to change, and subjective preferences regarding layout and framing of information. Participants were shown a bill and asked:

- A series of questions assessing their objective comprehension of bill elements such as their energy consumption, total charge, due date for bill etc.
- Questions assessing their subjective perception of the bill e.g. ease of finding information related to charges, switching, or energy consumption.
- Questions assessing their intention to change behaviour e.g. managing energy consumption.


Participants were randomly allocated to one of the following treatment groups:

- Bill design:
 - 'Best Practice' bill (BP A), with simple design, framing of key information, comparability box on page 1 with key information to compare and switch e.g. personal projection, energy consumption for last 12 months
 - 'Current Market' practice based on examples of bills found in the desk-based review: there is no comparability box i.e. information related to personal projection is NOT on first page; and complex price presentation;
- Energy consumption information location: placed either on page 1 or on page 2;
- Energy consumption frequency: whether energy consumption information is shown quarterly, or monthly;
- Energy consumption benchmark: whether the consumer's energy consumption is shown relative to the consumer's consumption at the same time last year, or relative to the average household;

- Price breakdown infographics: whether participants are provided with infographics of price breakdown, or not;
- Saliency of fixed and variable elements of price: whether price breakdown is provided in simple terms, saliently marking the fixed vs variable elements of price; or in complex terms without indicating which elements of price are fixed and which elements are variable.

For example, if participants were shown energy consumption information on page 1, represented quarterly relative to energy consumption at the same time last year, page 1 of the bill would look like the following:

Figure 16: Mock-up of page 1 of the bill: energy consumption information on page 1, represented quarterly, comparison with energy consumption at the same time last year



Customer name and address:
Ms XXXX XXXXXXXX
18 XXX XXXXXXXXXX,
XXXXXXXXXX,
POSTCODE

Bill date:
XX MMM 2016

Bill period:
XX MMM 2016 – XX MMM 2016

Comparing your tariff with others	
Tariff name	XXXX
Fixed or variable rate tariff?	Fixed
Payment method	XXXX

Could you save money by switching?	
Your actual usage in the last 12 months	XXX.XX kWh
Your 12 months personal projection	€XX.XX

Information needed to switch	
End date of your contract	DD MMM
Exit fees (if you switch before the End date)*	€0.00
Advance notice for cancellation	DD MMM
Switching Code	XXXXX

*If you are thinking of switching suppliers, call us first at _____

Your electricity bill

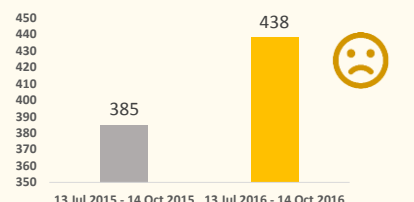
You owe
€60.30

Due by
02 NOV

See next page for how your bill is calculated

Your energy usage in kWh

You are using **more** energy than you did at the same time last year




Period	Usage (kWh)
13 Jul 2015 - 14 Oct 2015	385
13 Jul 2016 - 14 Oct 2016	438

Getting in touch

To manage your account online visit (website) or call (number, open 24 hours a day)
 To submit a meter reading visit (website) or call ()
 For more help visit (website) or call ()
 For more information on your rights in the event of a dispute visit (website)
 To make a complaint call (number)

However, if energy consumption information was presented on page 2 of a current market practice bill, represented monthly relative to an average household, page 2 would look like the following:

Figure 17: Mock-up of page 2 of the bill: energy consumption information on page 1, represented monthly, comparison with energy consumption of an average household



Ecolectricity

Some information about my tariff

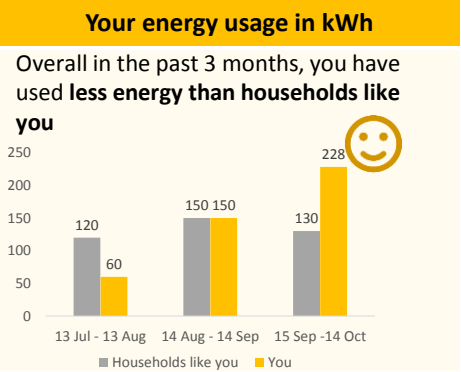
Tariff name	XXXX
Payment method	XXXX
Switching Code i	XXXXX
Fixed or variable rate tariff?	Fixed
End date of your contract	DD MMM
Advance notice for cancellation	DD MMM
Exit fees (if you switch before the end date)*	€X.00

If you are thinking of switching suppliers, call us first at _____

Your actual energy usage in the last 12 months was XX kWh

Your energy usage in kWh

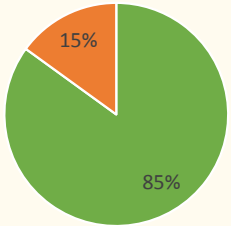
Overall in the past 3 months, you have used **less energy than households like you** 😊



Period	Households like you	You
13 Jul - 13 Aug	120	60
14 Aug - 14 Sep	150	150
15 Sep - 14 Oct	130	228

The fuel mix of your energy

85% of your energy comes from **renewable** sources...




■ Renewable sources
 ■ Non-renewable sources

For information on the environmental impact of your energy, visit (website) or call (number)

241

If energy consumption information was presented in the most simple manner, energy consumption information was presented splitting up variable and fixed elements, with a reminder of the energy consumption over the billing period, as below:

Figure 18: Mock-up of page 2 of the bill: simplified price presentation




Ecolectricity

How your bill is calculated	
Variable element (this goes up if you use more electricity)	
Charge for using electricity	€XX.XX
How much electricity did I use over the last 94 days?	XX kWh
Unit charge per kWh	€XX.XX
Fixed element (this remains the same however much electricity you use)	
Fixed electricity supply cost	€XX.XX
Other taxes	€XX.XX
VAT (X%)	€XX.XX
You owe	€XX.XX

What is a kilowatt-hour?

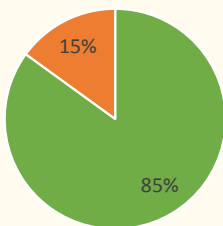
A kilowatt hour lets you:

Run your desktop PC for 3 hours



The fuel mix of your energy

85% of your energy comes from **renewable** sources...

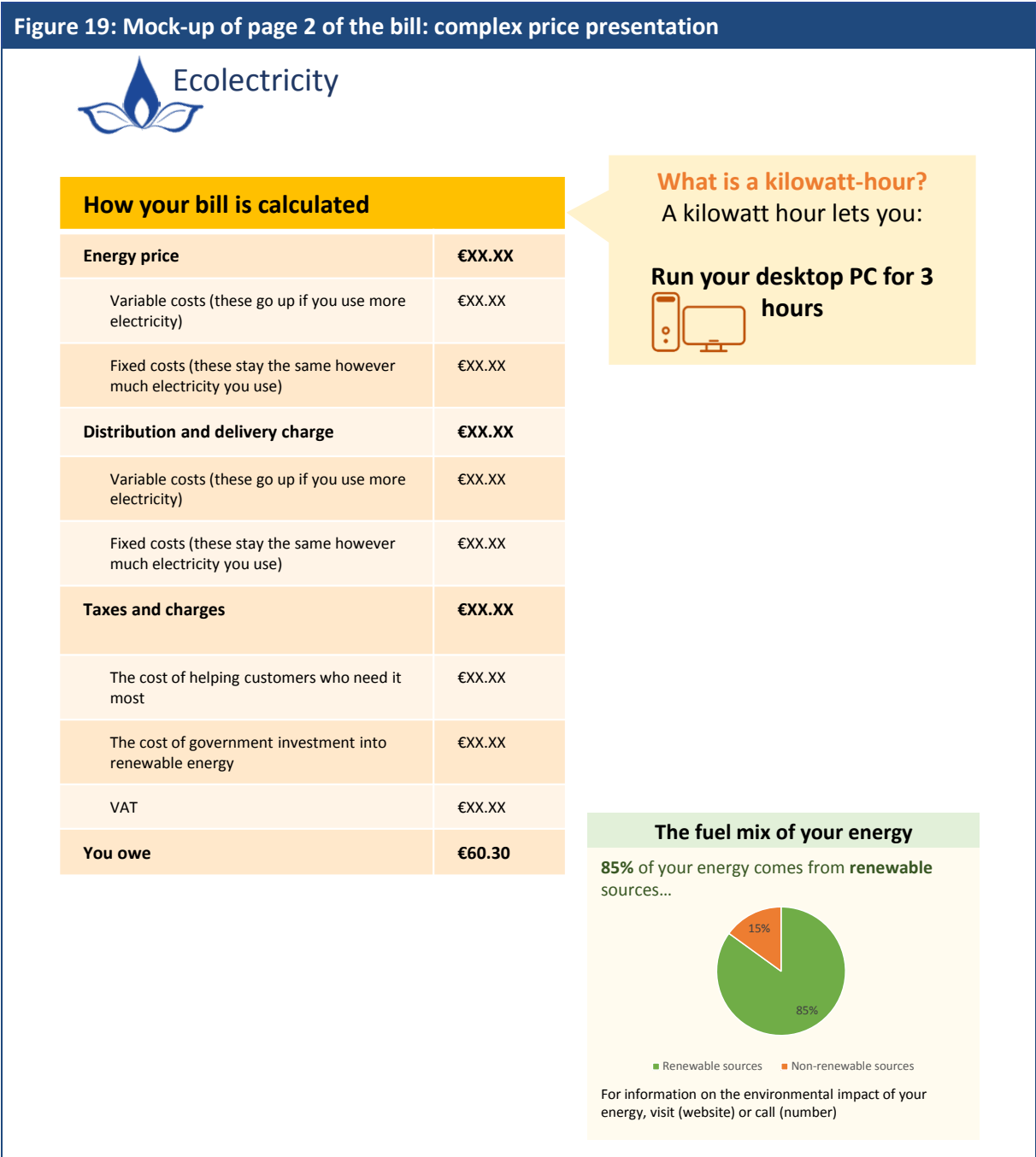


■ Renewable sources
■ Non-renewable sources

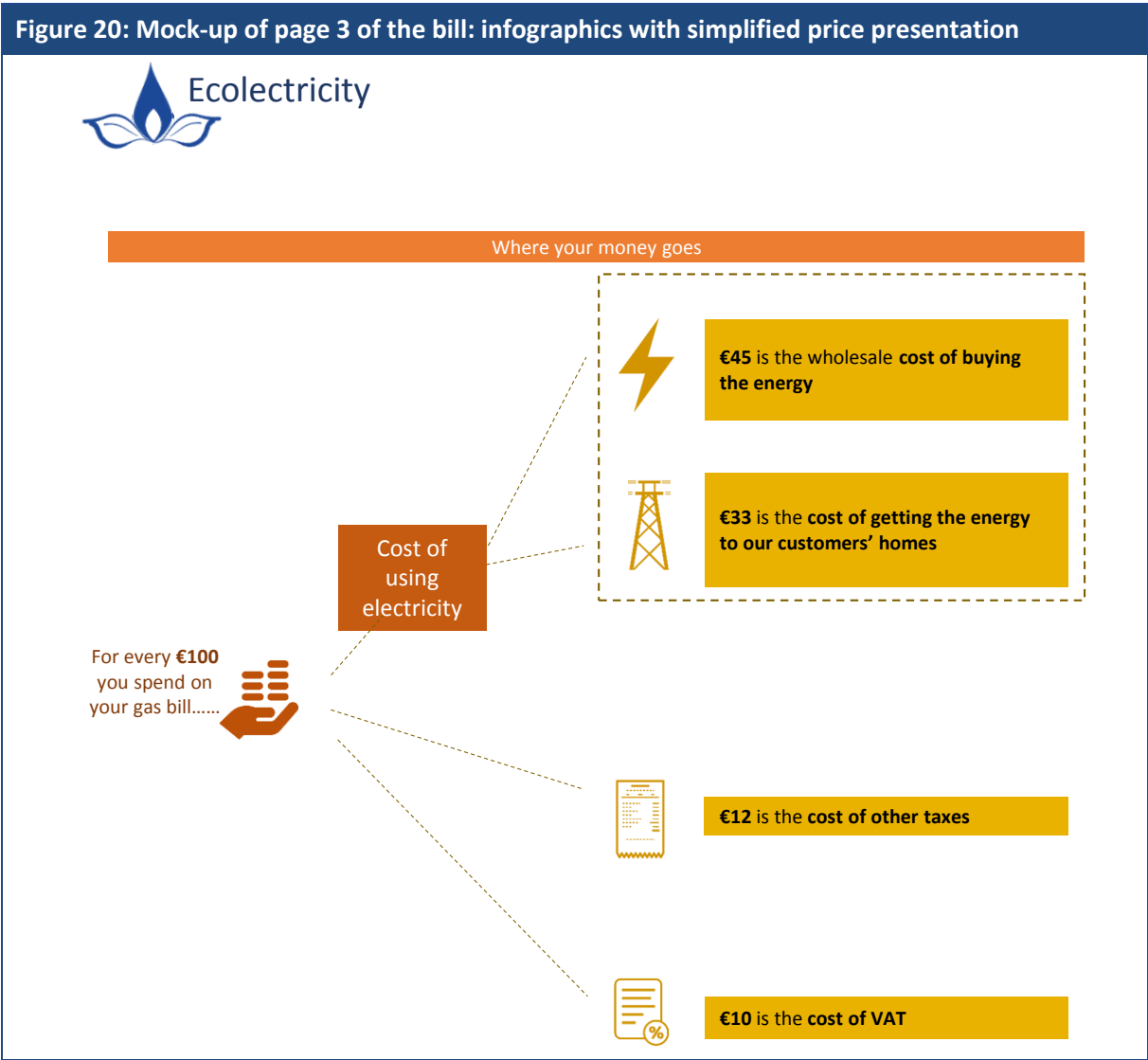
For information on the environmental impact of your energy, visit (website) or call (number)

6

However, if price presentation was more complex, price presentation would be shown as the following, without an explicit reminder of the energy consumption over the billing period:



If participants were shown a bill with infographics, with the most simplified price presentation, their bill had a third page with a graphic like the following:



If the participant was shown a bill with infographics for the more complex price presentation, the participants would be shown a bill with an additional (third) page with a graphic like the following:

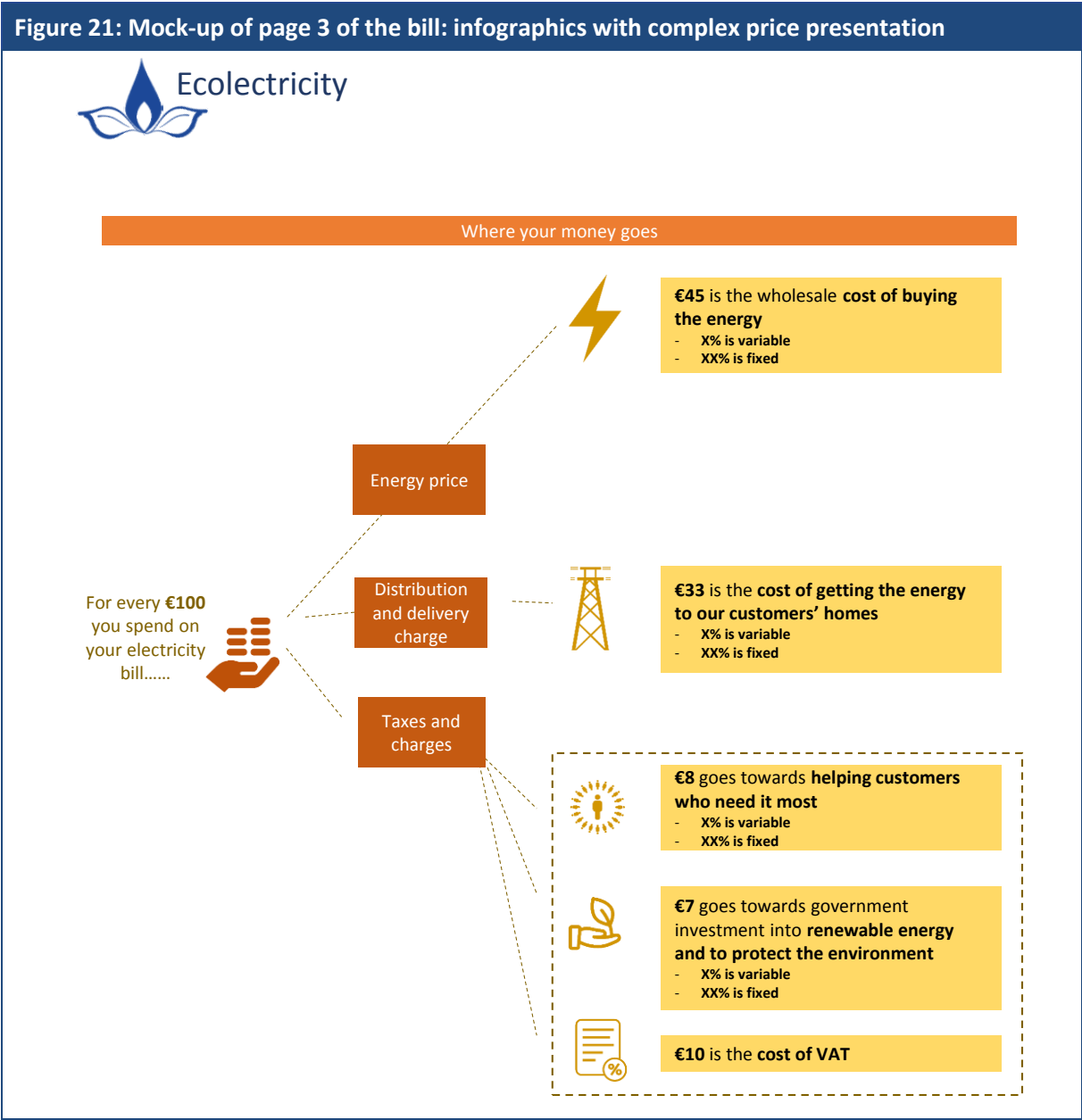
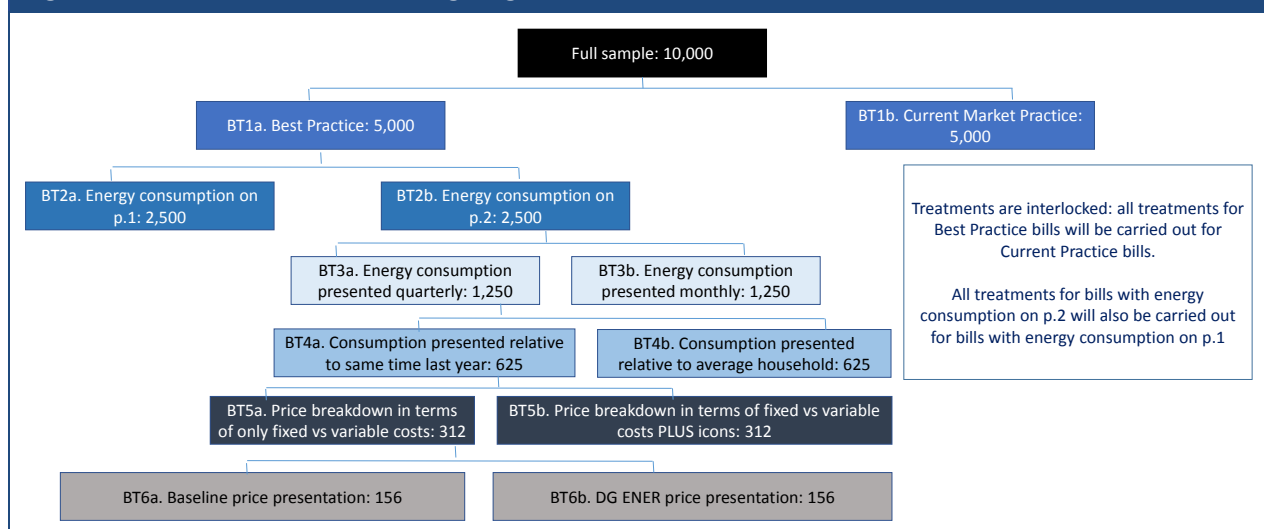


Figure 22: Treatments for the billing stage



The billing stage of the behavioural experiment tested consumers' objective comprehension of bill elements. The following treatments are of particular relevance for objective comprehension:

- BT1a. Best Practice bill;
- BT1b. Current market practice bill;
- BT2a. Energy consumption on page 1 of bill;
- BT2b. Energy consumption on page 2 of bill

The best practice bills and current market practice bills were designed with a number of key differences:

- Presence/absence of comparability box: the best practice bill had a 'comparability box' on page 1, which presented together a number of pieces of information relevant to comparing the consumer's tariff, and switching. This information was present but scattered in the Current market practice bill.
- Layout and placement of information on bills: The best practice bill also presented relevant information in a simple and striking manner. For example, information on what the consumer owes, and by when she owes it, were prominently marked on page 1. In the current market practice bill, this information was scattered on page 1 and not as clearly marked.
- The billing stage also tests consumers' comprehension of their energy usage over a period. 50% of the time, this information was presented on the first page of the bill; and 50% of the time it was presented on the second page of the bill.

The following table summarises the questions and the rationale for including them. These questions had correct answers which the respondent had to select from multiple choice set. The correct answers were calibrated along with the bills, using desk research from Deloitte and London Economics.

Table 17: Objective comprehension questions for the billing stage of the behavioural experiment		
Question	Bill design element tested	Hypothesis
What is the name of your tariff?	Presence/absence of comparability box: Information included in the comparability box for Best practice bills (page 1); but on page 2 and scattered for 'Current market practice' bills	It is expected that a higher proportion of participants who are shown the 'Best practice' bill will answer this question correctly, compared to participants who are shown the 'Current market practice' bill
What is the end date of your contract?		
What do you need to pay to leave your contract early?		
What is your switching code?		
What is the advance notice for cancellation?		
What is the payment method?		
What was your energy usage for the past 12 months?		
What is your 12 months personal projection?	Layout and placement of information on bills: Information indicated prominently in comparability box on page 1 of Best Practice bills; but less saliently on page 1, or scattered, on 'Current market practice' bills	
How much do you owe?		
Do you have a fixed rate or variable rate tariff?		
What was your energy usage for the period July – October of last year?	Layout and placement of information on bills: This information is provided on page 1 of 50% of the bills, and on page 2 of 50% of the bills	It is expected that a higher proportion of participants shown the bills 'energy consumption on page 1' will answer this question correctly, compared to participants who are shown the bills where energy consumption is on page 2. We expect that the proportion of participants answering this question will also be higher for participants shown the bills where energy consumption is shown quarterly, compared to participants who are shown bills where energy consumption is shown monthly.

Subjective preference questions

The subjective preference questions in the billing stage explored participants' subjective assessments of the bills. Participants' answers to these subjective questions were crossed in the analysis with their answers to the objective questions. This crossing is used to assess if participants subjectively consider a bill to be easy to understand but objectively they cannot find and understand the information.

A5.5 Fuel mix stage

The fuel mix stage tests the impact of visualisation of fuel mix on participants' perception of the fuel mix of their electricity, and intention to change behaviour regarding choice of electricity with renewable energy.

Participants were shown a bill, and then asked a series of questions assessing:

- subjective perception of the bill e.g. ease of finding information related to fuel mix.
- intention to change behaviour e.g. finding out fuel mix of their energy, or switching to a tariff with more renewable energy in the fuel mix.

The fuel mix stage retained the best practice bill from the billing stage, and varied the following treatments:

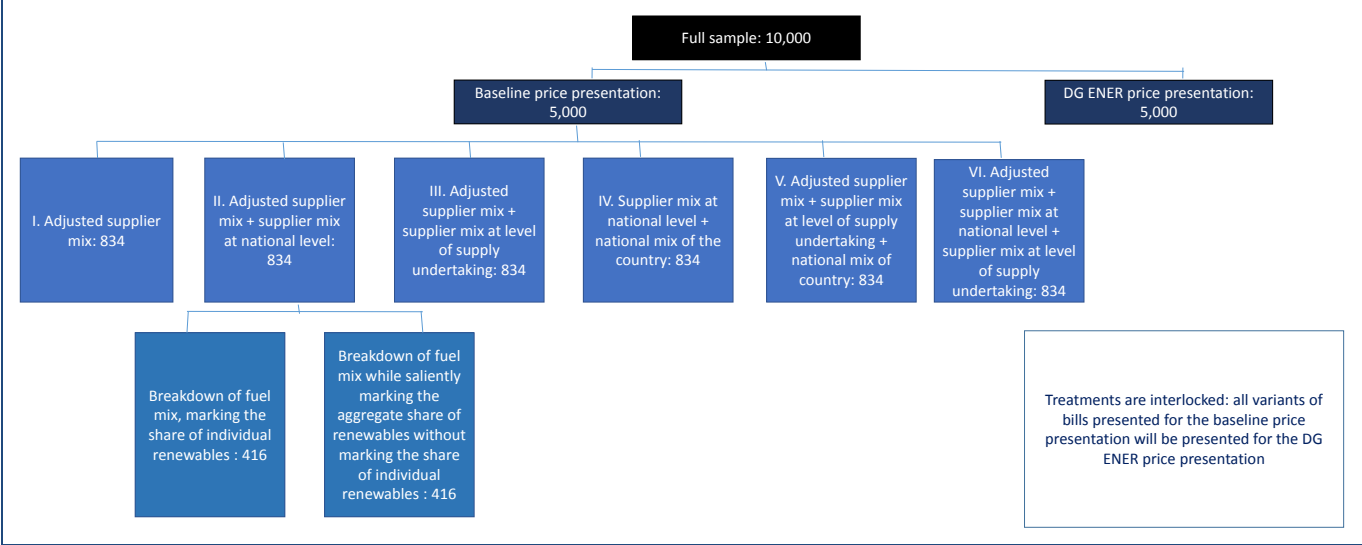
- Comparison group: the following comparisons were tested (treatments in italics were tested in the laboratory experiment)¹³:
 - I: adjusted supplier mix (that is, the supplier's fuel mix without 100% renewable energy electricity);
 - II: adjusted supplier mix + supplier mix at national level;
 - III: adjusted supplier mix + supplier mix at level of supply undertaking (that is, the supplier mix in the countries in which the supplier operates);
 - IV: supplier mix at national level + national mix of country;
 - V: adjusted supplier mix + supplier mix at level of supply undertaking + national mix of country;
 - VI: adjusted supplier mix + supplier mix at national level + supplier mix at level of supply undertaking
- Salience of share of renewables:
 - a = Breakdown of fuel mix, marking the share of individual renewables;
 - b = Breakdown of fuel mix while saliently marking the aggregate share of renewables without marking the share of individual renewables

We also tested whether price breakdown was provided in simple terms, saliently marking the fixed vs variable elements of price; or in complex terms without indicating which elements of price are fixed and which elements are variable.

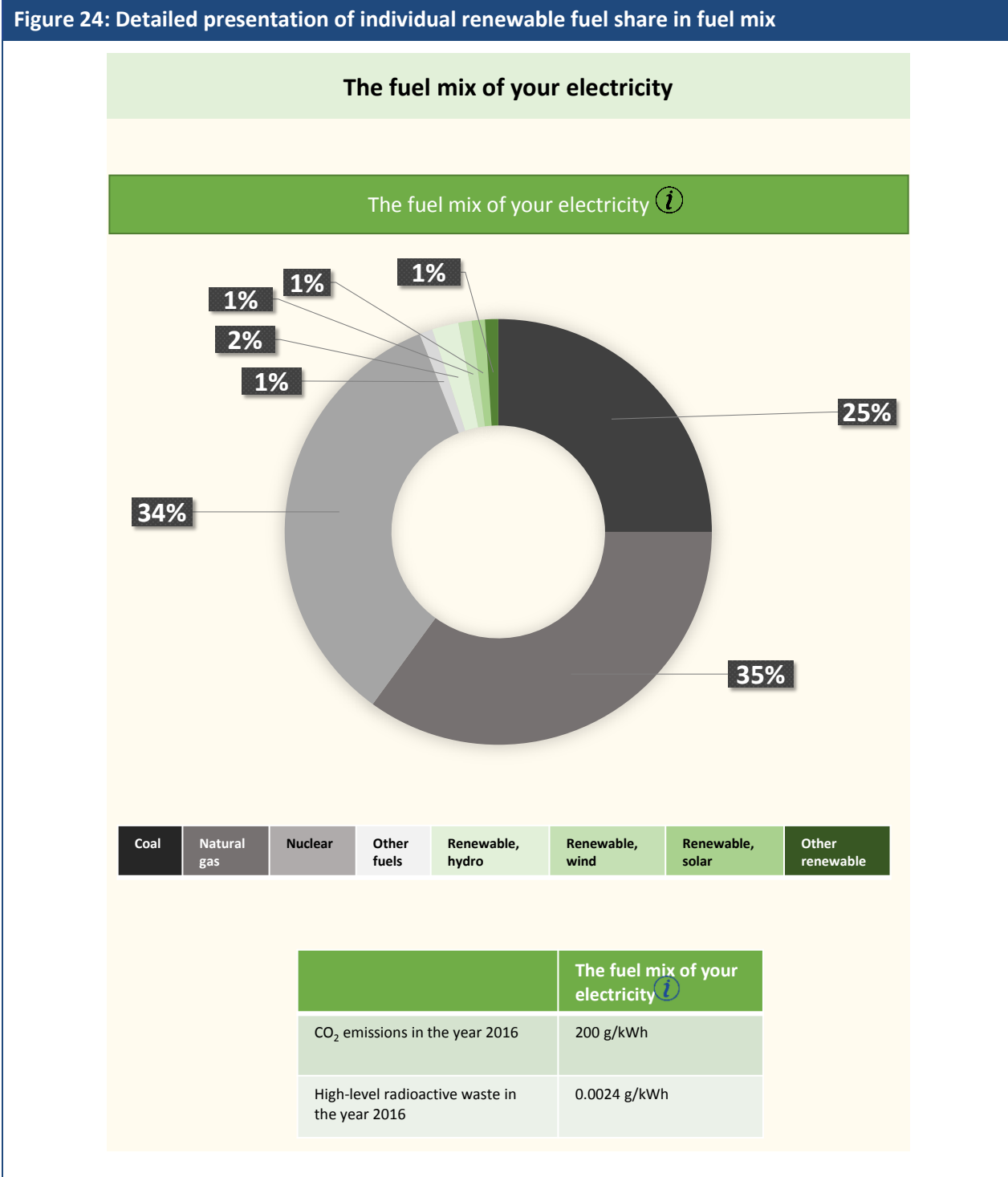
¹³ All participants in the laboratory experiment were shown Breakdown of fuel mix while saliently marking the aggregate share of renewables without marking the share of individual renewables, and price breakdown is provided in simple terms

The following figure summarises the treatments for the fuel mix stage, as well as the sample split for treatments.

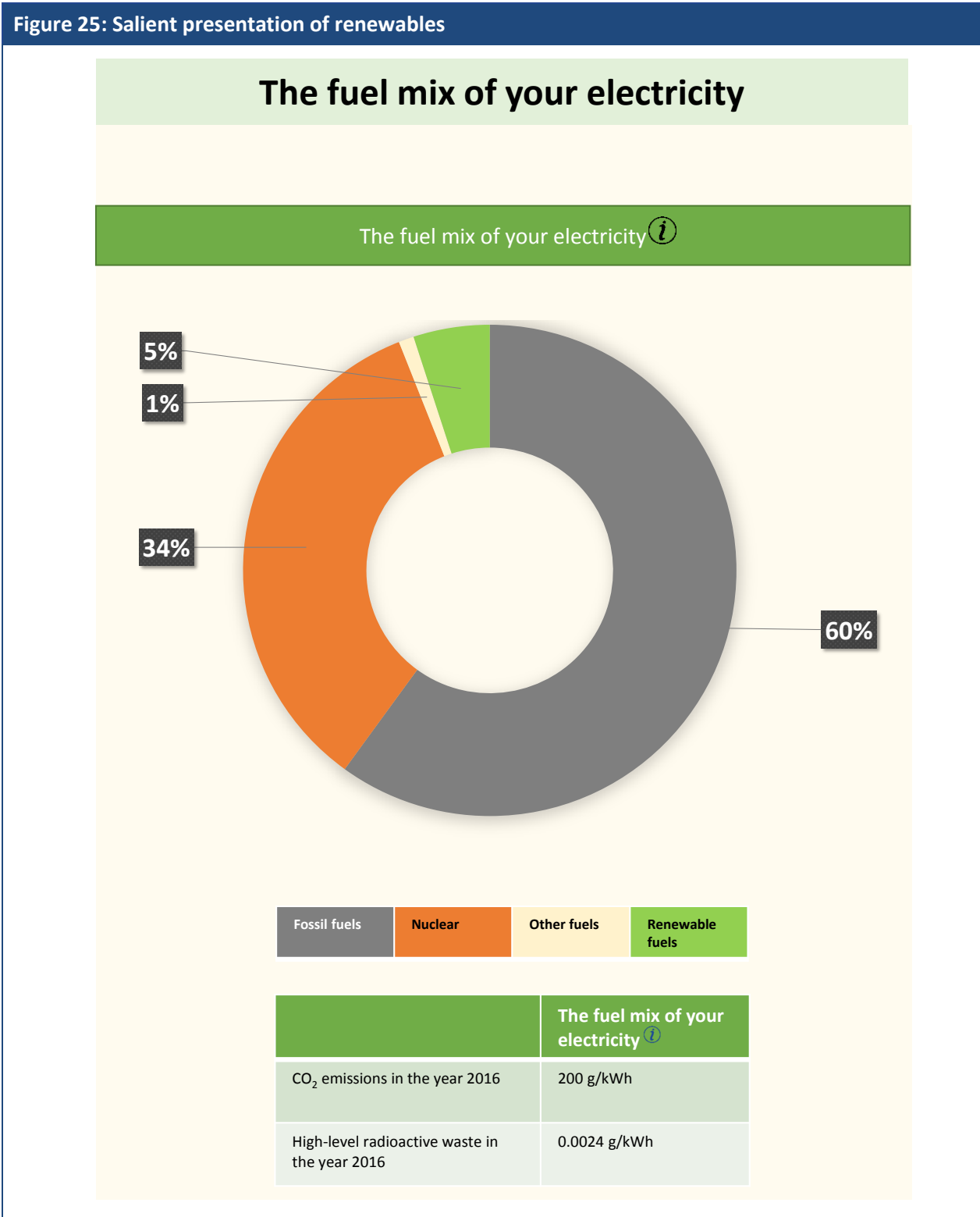
Figure 23: Treatments for the fuel mix stage



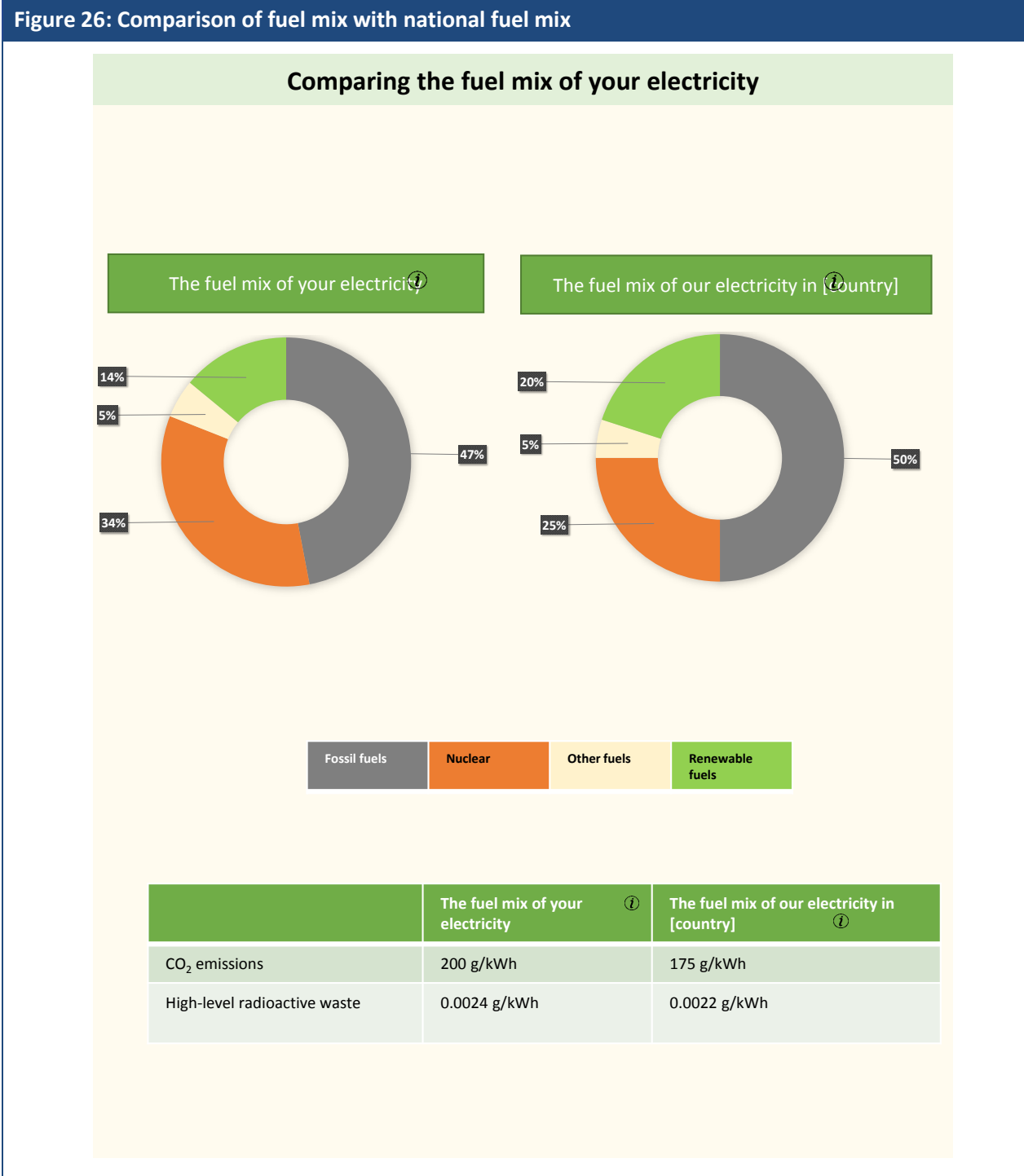
For example, if participants were shown fuel mix with detailed presentation of the share of individual renewable fuels, the fuel mix would look like this:



A more simplified fuel mix presentation, with salient share of renewables in the fuel mix, would look like this:

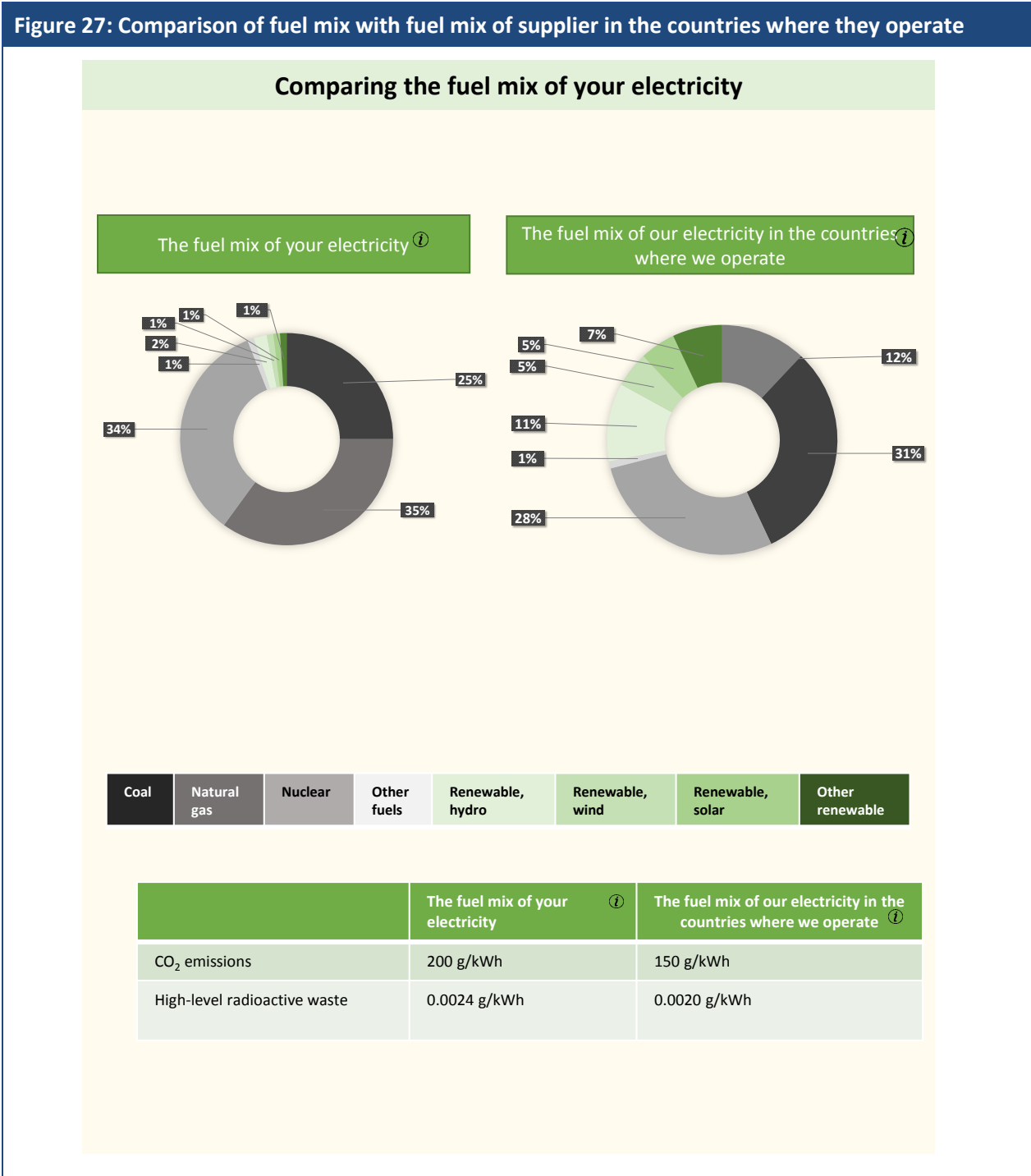


If participants were shown a comparison of their fuel mix with the national fuel mix, the comparison would look like the following:

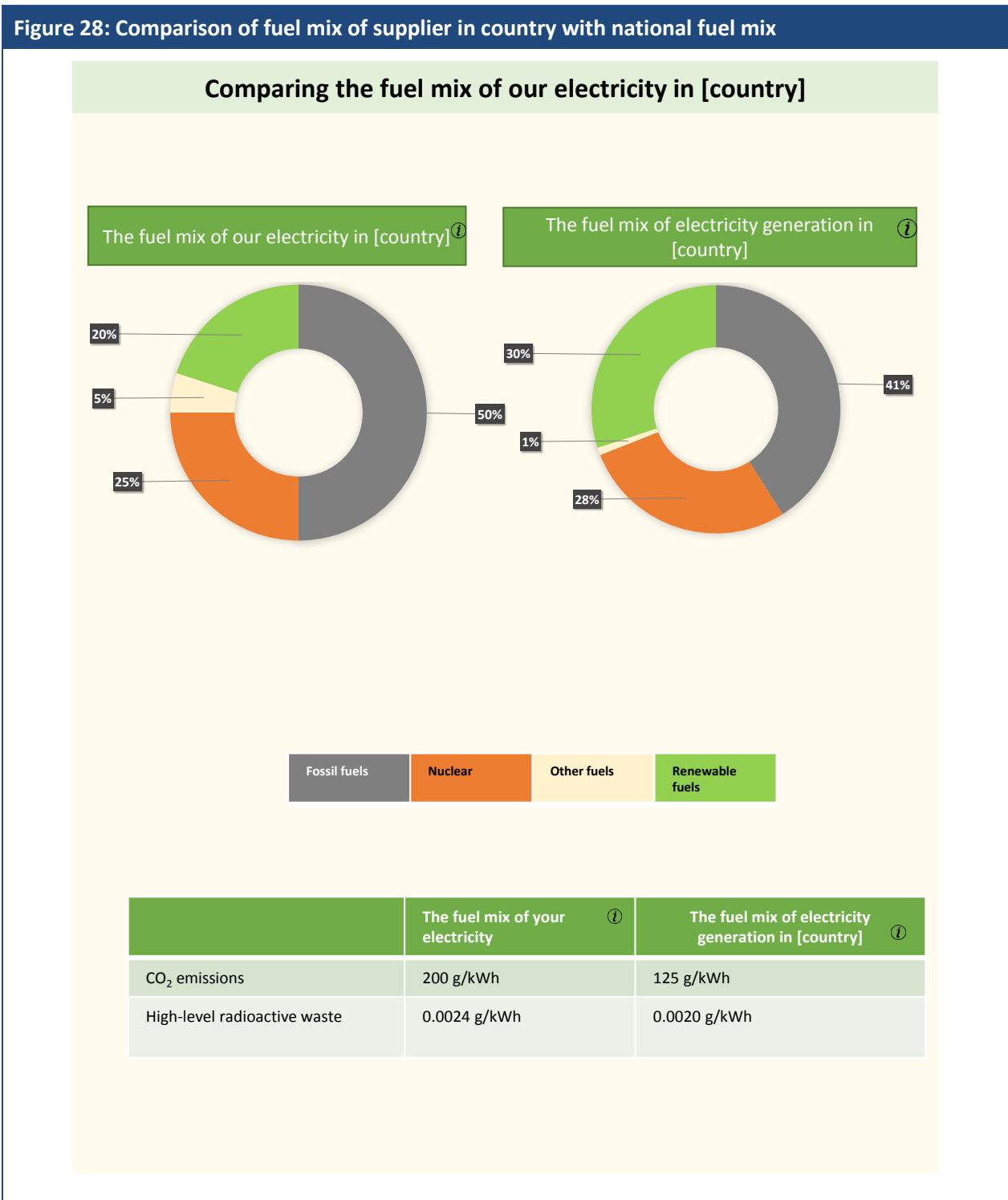


If participants were shown a comparison between their fuel mix and the mix of their electricity company in the countries where they operate, the comparison would look like this if the fuel mix was presented in the more detailed form;

Figure 27: Comparison of fuel mix with fuel mix of supplier in the countries where they operate

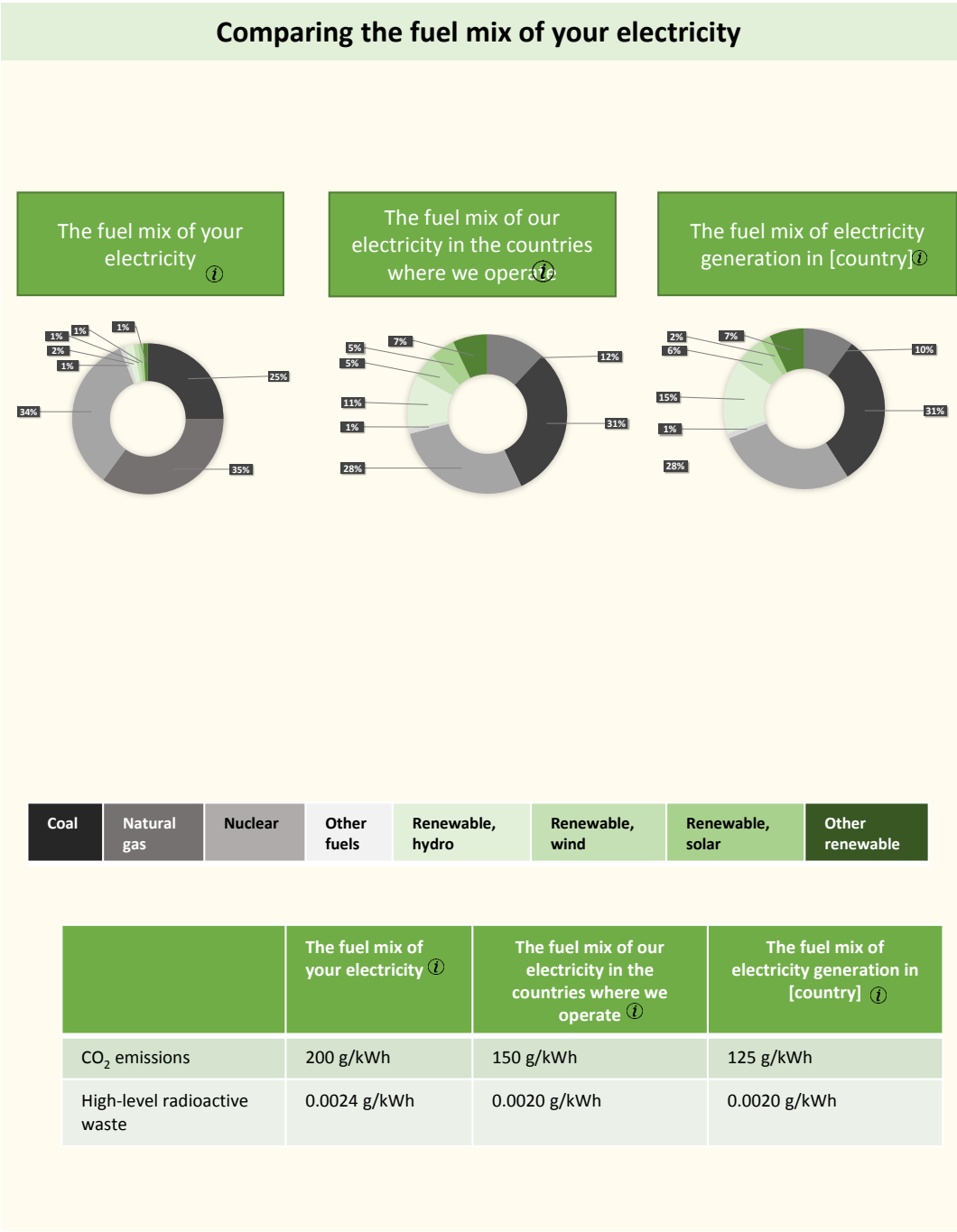


If participants were shown a comparison between the fuel mix of their company in the country they lived in with the national fuel mix, the comparison would look like the following:



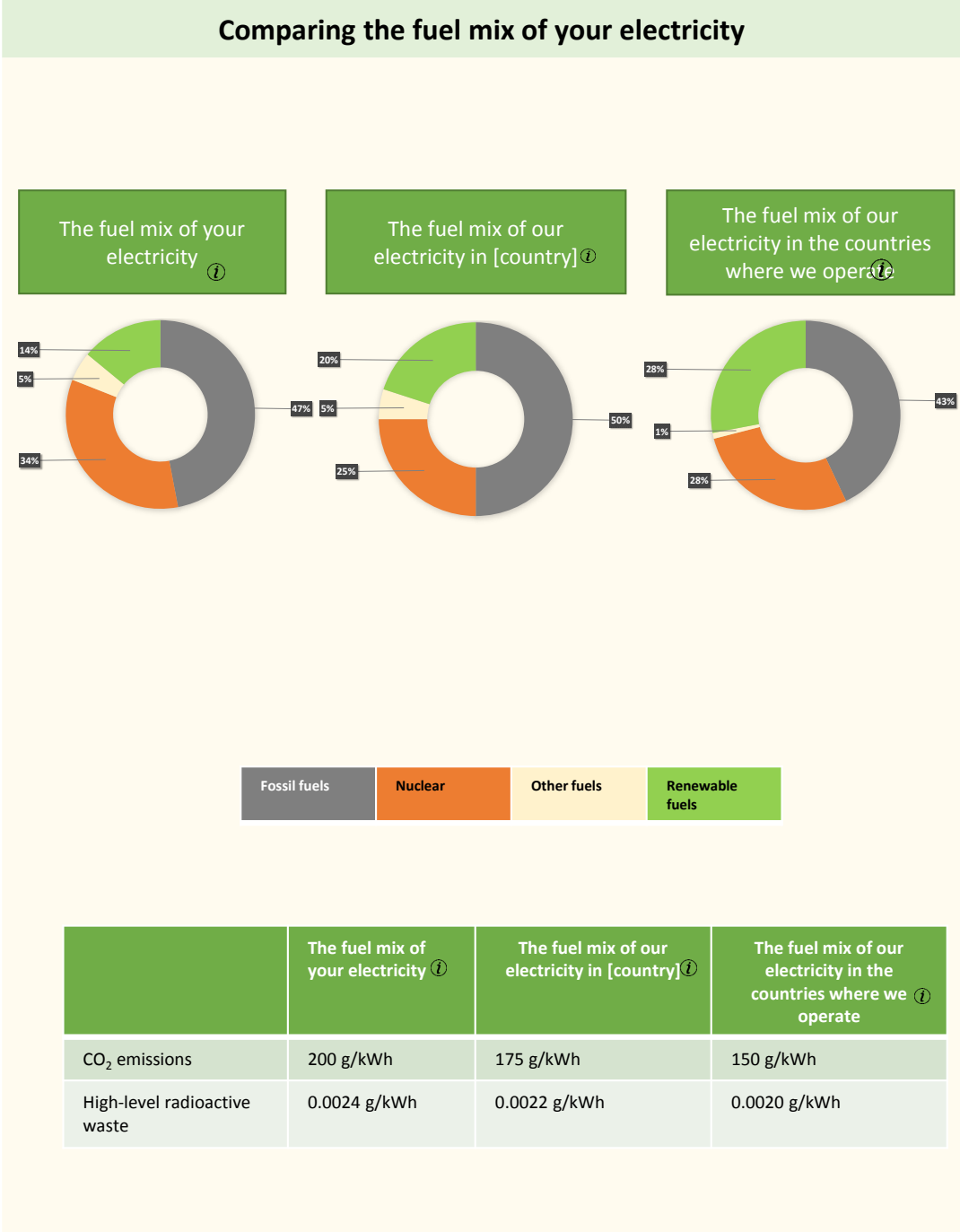
If participants were shown a comparison between their fuel mix, the fuel mix of their supplier in the countries where they operate and the national fuel mix, the comparison would look like the following:

Figure 29: Comparison of fuel mix with fuel mix of supplier and national fuel mix



If participants were shown a comparison between their fuel mix, the fuel mix of their supplier in the country, and the fuel mix of their supplier in the countries where they operate, the presentation would look like the following:

Figure 30: Comparison of fuel mix with fuel mix of supplier in country and fuel mix of supplier in all countries where they operate



Follow-up questions

The following questions in the fuel mix stage explored participants’ subjective preferences regarding the visualisation of fuel mix on the bills, and intention to change behaviour regarding the share of renewables in electricity.

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