

Getting Electricity Questionnaire – «Survey_Economy»

www.doingbusiness.org

Dear «FirstName» «LastName»,

We would like to thank you for your participation in the *Doing Business* project. Your expertise in the field of getting an electricity connection in «Survey_Economy_FullName» is essential to the success of the *Doing Business* report, one of the four flagship publications of the World Bank Group that benchmarks business regulations in 190 economies worldwide. The Getting Electricity indicator is one of the 11 indicator-sets published by the *Doing Business* report. It measures the procedures, time and cost required for a business to obtain a new electricity connection, as well as the reliability of electricity supply and transparency of tariffs.

The report attracts much attention around the world. The latest edition, *Doing Business 2018: Reforming to Create Jobs*, was the 15th in a series of annual reports measuring the regulations that enhance business activity and those that constrain it. It received over 10,000 media citations within just a week of its publication on October 31, 2017. Within that same period the *Doing Business* website was viewed over a million times and the report was downloaded over 15,000 times. One hundred and nineteen economies implemented a total of 264 reforms easing the process of doing business. Europe and Central Asia continues to be the region with the highest share of economies reforming – i.e. 79%, followed by South Asia and Sub-Saharan Africa.

Governments worldwide read the report with interest every year, and your contribution makes it possible for the *Doing Business* project to disseminate the regulatory best practices that continue to inspire their regulatory reform efforts. In 2016/17, 20 economies made getting electricity easier.

We are honored to be able to count on your expertise for *Doing Business 2019*. Please follow the steps below when completing the questionnaire:

- Review the assumptions of the case study before updating last year's information in the questionnaire.
- Describe in detail any reform that has affected the process of getting electricity since June 1, 2017.
- Be sure to update your name and address if necessary, so that we can mail you a complimentary copy of the report.
- Kindly return the questionnaire to us at DBelectricity@worldbank.org.

We thank you again for your invaluable contribution to the work of the World Bank Group.

Sincerely,



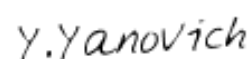
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What entity do you work for?

Click all that apply if there are multiple respondents

- | | |
|--|---|
| <input type="checkbox"/> Utility (privately-owned) | <input type="checkbox"/> Utility (publicly-owned) |
| <input type="checkbox"/> Regulatory body | <input type="checkbox"/> Government body |
| <input type="checkbox"/> Private Sector | |

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Please e-mail me an electronic copy of the report and my certificate of appreciation.

Referrals: Please help us expand our list of contributors by referring us to other experts in the private or public sector (lawyers, notaries, public officials or any expert on this field) who can respond to the questionnaire.

| First name | Last name | Position | Firm | Address | Phone | E-mail |
|------------|-----------|----------|------|---------|-------|--------|
| [] | [] | [] | [] | [] | [] | [] |
| [] | [] | [] | [] | [] | [] | [] |

PART 1 – Reliability of electricity supply in «Survey_City»

1.1 Power outages estimates

1.1.1 How many power outages did you personally experience in 2017?

Unscheduled power outages

-Click to Select-

Scheduled power outages (e.g. maintenance, load shedding, etc.)

-Click to Select-

[note: If you are a private sector representative, please now go directly to section 1.3 at the bottom of the page.]

1.1.2 Does the utility in «Survey_City» calculate SAIDI and SAIFI indexes?

-Click to Select-

Note: the **SAIDI index** is the total duration of interruptions for the average customer served. The **SAIFI index** is the number of interruptions for the average customer served. We consider a customer as one connection point.

1.1.3 If Yes, please fill in the table below for «Survey_City». Data should include load shedding and planned outages (e.g. maintenance).

| | 2016 | | 2017 | | Comments <u>Explain significant changes from 2016</u> |
|-----------------------------|---|--|---|---|--|
| | SAIDI <i>hours of power outages</i> | SAIFI <i>frequency of power outages</i> | SAIDI <i>hours of power outages</i> | SAIFI <i>frequency of power outages</i> | |
| Average per customer | «DB_ge_System average interruption duration index (SAIDI)» <i>hours per year</i> | «DB_ge_System average interruption frequency index (SAIFI)» <i>n° outages</i> | <i>hours per year</i> | <i>n° outages</i> | |

► Are both planned outages and load shedding included in the SAIDI and SAIFI estimates? -Click to Select-

► If major events are excluded in the estimates above, please specify how they are determined:

► Please update the minimum outage time (in minutes) used for the calculation of SAIDI and SAIFI (considered to be «DB_ge_Minimum outage time (in minutes)» last year):

1.2 Systems to monitor power outages

| | Last year | Update |
|--|--|--|
| 1.2.1 Does the distribution utility use an automated Outage/ Incident Management System (OMS/IMS) and/or Energy Management Systems/ Supervisory Control and Data Acquisition (EMS/SCADA) to record power outages on the network in «Survey_City»? | «DB_ge_Does the utility use automated tools to monitor outages?» | -Click to Select- <i>If answer is different from last year, please provide information on the automated system used (e.g. system type and installation year):</i> |
| 1.2.2 Does the distribution utility use automated OMS/IMS and/or EMS/SCADA to restore electricity service in «Survey_City»? | «DB_ge_Does the utility use automated tools to restore outages?» | -Click to Select- <i>If answer is different from last year, please provide information on the automated system used:</i> |

1.3 Transparency of key performance indicators on reliability

| | Last year | Update |
|--|---|---|
| 1.3.1 Does the utility in «Survey_City» publish SAIDI and SAIFI data publicly online (e.g. through a public annual report)? | «DB_ge_Does the utility report SAIDI/SAIFI publicly?» | -Click to Select-- <i>If yes, please provide a link to the report:</i> |

| | | |
|---|--|---|
| <p>1.3.2 Does any state body independent from the utility (e.g. regulatory body) monitor outages on a regular basis (e.g. through an annual report)?</p> | <p>«DB_ge_Does a regulator - that is an entity separate from the utility - monitor the utility's performance on reliability of supply?»</p> <p>«DB_ge_Name of regulator (if applicable)»</p> | <p>-Click to Select-</p> <p><i>If necessary, please update the name of the agency , and provide a link/ attachment to a report:</i></p> |
|---|--|---|

1.4 Consumer safeguards

| | Last year | Update |
|--|--|--|
| <p>1.4.1 Are there any financial deterrents mechanisms in «Survey_City» in cases outages go over a certain cap (e.g. customer compensation or fines for utility)?</p> | <p>«DB_ge_Does the utility either pay compensation to customers or face fines by the regulator (or both) if outages exceed a certain cap?»</p> | <p>-Click to Select-- <i>If yes, select all that are applicable:</i></p> <p><input type="checkbox"/> Utility compensates customers if outages go over a certain cap (hours or frequency). Please specify:</p> <p><input type="checkbox"/> Utility is fined</p> <p><input type="checkbox"/> Other (please comment)</p> <p>If change from previous year, please provide explanation:</p> |
| <p>➤ What is the legal basis for imposing financial deterrents on the utility?</p> | <p><i>New question</i></p> | <p><i>Please select all that apply:</i></p> <p><input type="checkbox"/> Concession agreement</p> <p><input type="checkbox"/> Electricity supply contract</p> <p><input type="checkbox"/> Regulation (please provide reference if available)</p> <p><input type="checkbox"/> Other (please comment)</p> <p><i>Are the deterrents listed enforced in practice -Click to Select-</i></p> |
| <p>1.4.2 If private equipment is damaged due to voltage fluctuations, can customers obtain compensation from the utility?</p> | <p><i>New question</i></p> | <p>-Click to Select- <i>If yes, please select how compensation requests are filed:</i></p> <p><input type="checkbox"/> At the office of the utility</p> <p><input type="checkbox"/> At the office of a third-party agency</p> <p><input type="checkbox"/> On the utility's website (please provide link)</p> <p><input type="checkbox"/> Online through a third-party agency (please provide link)</p> |
| <p>➤ If yes, is there a third-party mechanism or agency that decides (or arbitrates) on the appropriate compensation amount?</p> | <p><i>New question</i></p> | <p>-Click to Select-</p> <p>Please provide name of the body</p> |

PART 2 – Electricity tariffs in «Survey_City»

2.1 Electricity tariff breakdown

For the following questions, please assume that:

- 1) The case study warehouse in «Survey_City» is **locally owned** by an entrepreneur and is used for commercial purposes with the following conditions:
 - Operates **30 days a month** from 9:00am to 5:00pm (**8 hours/day**), with equipment utilized at **80% of capacity** on average without electricity cuts (assumed for simplicity reasons). Although January has 31 days, for calculation purposes, only 30 days are accounted for.
 - Has a subscribed **capacity of 140 kVA**, a power factor of 1 (**1 kVA = 1 kW**).
 - Monthly energy consumption of **26,880 kWh/month**, and hourly consumption of 112 kWh.
- 2) If multiple electricity suppliers exist, assume that the **cheapest** supplier is used.

Please fill in the table below. Alternatively, please send the relevant tariff schedule or your monthly bill for **January 2018** to DBelectricity@worldbank.org.

| | January 2018 local currency | Comments Explain <u>any change</u> from last year |
|---------------------------------------|--------------------------------|--|
| Energy/usage charge for 26,880 kWh | | |
| Capacity/demand charge for 26,880 kWh | | |
| Administrative/processing costs | | |
| Taxes (excluding VAT) | | |
| Other (please describe) | | |
| TOTAL | | |

► How is the consumption bill calculated (e.g. tariffs vary by time of the day)?

2.2 Transparency of tariffs

| | |
|---|---|
| 2.2.1 Are tariffs publicly available online? | <input type="checkbox"/> Yes - please provide a link: <input type="checkbox"/> Not available online |
| 2.2.2 Are customers notified at least a full cycle in advance (i.e one month) of the exact change in the electricity tariff? | -Click to Select- <i>How long in advance are tariff changes communicated to customers in practice? -Click to Select-</i> |

PART 3 – Obtaining an electricity connection in «Survey_City»

3.1 Case Study Assumptions

The Getting Electricity indicators record all procedures required for a business to obtain a permanent electricity connection and supply for a standardized warehouse. These procedures include completing applications and contracts with electricity utilities, obtaining all necessary clearances from other agencies and installing the external final connection works between the utility's network and the warehouse entry.

Please provide responses to the questions about procedures and reforms based on the assumptions below:

| | |
|------------------------------------|---|
| The warehouse: | <ul style="list-style-type: none"> • Is owned by a local entrepreneur. • Is located in «Survey_City». • Is located in an area where similar warehouses are typically located. In this area a new electricity connection is not subject to a special investment promotion regime (special subsidization or a faster service). • Is in an area where there are no physical constraints. For example, the warehouse is not near a railway. • Is a new construction and is being connected to electricity for the first time. • Has 2 stories, both above ground, with a total surface of approximately 1,300.6 square meters (14,000 square feet). The plot of land on which it is built is 929 square meters (10,000 square feet). |
| The electricity connection: | <ul style="list-style-type: none"> • Is a permanent connection. • Is a 3-phase, 4-wire Y connection with a subscribed capacity of 140 kVA with a power factor of 1 (1 kVA = 1 kW). (Where the voltage is 120/208 V, this means that the current would be around 400 amperes. Where it is 230/400 V, the current would be almost 200 amperes.) • Connection length is 150 meters. The connection is to either the low- or medium-voltage distribution network and is either overhead or underground, whichever is more common in the area where the warehouse is located. (Please see figure 1 below.) • Requires works that involve the crossing of a 10-meter wide road (by excavation, overhead lines, etc.) but are all carried out on public land. There is no crossing of other owners' private property because the warehouse has access to a road. • Takes up a negligible length in the customer's private domain. • The internal wiring of the warehouse has already been completed, up to and including the customer's service panel or switchboard and the meter base. However, internal wiring inspections and certifications that are prerequisites to obtain a new connection are counted as procedures. • Monthly energy consumption of 26,880 kWh/month, and hourly consumption of 112 kWh. |

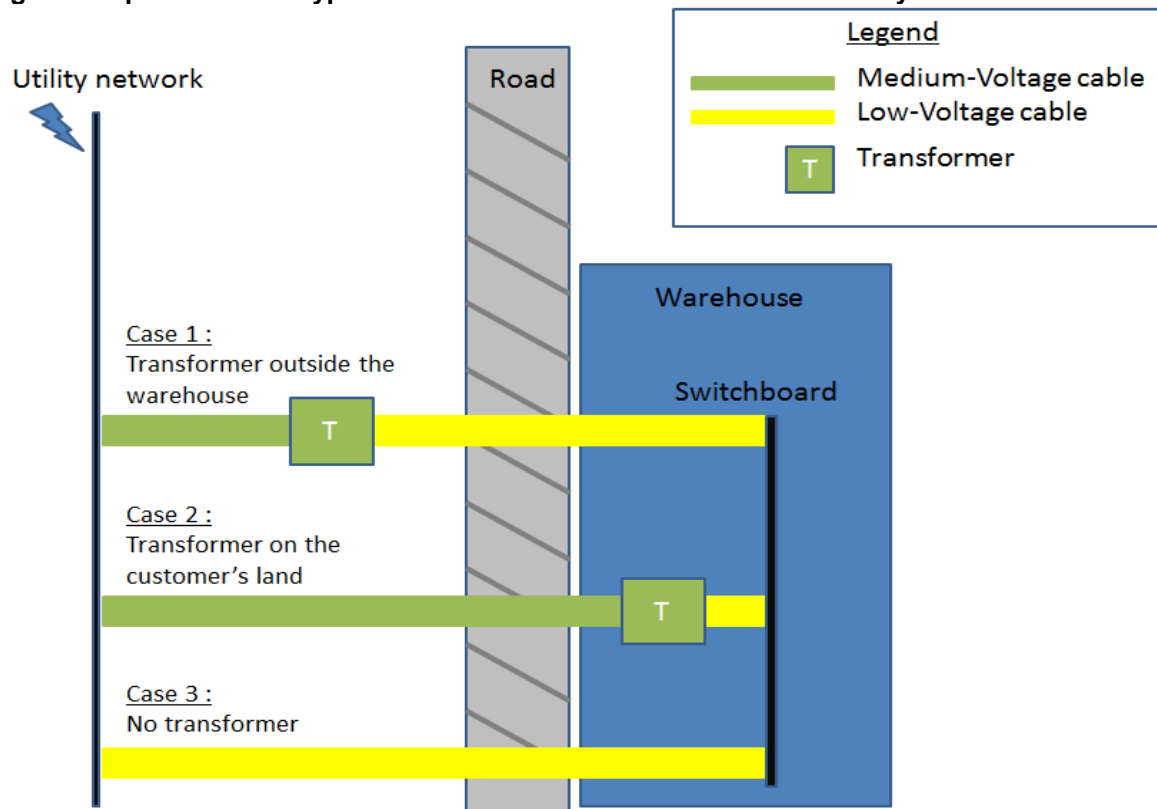
3.1.1 Taking into account the assumptions described above, please review the following information and provide updates where necessary:

| | Last year | Update |
|---|---------------------------|--------|
| Most likely location of the warehouse in « Survey_City » | «DB_ge_WarehouseLocation» | |
| Distribution utility that serves the majority of customers in «DB_ge_WarehouseLocation» | «DB_ge_UtilityName» | |

3.2 Data Update: Connection Works

Keeping in mind the case study assumptions, please review the options shown in Figure 1 and decide what type of works are most likely for the area considered (see in table 3.1.1).

Figure 1. Options for the type of works needed to connect the case study warehouse to electricity



3.2.1 Please confirm or update the most likely type of works for the location considered

| Last year | Update | Please explain |
|---------------------|-------------------|----------------|
| «DB_ge_TypeOfWorks» | -Click to Select- | |

3.2.2 Is it likely that installation of a distribution transformer is needed? -Click to Select-

3.2.3 If applicable, is it likely that the transformer is installed on the customer's land? -Click to Select-

3.3 Reform Update

3.3.1 Are you aware of any reform (in practice, laws or regulations) taking place between June 1, 2017, and May 1, 2018 for obtaining an electricity connection for the type of warehouse specified in the case study?

A reform is any change in the process to obtain a new electricity connection that affected the procedures, time or cost. Examples include the regulatory agency updating the fee schedules or the distribution utility implementing a more efficient process that has reduced the time to obtain a connection.

| Response | If yes, please provide details on the reform (dates, procedures affected, etc.) |
|-------------------|---|
| -Click to Select- | |

3.3.2 Are you aware of any such reform expected after May 1, 2018?

| Response | If yes, please provide details on the reform |
|-------------------|--|
| -Click to Select- | |

3.4 Research questions: training requirements and wiring safety

For the questions below, please keep in mind the case study assumptions and **check all the answers that apply**.

A. Electricity sector regulations:

3.4.1 Is there a national electricity code or set of regulations in «Survey_Economy» providing standards for the installation of electrical wiring: -Click to Select- Name of code/ regulations (if applicable)

Do the above-mentioned code and/or regulations provide clear provisions or guidelines on the following matters?

- Professional qualifications required to carry-out the external / internal wiring
- Inspections required on the external/ internal wiring
- Professional qualifications required to inspect the external / internal wiring

Comments:

3.4.2 How are changes in electricity regulations communicated to the following parties?

| | Private sector | Utility employees |
|--|--------------------------|--------------------------|
| (a) Dissemination campaign (e.g. social media, billboards, etc.) | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Training/workshops | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Through public broadcast (e.g. TV, radio, etc.) | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) None of the above | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Other (please specify in comments): | <input type="checkbox"/> | <input type="checkbox"/> |
| Comments | | |

B. Quality control of internal wiring

3.4.3 Who typically conducts the installation of the internal wiring in the warehouse?

- Private company (in-house) Private company (external party)
- Utility (or third party hired by utility) Other - please specify:

3.4.4 What are the legal requirements for the party carrying-out the internal wiring installation?

- Degree in engineering
- Minimum years of professional experience - please specify how many years:
- Professional license or certification - please specify what authority issues this certification:
- Other - please specify:

Legal Basis (if applicable)

Comments:

3.4.5 Is there a legal obligation to conduct an internal wiring inspection as part of the connection process?

-Click to Select- Legal Basis (if applicable)

3.4.6 If applicable, who conducts the mandatory internal wiring inspection?

- Utility
- Licensed private company separate from the one doing the internal wiring installation
- State energy agency - please specify the name of the agency:
- Other - please specify:

3.4.7 According to the law and prior to the installation works, are the internal wiring plans (e.g. wiring diagrams) checked by the utility (or a third-party agency on its behalf)?

- Yes – Utility checks
- Yes – Third party checks. Name of agency:
- No

Legal Basis (if applicable)

Comments:

3.4.8 If applicable, what are the legal requirements for the party reviewing the internal wiring plans?

- Degree in engineering

- Minimum years of professional experience - please specify how many years:
 - Professional license or certification - please specify what authority issues this certification:
 - Other - please specify:
- Legal Basis (if applicable)
Comments:

C. Quality control of external wiring

3.4.9 Who conducts the installation of the external wiring connection to the warehouse?

- Private company
- Utility (or third party hired by utility)
- Other - please specify:

3.4.10 What are the requirements imposed by the law on the party carrying-out the external connection works?

- Degree in engineering
 - Minimum years of professional experience - please specify how many years:
 - Professional license or certification - please specify what authority issues this certification:
 - Other - please specify:
- Legal Basis (if applicable)
Comments:

3.4.11 Once the external works are completed, is a final inspection required by law or any regulation?

-Click to Select-

Legal Basis (if applicable)

3.4.12 If applicable, who conducts the external wiring connection inspection?

- Utility
- Licensed private company
- State energy agency - please specify the name of the agency:
- Other - please specify:

Comments:

D. Knowledge and training

3.4.13 Does the utility provide training to engineers, technicians and/or inspectors involved in the connection process when there is a change in regulation or practice (e.g. technology)? -Click to Select-

Comments:

- ▶ If yes, does the utility receive public funds for the above-mentioned trainings? -Click to Select-

3.5 Data Update: Procedures

In responding to the questions below, please keep in mind the following definitions:

- **Time** is measured in **calendar days**, and the minimum time for each procedure is 1 day. Time estimates should reflect the duration of wait times when no bribes are paid.
- A **procedure** is an interaction of the customer or the customer's representative (e.g., electrician or hired electrical contractor or firm) with external parties, including the utility, government agencies, inspectors and notaries. **Procedures sometimes take place simultaneously; when this is the case, it will be indicated in the list of procedures below.**
- **Costs** are those for the **external connection works only** and exclude value added tax (VAT). Costs such as for the internal wiring of the warehouse (up to and including the panel or switchboard) are not recorded. In all cases costs exclude bribes.

3.5.1 Connections to electric network

Please indicate the number of new connection cases you were involved with last year (confidential)

| | Number of new connections |
|------------------------------|---------------------------|
| Below 50 kVA: | |
| Between 50 kVA and 100 kVA: | |
| Between 100 kVA and 200 kVA: | |
| Above 200 kVA: | |

3.5.2 Based on your experience, what is **the fastest and slowest time (calendar days)** in practice to obtain a new electricity connection per the case-study scenario mentioned above?

Fastest time:

Slowest time:

Explain difference:

3.5.3 Are the requirements to get a new commercial electricity connection publicly available online? -Click to Select-
Please specify website:

3.5.4 List of procedures

Kindly review and update where needed the following list of procedures for obtaining a new electricity connection

[note: last year's answers are included below and represent a unified response based on the input of contributors. Last year's answers may, therefore, not match the specific estimates you provided. If you feel that last year's data is inaccurate, kindly provide your own answer and indicate whether the change is due to a correction (i.e. last year's information was erroneous) or a reform (i.e. there has been a change in practice or by law since June 1, 2017)].

| | |
|--|--|
| Procedure «DB_ge_DBGEProcList_PROCEDURE_NUMBER_coun»: | «DB_ge_DBGEProcList_ProcedureName_counter» |
| Simultaneity with previous procedure: | Simultaneity (last year): «DB_ge_DBGEProcList_ProcedureSimultaneity» Simultaneity update: -Click to Select- |
| Time | Time last year: «DB_ge_DBGEProcList_ProcedureTimePublished» Time update: |
| Cost | Cost last year: «DB_ge_DBGEProcList_ProcedureCostPublished». Comments: «DB_ge_DBGEProcList_ProcedureCostComment_» Cost update: |
| Agency | Agency last year: «DB_ge_DBGEProcList_ProcedureAgency_count» Agency update: |
| Procedure details: | Details: «DB_ge_DBGEProcList_ProcedureComment_coun» Your comments: |
| If you made changes to last year's information, are they due to? -Click to Select- | |
| Please explain the changes and provide the legal basis where applicable: | |

Additional procedures

If you would like to add one or more procedures, please fill out the box below.

| Name of the additional | |
|------------------------|--|
| | |

| | |
|--|--|
| procedure: | |
| Time: | |
| Cost: | |
| Agency: | |
| Procedure details: | |
| If you made changes to last year's information, is it due to? -Click to Select- Please explain the changes and provide the legal basis where applicable: Please indicate which procedure this new procedure follows in the sequence: | |

3.6 Further Details on the Security Deposit and Excavation Permit

3.6.1 Security deposit

Kindly review and update where needed the following details on the security deposit charged for the case study connection (subscribed capacity, 140 kVA; monthly consumption, **26,880** kWh):

| | Last year | Update |
|---|--|--------|
| 1) What is the amount of the security deposit? | «DB_ge_SecurityDepositFullValuePrepopulation» | |
| 2) After how many years is the security deposit returned (for a 5-year contract)? | «DB_ge_SecurityDepositTimePrepopulation» | |
| 3) At what interest does the utility give back the security deposit (percentage)? | «DB_ge_InterestPaidByUtilityPERCENT» | |
| 4) Can the client settle the security deposit with a bank guarantee? | «DB_ge_SecurityDepositInCashOrBondPrepopulation» | |

3.6.2 Excavation permit or right-of-way clearance for road crossing in the public domain

| | Last year | Update |
|--|--|--------|
| 1) Is an authorization needed for a road crossing (by excavation, overhead lines or other works involved in obtaining an electricity connection) in the public domain? | «DB_ge_ExcavationOrRightOfWayRequired» | |
| 2) Who obtains the permit? | «DB_ge_WhoObtainsPermit» | |
| 3) Where is the permit obtained? | «DB_ge_WhereToObtainPermit» | |
| 4) How long does it take to obtain the permit (in calendar days)? | «DB_ge_TimeToObtainPermit» | |
| 5) How much does the permit cost? (Please indicate the currency) | «DB_ge_CostOfPermitPopulation» | |

* * *

Thank you very much for completing the questionnaire!

We sincerely appreciate your contribution to the *Doing Business* project. The results will appear in the *Doing Business 2019* report and on our website: www.doingbusiness.org.
Your work will be gratefully acknowledged.