## Getting Electricity Questionnaire – «Survey\_Economy» www.doingbusiness.org

Dear «Title» «FirstName» «LastName»,

We would like to thank you for your participation in the Doing Business project. Your expertise in the field of getting electricity in «DB ge Survey City» is essential to the success of the Doing Business report, one of the 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 2019: Training for Reform, was the 16th in a series of annual reports measuring the regulations that enhance business activity and those that constrain it. It received over 12,000 media citations within just a week of its publication on October 31, 2018. Within that same period the Doing Business 2019 report was mentioned in online articles or social media posts over 120,000 times. One hundred and twenty-eight economies implemented a total of 314 reforms easing the process of doing business. Europe and Central Asia and Sub-Saharan Africa continue to be the regions with the highest share of economies reforming - i.e. 83%, followed by the Middle East and North 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 2017/18, 26 economies reformed in the area of electricity, as captured by the Getting Electricity indicator.

We are honored to be able to count on your expertise for Doing Business 2020. Please do the following in 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 May 2, 2018. •
- Be sure to update your name and address if necessary.
- Kindly return the questionnaire to DBelectricity@worldbank.org •

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

Sincerely,

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## Paperless Option for Complimentary Report and Certificate

**New this year:** the paperless option is selected by default to reduce our environment footprint. Your certificate and report will be sent via email. Please remove the [X] below if you prefer to receive print versions via postal mail. Please e-mail me an electronic copy of the report and my certificate of appreciation.

#### Primary Contributor Information: Please check the box next to information you do not want us to publish.

	Name								
	Title (Mr., Ms., Dr.)	)	«Tit	le»		[ ]			
Do not publish 🗌	First Name		«Fir	stName	»	[ ]			
	Last Name		«La	stName	>	[ ]			
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Street	«Street»		[	]	P.O. Box	«POBO	X»	[	]
City	«City»		[	]	State/ Province	«State»		[	]
Zip/Postal code	«ZipPostalCode»		[	]	Country	«Count	ту»	[	]

Additional Contributor(s): If there are more people to acknowledge, kindly send us an e-mail.

Name	Occupation	Ema	ail	Phone	Address
[title] [first name] [last name]	[firm] [position] [profession]	[	]	[phone] [mobile]	[street] [state/province] [city/country]
[title] [first name] [last name]	[firm] [position] [profession]	[	]	[phone] [mobile]	[street] [state/province] [city/country]
[title] [first name] [last name]	[firm] [position] [profession]	[	]	[phone] [mobile]	[street] [state/province] [city/country]

# What entity do you work for?

Click all that apply if there are multiple respondents

Utility (privately-owned)	Utility (publicly-owned)
Regulatory body	☐ Government body
Private Sector	

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

First name	Las	t name	Pos	ition	Firm		Add	ress	Pho	ne	E-m	ail	
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# PART 1 – Reliability of electricity supply in «DB\_ge\_Survey\_City»

## 1.1 Power outages estimates

### 1.1.1 How many power outages did you personally experience in 2018?

Unscheduled power outages

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

-Click to Select--Click to Select-

## 1.2 Transparency of key performance indicators on reliability

	Last year	Update
1.2.1 Does any state body independent from the utility (e.g. regulatory body) monitor outages on a regular basis (e.g. through an annual report)?	«DB_ge_Regulatory monitoring on a regular basis?» «DB_ge_Name of regulator (if applicable)»	-Click to Select- If necessary, please update the name of the agency and provide a link/ attachment to a report:
1.2.2 Does the utility in «DB_ge_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>

## 1.3 Consumer safeguards

	Last year	Update
1.3.1 Are there any financial deterrent mechanisms in «DB_ge_Survey_City» in cases outages go over a certain cap (e.g. customer compensation or fines for utility)?	<ul> <li>«DB_ge_Does the utility either pay compensation to customers or face fines by the regulator (or both) if outages exceed a certain cap?»</li> <li>«DB_ge_Legal basis for imposing financial deterrents on the utility»</li> </ul>	-Click to Select <i>If yes, select all that are applicable:</i> Utility compensates customers if outages go over a certain cap (hours or frequency). Please specify: Utility is fined Other (please comment) <i>If there was any change from previous year, please provide an explanation and legal basis:</i>
1.3.2 If private equipment is damaged due to voltage fluctuations, can customers obtain a compensation from the utility?	«DB_ge_If equipment is damaged due to voltage fluctuations, can customers obtain compensation from utility?»	-Click to Select <i>If yes, please select how compensation requests are filed:</i> At the office of the utility/third-party agency Online - please provide the link:
If yes, is there a third-party mechanism or agency that decides (or arbitrates) on the appropriate compensation amount?	«DB_ge_Is there a third-party that decides on the compensation amount?»	-Click to Select <i>If yes, please provide name of the body:</i>

[Note: If you are a private sector representative, please go directly to PART 2 at the next page.]

## 1.4 Questions for utilities and energy regulators: systems to monitor power outages

1.4.1 Does the utility in «DB\_ge\_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.

1.4.2 If Yes, please fill in the table below for «DB\_ge\_Survey\_City», with data for 2018 (January - December). The data should include load shedding and planned outages (e.g. maintenance).

	2	2017		018	Comments
	SAIDI	SAIFI frequency of power outages	SAIDI	SAIFI frequency of power outages	Explain <u>significant changes</u> from 2017
Average per customer	«DB_ge_ System hours per average year interruptio	«DB_ge_Sys	hours per year		

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n duration index (SAIDI)»	index (SAIFI)»			
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- ► Are both planned outages and load shedding included in the SAIDI and SAIFI estimates? -Click to Select-
- ▶ If major events are excluded from the SAIDI and SAIFI estimates, please specify how they are determined:
- Please update the minimum outage time (in minutes) for SAIDI and SAIFI calculation (assumed as «DB\_ge\_Minimum outage time (in minutes)» last year):

	Last year	Update
1.4.3 Does the 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 in «DB_ge_Survey_City»?	«DB_ge_Does the utility use automated tools to monitor outages?»	-Click to Select- If answer is different from last year, please inform which automated system is used (e.g. system type and installation year):
1.4.4 Does the utility use automated OMS/IMS and/or EMS/SCADA to restore electricity service in «DB_ge_Survey_City»?	«DB_ge_Does the utility use automated tools to restore outages?»	-Click to Select- If answer is different from last year, please inform which automated system is used:

# PART 2 – Obtaining an electricity connection in «DB\_ge\_Survey\_City»

## 2.1 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> <li>Is owned by a local entrepreneur.</li> <li>Is located in <b>«DB_ge_Survey_City»</b>, 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).</li> <li>Is in an area where there are no physical constraints. For example, the warehouse is not near a railway.</li> <li>Is a <b>new construction</b> and is being <b>connected to electricity for the first time</b>.</li> <li>Has 2 stories, both above ground, with a total surface of 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).</li> </ul>
The electricity connection:	<ul> <li>Is a permanent, 3-phase, 4-wire, Y connection with a subscribed capacity of 140 kVA and a power factor of 1 (1 kVA = 1 kW). (Where the voltage is 120/208 V, the current would be around 400 amperes. If it is 230/400 V, the current would be almost 200 amperes.)</li> <li>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.)</li> <li>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.</li> <li>Takes up a negligible length in the customer's private domain.</li> <li>The internal wiring of the warehouse has already been completed, up to and including the customer's service panel or switchboard and meter base. However, internal wiring inspections and certifications that are prerequisites for a new connection are counted as procedures.</li> <li>Monthly energy consumption of 26,880 kWh/month (or 112 kWh per hour).</li> </ul>

### 2.1.1 Considering these assumptions, please review the information below and provide updates as needed:

	Last year	Update
Most likely location of the warehouse in <b>«DB_ge_Survey_City»</b>	«DB_ge_WarehouseLocatio n»	

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Distribution utility that serves the majority of customers in <code>«DB\_ge\_WarehouseLocation»</code>

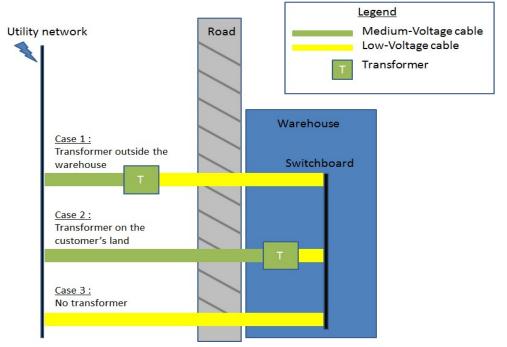
«DB\_ge\_UtilityName»

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# 2.2 Data Update: Connection Works

Keeping in mind the case study assumptions, please review the options shown in Figure 1 below.

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



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

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

### 2.2.2 Connection requirements

	Answer	
1) Are the requirements to get a new commercial electricity connection available online? (for a 140-kVA connection)	<ul> <li>Yes No - If yes, provide the website and select the information that is available:</li> <li>Procedures and steps required</li> <li>Time delivery objectives</li> <li>Forms and documents needed</li> <li>Connection costs</li> </ul>	
2) Is it possible to apply online for a new commercial electricity connection of 140 kVA (without visiting the utility's offices or submitting any physical documents)?	☐ Yes ☐ No - If yes, at which website?	
3) Is a site inspection carried out by the utility for the technical conditions/ estimate (with the customer's presence)?	☐ Yes ☐ No	
4) Is it necessary for the customer to obtain an authorization for connection works crossing a public road (by excavation or overhead lines)?	<ul> <li>Yes, the permit is requested at the Municipality</li> <li>Yes, the permit is requested at the one-stop shop/ utility</li> <li>Yes, the permit is obtained online – please provide the website:</li> <li>Yes – permit obtained by the utility for the customer</li> <li>No permit required for works crossing a road</li> </ul>	
5) Is it likely that the installation of a distribution transformer will be needed for this case?	□ Yes □ No	

# 2.3 Reform Update

# 2.3.1 Are you aware of any reform (in practice, laws or regulations) taking place between May 2, 2018, and May 1, 2019 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-	

### 2.3.2 Are you aware of any such reform expected after May 1, 2019?

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

## 2.4 Data Update: Procedures to connect to electricity

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, and for cases with minimum follow-up.
- 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 is indicated in the list of procedures below.
- **Costs** are those for the **external connection works** and exclude value added tax (VAT). Costs of permits, applications, transformers, cables and other material, inspections and all costs to complete the requirements to obtain a new connection are included. Costs for the internal wiring of the warehouse (up to and including the panel or switchboard) are not recorded. All costs exclude bribes.

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

Fastest time: Slowest time: Please explain differences:

### How many new electricity connection cases were you involved with last year? (confidential data).

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

#### **2.4.2 List of procedures to get a new connection to electricity in «DB\_ge\_Survey\_City»** Kindly **review and update where needed** the 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. They may not match the specific estimates you provided. If you believe that last year's data is inaccurate, kindly provide your own answers and indicate if 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 May 2, 2018)].

Procedure «DB_ge_DBGEProcL ist_PROCEDURE_N UMBER_coun»:	«DB_ge_DBGEProcList_ProcedureName_counter»		
Simultaneity with	Simultaneity (last year): «DB_ge_DBGEProcList_ProcedureSimultaneity»		
previous procedure:	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: inform when they took place and provide the legal basis (if 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:			

# PART 3 – Electricity Tariffs and Security Deposits

## 3.1 Electricity tariff breakdown

For the following questions, please assume that:

- 1) The case study warehouse in **«DB\_ge\_Survey\_City»** is owned by a local entrepreneur and is used for commercial purposes under the following conditions:
  - The warehouse operates 30 days a month from 9:00am to 5:00pm (8 hours/day), with equipment used at 80% of capacity on average, without power cuts. Although January has 31 days, for calculation purposes only 30 days are accounted for.
  - > It has a subscribed capacity of 140 kVA, and a power factor of 1 (1 kVA = 1 kW).
  - > Energy consumption of **26,880 kWh/month**, which is equal to an hourly consumption of 112 kWh.
- 2) If multiple electricity suppliers exist, assume that the **cheapest** supplier is used.

Please fill in the table below or send the relevant tariff schedule or your monthly bill for **January 2019** to: <u>DBelectricity@worldbank.org</u>.

	January 2019 local currency	<b>Comments</b> Explain <u>any change</u> from last year
Energy/usage charge for 26,880 kWh		
Capacity/demand charge for 140 kVA		
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)?

## 3.2 Transparency of electricity tariffs

	Answer	
3.2.1 Are tariffs publicly available online?	<ul> <li>Yes - please provide a link:</li> <li>Not available online</li> </ul>	
3.2.2 Are customers notified at least a full cycle in advance (i.e. one month) of the exact change in the tariff?	☐ Yes ☐ No - If yes, how long in advance are tariff changes communicated to customers in practice? -Click to Select-	
3.2.3 Do customers receive a bill every cycle?	<ul> <li>Yes, online bill</li> <li>Yes, paper bill</li> <li>No - If not, please explain how customers can access their bill:</li> </ul>	
3.2.4 Can customers pay their bill online?	<ul> <li>Yes, at website</li> <li>Yes, by phone app</li> <li>No - If not, please explain how customers pay their bill:</li> </ul>	
3.2.5 Are electricity tariffs decided or approved by the energy regulatory body?	☐ Yes ☐ No - If yes, please provide legal basis (if applicable):	
3.2.6 Can customers get back any overcharged amounts in their bill (if there is a wrong tariff assessment, incorrect meter reading, etc.)?	<ul> <li>Yes, customers can complain and get back the overcharged amount (cash or credit)</li> <li>No complaint mechanism available</li> </ul>	
3.2.7 Is there an energy ombudsman that independently resolves complaints between the utility and customers if they are overcharged?	☐ Yes ☐ No - If yes, please provide the agency's name and website:	
3.2.8 Does the utility use smart meters to record electricity consumption?	Yes No	

# 3.3 Security deposit

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

	Last year	Update
1) What is the amount of the security deposit?	«DB_ge_SecurityDepositFull ValuePrepopulation»	
2) After how many years is the security deposit returned (for a 5-year supply contract)?	«DB_ge_SecurityDepositTi mePrepopulation»	
3) At what interest does the utility give back the security deposit (percentage)?	«DB_ge_InterestPaidByUtilit yPERCENT»	
4) Can the client settle the security deposit with a bank guarantee?	«DB_ge_SecurityDepositInC ashOrBondPrepopulation»	-Click to Select-
5) Can the security deposit be paid online?	New question	-Click to Select-

# PART 4 – Research questions: wiring safety and quality control

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

## 4.1 Electricity sector regulations

	Last year	Update
4.1.1 Is there a national electricity code or set of regulations in your country providing standards for the installation of electrical wiring?	«DB_ge_3.4.1 Is there a national electricity code for the installation of electrical wiring?»	-Click to Select If the answer is different from last year, please provide more details and legal basis:
4.1.2 If yes, does the code or regulations provide clear guidelines on the following matters (check all that apply)?	New question	<ul> <li>Norming of material and equipment</li> <li>Professional qualifications required to carry out wiring works</li> <li>Inspections required on internal wiring</li> <li>Professional qualifications required to inspect wiring works</li> <li>Comments:</li> </ul>

## 4.2 Quality control of internal wiring

	Last year	Update
4.2.1 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)?	«DB_ge_3.4.7 Per law, are the internal wiring plans checked by the utility?»	-Click to Select If the answer is different from last year, please provide more details and legal basis:
4.2.2 Is there a legal obligation to conduct an internal wiring inspection as part of the connection process?	«DB_ge_3.4.5 Is an internal wiring inspection mandatory?»	-Click to Select If the answer is different from last year, please provide more details and legal basis:
4.2.3 If applicable, who conducts the mandatory internal wiring inspection?	«DB_ge_3.4.6 Who conducts the mandatory internal wiring inspection?»	<ul> <li>Utility</li> <li>Licensed private company (separate from the company in charge of the internal wiring)</li> <li>State energy agency - please inform the agency's name:</li> <li>Other - please specify:</li> <li>If the answer is different from last year, please provide more details and legal basis:</li> </ul>

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4.2.4 What are the legal requirements for the party carrying out the internal wiring installation (check all that apply)?	<ul> <li>Degree in engineering</li> <li>Minimum years of professional experience - please specify how many years:</li> <li>Professional license or certification - please specify what authority issues this certification:</li> <li>Other - please specify:</li> </ul>
	If answer is different from last year, please provide more details and legal basis:

## 4.3 Quality control of external wiring

	Last year	Update
4.3.1 Who will usually carry out the external connection works to the electricity grid?	«DB_ge_3.4.9 Who conducts the external wiring connection to the warehouse?»	<ul> <li>Utility (or a company hired by the utility)</li> <li>Private company</li> <li>Other - please specify:</li> <li>If the answer is different from last year, please provide more details and legal basis:</li> </ul>
4.3.2 What are the requirements imposed by the law on the party carrying out the external connection works (check all that apply)?	«DB_ge_3.4.10 What are the requirements on the party carrying- out the external connection works?»	<ul> <li>Degree in engineering</li> <li>Minimum years of professional experience - please specify how many years:</li> <li>Professional license or certification - please specify what authority issues this certification:</li> <li>Other - please specify:</li> <li>If answer is different from last year, please provide more details and legal basis:</li> </ul>
4.3.3 If the external connection works are not done by the utility, is an inspection of the external wiring connection carried out?	«DB_ge_3.4.11 ls a final inspection required by law?»	-Click to Select If the answer is different from last year, please provide more details and legal basis (if applicable):
4.3.4 If there is an external inspection, who will carry out this inspection of the external connection works?	«DB_ge_3.4.12 Who conducts the external wiring connection inspection?»	<ul> <li>Utility</li> <li>Licensed private company (separate from the company in charge of the external connection)</li> <li>State energy agency - please inform the agency's name:</li> <li>Other - please specify:</li> <li>If the answer is different from last year, please provide more details and legal basis:</li> </ul>

#### \* \* \*

### 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 2020* report and on our website: www.doingbusiness.org. Your work will be gratefully acknowledged according to your preference.