

Getting Electricity – Economy
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Dear Contributor,

We would like to thank you for your cooperation with the *Doing Business* project. Your contribution and expertise are essential to the success of the *Doing Business* report, an annual publication of the World Bank and the IFC that benchmarks business regulation in 183 economies worldwide.

The positive feedback from governments around the world who are using the *Doing Business* reports as an input for policy debate about regulatory reform is only possible thanks to the generous contribution of over 8,000 experts like you, in 183 economies.

For further information about the report, please visit our website on www.doingbusiness.org. We also invite you to read our quarterly newsletter for updates on the growing global network of *Doing Business* contributors around the world.

For *Doing Business 2011*, we are honored to be able to count on your expertise:

- Before completing the survey, please review the assumptions of the case study. We ask that you update last year's information, included in the survey.
- Please describe in detail any reform that affects the process of obtaining an electricity connection since June 2009.
- Last, we would greatly appreciate if you could take the time to respond to a few research questions that can help us understand better the regulatory aspects surrounding electricity connections in your country.

We would appreciate if you could return the completed survey by March 3, 2010 to cgeginat@worldbank.org and PersonInCharge. Please make sure to complete your name and address, so we can mail you a complimentary copy of the report.

If you have any questions, do not hesitate to contact us. Thank you again for your invaluable contribution to the World Bank's work.

Sincerely,

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Primary Contributor Information

All information will be published. Please **check** the information you **do not** want us to **publish**.
We do not publish mobile phone numbers.

Do not publish	Name		Update
<input type="checkbox"/> <i>Not published</i> <i>Not published</i>	Title (Mr., Ms., Mrs., etc.)		[]
	First Name		[]
	Last Name		[]
	Position (e.g. manager, associate, partner)		[]
	Profession (e.g. judge, lawyer, architect)		[]

Do not publish	Contact details		Update
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <i>Not Published</i>	Firm name		[]
	E-Mail address		[]
	Phone		[]
	Fax		[]
	Website		[]
	Mobile phone		[]

☐ Do not publish **Firm Address**

Street		[]	P.O. Box		[]
City		[]	State/ Province		[]
Zip/Postal code		[]	Country		[]

Please indicate below information of additional contributors who helped with the survey.

Name	Occupation	Email	Phone	Address, if different than above
[title]	[firm]	[]	[phone]	[street]
[first name]	[position]		[mobile]	[state/province]
[last name]	[profession]			[city/country]

Case Study Assumptions

The warehouse:	<ul style="list-style-type: none"> • Is owned by a local entrepreneur. • Is located in DB City. • Has chosen a location within the official limits of the city where other warehouses locate (non-residential area). • Is not located in a special economic or investment zone, i.e. the electricity connection is not subject to subsidization or a faster service under a special investment promotion regime. • If several options are available in terms of location, we assume that our warehouse chooses the location where electricity is most easily available. • Has road access. Works involve road crossing (excavation, overhead lines, etc.), but they are all carried out in a public land, i.e. there is no crossing into other people's private property. • There are no physical constraints in the area where the property is located. For e.g. the warehouse is not near a railway. • Is used for storage of refrigerated goods. • Is a new construction (i.e., there was no previous construction on the piece of land where it is located). It is being connected to electricity for the first time. • Has 2 stories, both above ground, with a total surface of approximately 1,300.6 m² (14,000 ft²). The plot of land on which it is built is 929 m² (10,000 ft²).
The power connection:	<ul style="list-style-type: none"> • Is a permanent connection. • 3-phase, 4-wire Y, 140 kVA (subscribed capacity) (Note: For example, for countries where the voltage is 120/208 V, this means the current would be around 400 Ampere. For a voltage of 220/380 V, the current would be almost 200 Ampere). • Maximum demand is 128 kW. • Low-voltage (LV) connection is 150 meters long (unless a distribution transformer is installed on the client's property, in which case LV connection length=0). We assume either overhead or underground connection, whatever is more common in the country, and the area in question. • The length of any connection (or part thereof) in the customer's private domain is negligible. • Connection involves installation of only one electricity meter. • The monthly electricity consumption would be 0.07GWh (Gigawatt-hour). • The internal wiring is already done until, and including, the customer's service panel/ switchboard and the meter base (in the cases where the meter is connected to the LV side and is located inside or right outside the customer's warehouse).

Data Update

For your convenience, last year's answers are included in this survey. They represent a unified answer, based on the answers we received from various contributors.

Please update the data, taking into account the assumptions of the case study.

- **Time** is measured in **calendar days**.
- A **procedure** is an interaction of the client or their representatives (e.g. electrician, hired electrical contractor/firm) with external parties, including the utility, government agencies, inspectors, and notaries.
- **Costs** are those for the **external connection works only** and exclude VAT. Costs such as for the internal wiring of the warehouse (until and including the panel/switchboard) are not recorded. In all cases the cost excludes bribes.
- **External works** are those conducted between the utility's network and the warehouse entry. Works involving wiring the inside of the warehouse until, and including, the customer's panel/switchboard and the meter base (where applicable), are considered the customer's responsibility and are *not* recorded.

1. Please confirm the following:

- a. The most likely location of the warehouse based on the assumptions above is **Area Collected**.
☐ Yes or ☐ No, please explain. []
- b. **Utility Name** is a distributor of electricity in **Area Collected**.
☐ Yes or ☐ No, please explain. []
- c. If several distribution utilities provide connections in **Area Collected**, is it accurate to say that **Utility Name** serves the majority of customers in the area?
☐ Yes or ☐ No, please explain. []

- d. In the area assumed in question a. the most likely way (in more than 50% of the cases) to connect the warehouse to the utility's network is recorded in the table below as of last year. Please confirm or update the information, and indicate if it is a **correction** (i.e. incorrect data) or a **reform** (i.e. modification in practice or by law since June 2009).

Type of works	Last year's answer	Check a box below to indicate this year's answer (in case this represents a change to last year, please explain)
Extension ¹ of network (overhead)		<input type="checkbox"/> Please explain. []
Extension ¹ of network (underground)		<input type="checkbox"/> Please explain. []
Expansion ² of network (overhead)		<input type="checkbox"/> Please explain. []
Expansion ² of network (underground)		<input type="checkbox"/> Please explain. []
Extension ¹ of network (service is unclear). Please indicate if it is overhead or underground.		<input type="checkbox"/> Please explain. []
Expansion ² of network (service is unclear). Please indicate if it is overhead or underground.		<input type="checkbox"/> Please explain. []
The two possibilities (extension ¹ and expansion ²) are equally likely. Please indicate if the service is overhead or underground.		<input type="checkbox"/> Please explain. []

Note:

- Extension of network** is defined as the direct connection of the warehouse to the low-voltage distribution network by extending overhead wires (if overhead service) or underground cables (if underground service) to the closest *existing* point of supply on that low-voltage network (for example, pole-mounted or pad-mounted distribution transformer).
- Expansion of network** is defined as the connection of the warehouse to the medium-voltage distribution network by installing a unit substation (overhead post including a pole-mounted transformer and its accessories if overhead service; transformer post including a pad-mounted transformer if underground service) either on the customer's property or in a public domain.

2. Procedure List

Please update the following procedure list:

Last year's data suggests that the total time and cost for obtaining an electricity connection are, respectively, x **calendar days** and y LCU.

Note: The assumption on the low-voltage connection distance has changed since last year from 10 to 150 meters. Please update if appropriate.

* denotes procedures that take place simultaneously

Procedure	
Time	Time update
Cost	Cost update
Agency	Agency update
Details	Additional details [field]
In the event that you cannot confirm the information, please indicate if this is due to a correction (i.e. incorrect data) or a reform (i.e. modification in practice or by law since June 2009).	

3. Additional Procedures:

Please specify any new or missing procedure(s) that have not been included in the above list that are required by law or practice to obtain an electricity connection in DB City. For these additional procedures, please also give details on the time, cost, and agency.

Procedure	[]
Time	[]
Cost	[]
Agency	[]
Details	[]
Please indicate whether the changes above are due to a correction (i.e. incorrect data) or a reform (i.e. modification in practice or by law since the 1 st of June 2009). []	

If available, please indicate the legal basis for the connection processes in your country.
[]

Reform Update

1. Has there been any reform (in practice or in the laws and regulations) related to obtaining an electricity connection since June 1, 2009? Please describe by providing details on the reform(s), including the date of the reform's passage and implementation and the specific procedures affected.

☐ Yes ☐ No

Comment

[]

2. Are you aware of any reform (in practice or in the laws and regulations) related to obtaining an electricity connection that is expected to be adopted prior to June 1, 2010? Please describe.

☐ Yes ☐ No

Comment

[]

3. Are you aware of any reform (in practice or in the laws and regulations) related to obtaining an electricity connection that is ongoing and is expected to be adopted in the longer term? Please describe: 1) the expected date of the reform, 2) the goal of the reform, and 3) its major characteristics (solutions it provides to achieve the goal).

☐ Yes ☐ No

Comment

[]

Thank you for answering some additional questions that help us clarify our understanding of the connection process in your country:

1. Licensing of electricians

- I. Do your country's electrical standards prescribe a minimum educational background for electricians who are allowed to carry out internal wiring installations for a case like the one assumed here (140 kVA)? If so, please provide details. []
- II. In addition to these minimum standards, are electricians that carry out internal wiring installations subject to additional requirements, such as:
 - a. ☐ The electrician has to show a number of years of work experience. Please indicate number of minimum years of work experience. []
 - b. ☐ The electrician has to be registered with the utility.
 - c. ☐ The electrician has to be registered with an outside agency. Please specify the agency. []
 - d. ☐ Other; please explain. []
- III. Is the application process for obtaining an electricity connection usually handled by the same electrician who does the internal wiring? ☐ Yes or ☐ No. If you answered No, please explain. []

2. Ensuring the safety of internal wiring installations

- I. What describes the safety requirements regime in your country best:
 - a. ☐ An inspection of the internal wiring is required, and is conducted by the **utility or another agency**. Please specify by whom. []
 - b. ☐ The electrician who did the internal wiring submits a signed notification to the utility upon completion in which they guarantee it has been carried out according to the regulations.
 - c. ☐ A more specialized electrician is hired in addition to the one who did the internal wiring and he/she will issue a certificate of compliance to the customer.
 - d. ☐ No safety requirements regarding the internal wiring exist in your country.
 - e. ☐ Other; please explain: []

- II. The quality of the internal wiring installation is usually checked:
 - a. ☐ during the construction process of the warehouse (Building/Construction Permit)
 - b. ☐ only when the customer applies for an electricity connection
 - c. ☐ in the context of another administrative process. Please explain []
 - d. ☐ other; please explain []

- III. Kindly also explain the exact technical nature of the inspection. What exactly is inspected? []

- IV. Please list the laws, regulations, and decrees that govern the safety requirements in your country and the dates these laws were adopted. []

- V. Who is held liable in the case of an electrical fire due to a faulty internal wiring installation after the client has started consuming electricity? Please explain. []

- VI. Would you say the accuracy of internal wiring installations in your country is ensured:
 - a. ☐ to protect the customer from electrical fires and in the interest of public safety
 - b. ☐ in order to protect the interest of the utility to ensure the proper functioning of the distribution network
 - c. ☐ both

3. Clearances with other public service providers

- I. **We assume road crossing in public domain.** In this case, does the **customer** have to obtain an **excavation permit** or a **right-of-way clearance**?
 - a. ☐ No, the utility, **not the customer** obtains the excavation permit/right of way. Please explain:
 - the agency it is obtained from []
 - how it affects connection time and cost for the customer []
 - b. ☐ Yes, the customer or his representative obtains the excavation permit. Please explain:
 - the agency it is obtained from []
 - the stage of the procedure list at which the customer would be required to obtain the permit []
 - how long it takes to obtain it [] calendar days
 - and how much it costs in [] LCU
 - c. ☐ No, no excavation permit needs to be obtained by either the customer or the utility.
- II. Does the customer have to include any particular type of document to help the utility identify the address of the warehouse? (Relevant in countries with weak addressing systems) []
- III. Please specify any **other authorization** that the **customer** would have to obtain specifically for the electricity connection (other than a building permit). []

4. Supply contract

- I. Is the utility providing the electricity connection also a supplier of electricity? ☐ Yes or ☐ No
- II. Does the customer have the choice of buying the electricity also from other suppliers? ☐ Yes or ☐ No
- III. Assuming the customer decides to purchase electricity from the utility responsible for the connection, is the client required to sign an electricity supply contract that is separate from the connection contract? ☐ Yes or ☐ No (for example, the two contracts are merged into one.)
- IV. Where the connection and the supply contract are separate contracts, are they effectively signed with two different legal entities? ☐ Yes or ☐ No. If yes, please state the names of the two different legal entities. []
- V. If you answered question IV with YES, please explain if the signing of the two different contracts also translates into two separate procedures for the customer [].

5. Security deposit

- I. According to last year's answers, for a customer with the profile assumed above there is a security deposit in the amount of x LCU. Is this correct? ☐ Yes or ☐ No, new value as of June 2009 is [].
 - a. Please indicate whether the changes above are due to a **correction** (i.e. incorrect data) or a **reform** (i.e. modification in practice or by law since June 2009).
[]

- II. When is the security deposit returned to the customer? []
 - a. Is the deposit returned with an interest? ☐ No or ☐ Yes, the interest rate is
[].

- III. The security can be settled:
 - a. ☐ In cash or check only
 - b. ☐ With a bank guarantee
 - c. ☐ With a bond
 - d. ☐ Other; please describe. []

- IV. If your answer to the previous question was b. or c. please specify the fee charged by the bank and indicate if it is a one-time fee or an annual one. []

6. Legal time limits

- I. According to last year's answers, we know of the following legal time limits in your country. Please confirm the data and source for last year or let us know of any changes.

Process/Procedure	Last year's legal time limit	Legal time limit since June 2009
From application till preparation of estimate of connection fees		[]
From payment of the estimate till end of external works		[]
From end of external works till installation of meter		[]

As of our records the source of the legal time limits is:

Please update or correct: []

If you have made any changes above please indicate if they are due to a **correction** (i.e. incorrect data) or a **reform** (i.e. modification in practice or by law since June 2009). []

- II. In case the above time limits are not adhered to, some penalties against the utility might apply. Please confirm or update last year's answers on the penalty value and its unit (per breach, per day, etc.), and the source for the penalty data.

Process/Procedure	Last year's penalty	Penalty since June 2009
From application till preparation of estimate of connection fees		[]
From payment of the estimate till end of external works		[]
From end of external works till installation of meter		[]

As of our records the source of the penalty data:

Please update or correct: []

If you have made any changes above please indicate if they are due to a **correction** (i.e. incorrect data) or a **reform** (i.e. modification in practice or by law since June 2009). []

- III. In case the utility exceeds the time limits set in the law and is required to pay the customer a penalty, does it pay the penalty automatically or upon request from the customer?
☐ Automatically or ☐ Upon request
Please explain. []
- IV. Are the time limits above generally adhered to in practice? If not, please let us know what you consider the main reason for delays concerning the respective procedure (for example, too short to be practical, lack of material in the utility's stock, too few staff at the utility)? Please explain. []

Referral

Please help us expand our list of contributors by referring us to other experts in the private and public sector who can answer the Getting Electricity Survey.

	First name	Last name	Firm	Position	Phone	E-mail
Electricians	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]
Architects/ Engineers	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]
Regulators	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]
Construction companies	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]	[<input type="text"/>]

Thank you for completing the survey!

We appreciate your contribution to the Doing Business project.
The results will appear in *Doing Business 2011* and on our website:
<http://www.doingbusiness.org>.

Your work will be gratefully acknowledged in both.