UNDERSTANDING HOW MUCH ELECTRICITY YOU NEED

Customer Connection Model - 5 Step Process

1. **Apply** Voltage & Service Size
2. **Design & Proposal**
3. **External Approvals**
4. **Construction**
5. **Connection**

The first step in the Customer Connections Process is preparing the **application** which includes sharing your voltage and service size needs. This brochure outlines what you need to calculate your electricity needs. The amount of electricity used is also called electrical load and is made of two subcategories: **Connected Load** and **Operating Load**. When we're calculating your electricity needs, we're going to use operating load.

Electrical Load

This is the how much electricity you think you're going to need, measured in kilowatts (kW).

Connected Load

This is how much electricity you use if everything is turned on at the same time. This is unlikely and almost never happens - like turning on an electric heater and an air conditioner at the same time.

Operating Load

Realistic version of energy consumption; based on what electrical items are likely to be running simultaneously day-to-day. This is what we'll use to calculate your electrical needs.

Operating Load

Operating load is a more accurate measure of your consumption so we use it to **determine your contractual use of electricity.** The more accurate this information is, the better we can manage your needs and avoid overpayment on your bills. The contracted amount appears as the distribution contract demand (DCD).

Please see the attached worksheet to help calculate your operating load.

Tips

- Ask your electrician to complete a preliminary load calculation. They will be able to provide you your connected and operating load as well as your voltage and service size.
- Square footage is not an accurate indicator of operating load. Ex. A manufacturing factory will use significantly more power than a storage warehouse of the same size.
- Confirm if your facility qualifies as temporary (less than one year) or permanent. Only permanent services qualify for ATCO's investment into the project, and may offset some of the costs to build the services.

ATCO

How this Affects You

Commercial Customers
A larger operating load implies we have a higher DCD. The higher the DCD is set the more ATCO invests into your project, up to a certain amount. This may lower your connection costs but will increase the minimum threshold of electricity you will be charged each month.

Farm Customers
Your DCD and investment is based on your breaker size. A larger operating load means a larger breaker, and in turn a larger DCD. If your service is large enough, we may consider you a commercial customer to provide you with lower overall costs.

Residential
You don't have a contracted DCD. You will always pay for what you use.

Did you know?

The use of DCD is comparable to how your data plan for your cell phone works. You have a plan with a set amount of data and you will be charged for that even if you use less. If you go over, your bill will be higher. Your electricity bill works in the same way.

FAQs

I'll expand my business later, so I may need more electricity eventually. Should I just get it now?

We do not recommend this, as you will run the risk of overpaying your monthly bill until then. We would still like to see your plans, so that we can proactively prepare to support your expansion and help reduce some costs later (I.e. install a sturdier pole or larger vault). This will make the expansion or upgrade process easier. Note that any costs associated with preparing for a larger service in the future, will be out of pocket.

How do I know if my DCD is bigger than what I need? How can I fix this?

First, check your monthly bill. It will display your DCD, and the power you've been drawing during the billing period – compare and review them. If you think you're overpaying, give ATCO a call at 1-800-668-2248, and ask for a re-assessment of your bill. We'll re-calculate the numbers and, if applicable, downgrade the service as necessary to reflect your actual usage. Please note, there may be costs associated with lowering your contracted DCD.

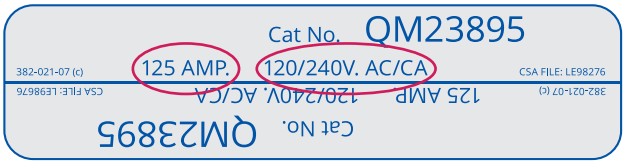
Should I undersize my load? What would happen if I did?

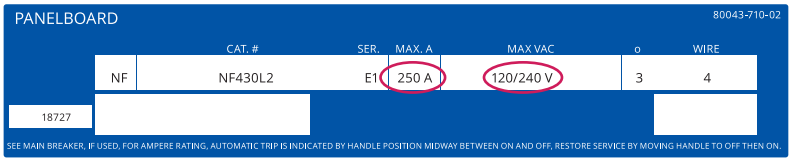
No. Undersizing may lead to additional costs associated with future upgrades that would be more costly than properly sizing your service at the beginning (e.g. Transformer is undersized and needs to be upgraded).

If you did undersize your load, call us at 1-800-668-2248. We will review the service and our original proposal to see what we can do to resolve the issue. If appropriate, we will complete the necessary upgrades. Although we may be able to invest in your incremental load, the full project costs may not be covered and you will need to pay an additional upfront contribution.

Calculate Operating Load

To complete this calculation, you will need your electrical panel size and your panel voltage. You can find this information on a sticker or metal card attached to your electrical panel (examples shown below). Otherwise, contact your electrician. Follow the steps below to calculate your operating load.





1	**Electric Panel Size** Record the actual panel size (amps), and not the service-rated size. For multi-site developments, like strip malls, calculate the load for each unit independently.	*For example, your panel size is 170A, but your service-rated size is 200A. Electricians tend to round up to determine your service-rated size. Electric Panel Size _____ A
2	**Secondary/Panel Voltage** Please select the panel voltage that corresponds with your unit or development.	1 Phase, 3-wire: ☐ 120/240V 3 Phase, 4-wire: ☐ 120/208V ☐ 277/480V ☐ 347/600V
3	**Converting the above into kW** Using the formula, calculate the kilowatt usage using the values recorded above.	1-Phase _____ A (*Amperage*) x _____ V (*Secondary Voltage 240V*) / 1000 x 0.9 = _____ kW 3-Phase _____ A (*Amperage*) x _____ V (*Secondary Voltage 208/480/600V*) x 1.73 / 1000 x 0.9 = _____ kW

Place the total above from Step 3 into the green box below.

Connected Load	Value in kW, assuming everything is running at the same time.	kW
Operating Load	Apply a percentage to your total connected load of what you'll typically need to run your business – typical percentages is 80% for oilfield/industrial, 60% for commercial/farm, and 30% for residential. **(Connected Load) x (percentage) = Operating Load**	kW