

# The Results are in: Goal Zero

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An up-and-comer in the green tech industry, Goal Zero produces portable solar products such as panels, charging kits and miniature generators. Rather than the more traditional industrial-sized solar panels that typically top residential homes, Goal Zero focuses on convenience and personal green tech gadgets. Such products are especially attractive to outdoor enthusiasts. For those who don't want to be attached to a wall to charge their electronic devices Goal Zero has your back!

While originally designed for the hiker, the backpacker, or the overall adventurer, testers at Consumers' Research felt the product may also lend itself to "the busy professional." The busy professional is often on the go and may forget his or her phone charger. For this person, a portable device that charges small electronics could be a great fallback for forgetfulness.

While the company produces a variety of charging kits, CR elected to test the "Nomad 7 Solar Panel and Guide 10 Plus Recharger" (full kit costs \$119.98). The product is advertised on the Goal Zero website as the ultimate lightweight power supply, using a USB connection and rechargeable AAA batteries to power small electronics including headlamps, smart phones, and GPS devices. For consumers interested in charging larger devices, Goal Zero offers the Sherpa 50 Solar Kit able to charge tablets, laptops, and digital cameras for \$409.97.

The kit arrived in two separate and surprisingly small packages. When opened, the CR team found a lightweight panel designed to attach to a tent or backpack. The panel is compact and folds shut for storage using magnets. The instructions included in the box were clear, explaining the set-up process both in text and via images. The product is simple to set up and took approximately 5 minutes from box to sunlight. Most impressive though, is how light the panel is. It unfolds to be the size of a large, legal size envelope and weighs very little – perfect for carrying around. Furthermore, the panel includes pockets in which one can store the multiple cables included with the kit.

Despite its expectations, CR discovered that although the product is great for the outdoorsman (its target customer), it is less successful when used by "the busy professional" (not its target customer). According to USA Today, the national average one-way commute time is 25.5 minutes. The commute during which the Nomad 7 Solar Panel was tested included 30 minutes of outdoor time in each direction, however, the product's full potential was not reached. Half an hour twice a day to charge the Guide 10 Plus Recharger battery pack was not nearly enough. Three full hours are needed to do so – more than double the time needed to charge a smartphone via wall outlet. Furthermore, while an iPhone 5 adequately charged when connected to the Nomad 7 in constant sunlight, a fully charged Guide 10 Plus Recharger battery pack was unable to completely charge the smartphone on its own.

In order for the busy professional to employ the solar kit as a viable back-up charging device, more sun exposure is needed than what is available in a typical commute. Placing the panel on the dashboard of a vehicle or a sunny window during the day increases sun exposure, but for commuters using public transportation or urban drivers who park in underground garages this is not always an option. The next best alternative is leaving the panel and battery pack at home in the sunlight to charge during the day.

For testing purposes, this tactic worked well. The battery pack charged enough that it was prepared the next time a phone needed some juice. However, this was clearly less convenient than simply plugging into a wall. If depending on the Goal Zero Nomad 7 Solar Panel as a fallback option, one would have to plan to need a failsafe. However, one probably never plans to forget their charger.

In a quick side-by-side review of portable solar chargers conducted by OutdoorGearLab, the Goal Zero Nomad 7 received a score of 61 out of 100 when used as intended. Similar to the findings of CR, the outdoor company noted the pros for the product include "light, inexpensive, simple, can charge two

devices at once.” Though the final point noted by the company was untested by CR, multiple sources confirm that the product struggles to charge multiple devices at once and is unable to charge an iPad. Noted on OutdoorGearLab’s website, the Nomad 7 struggled with charging iPhones and would stop charging the moment a person or cloud blocked the sun. However, the inclusion of the Guide 10 Plus Recharger battery pack in CR’s product testing eliminated this problem and ensured the phone continued charging thanks to the energy saved in the pack. Similar products recommended by OutdoorGearLab include the SolarMonkey adventurer, and Instapark Mercury 10.

While such products are bringing green tech closer to everyday use, there is still a ways to go before today’s gadget dependency can be supported by portable solar power. For now, GoalZero remains most useful to the outdoorsman. ◀