



CARES Act: NTUA's Off-Grid Solar Program

In August 2020, the Navajo Nation Office of the President and Vice President and the Navajo Nation Council authorized the Navajo Tribal Utility Authority (NTUA) to buy and install 1,000 off-grid 3.0 KW residential solar units. The funding for this program comes through the United States CARES Act.

The units are to be distributed on the basis of 40 units per each Navajo Nation Council Delegate legislative district and an additional 40 units are designated for the homes of U.S. Military Veterans.

These solar units will only be offered to homes currently not connected to the electric grid. Under the current CARES Act requirements, the units must be installed by the end of December 2020.



NTUA is the only utility in the United States to offer this type of program. NTUA started this program in the early 1990s and we have a tremendous amount of knowledge and experience on what it takes to install, operate and maintain these types of units. This will be our 6th generation of these types of units, meaning throughout the years NTUA has installed the latest in residential solar unit technology.

NTUA's 6th Generation Off-Grid Solar Unit and House Wiring Package consists of:

- 3.0 KW stand-alone photovoltaic power system
- Latest technology of inverters as well as top end charging system and monitoring software
- 18 cubic feet residential energy-star refrigerator
- Minimum of 800 amp-hour Lithium based Battery Storage system
 - Has the ability to supply power to a water pump for homes with existing cistern system
 - Fully charged battery may provide up to 3 days of power
- Systems will be secure and designed to minimize theft and vandalism



For homes that do not have house wiring, NTUA will install the following based on a standard 2 Bedroom Home:

- 6 lights (1- bedroom, 1- bedroom, 1- porch light, 1-living room, 1- kitchen, 1-bathroom)
- 7 electrical outlets (1- bedroom, 1-bedroom, 1-bathroom, 1-living room, 1-dedicated fridge, 1-water pump-under sink, 1-kitchen)
- 900 feet of #12 industry approved wire (300’-solid black, 300’ solid white, 300’ solid green) will be dedicated for each home.
- 6 space load center
- All house wiring will be placed in steel conduit - Electric Metallic Tubing (EMT)

For homes that are already house wired:

Customer will need to hire a licensed electrician to certify that the house wiring meets National Electric Code Standards.

NTUA Operation, Maintenance, and Repair Program of NTUA CARES Act Stand-Alone Solar Units:

- Semi-Annual Visits to all NTUA Stand-Alone Solar Units encompass the following:

- **Operation**

- Verify all Solar panels are performing within specifications
- Verify Inverter is receiving and delivering all electrical loads
- Verify residential load center is receiving all electrical load from the solar unit

- **Inspection**

- Visual Inspection
 - Verify no damage to the solar array or any of the balance of system
- Physical Inspection
 - Check all connections and fasteners for tightness
 - Check batteries for proper function

- **Troubleshooting**

- Malfunction of components
- Battery failures
- Balance of the system failures
- Seek Cause of the malfunction and determine best appropriate action of repair

- **Repair (labor, equipment and materials are included)**

- Safely replace all components that are not operating with-in specifications
- Batteries, solar panels, charge controllers, monitoring systems, cables and nuts, breakers, fuses, disconnect switches, structural components and inverters.

- **Maintenance**

- Batteries- load test for proper battery responses
- Clean all connections, vacuum within all enclosures and clean solar panels
- Adjust solar array for Summer and Winter Solar Angles
- Check all grounding rods and wiring
- NTUA will provide Operation, Maintenance, and Repair of the unit for its useful life



Costs:

- All customers receiving an CARES Act: NTUA Off Grid Solar Unit will need to pay the following:
 - One-time NTUA account establishment fee of \$10.60
 - One-time security deposit of \$25.00
 - Operation, Maintenance and Repair Fee of \$84 per month (plus NN Tax) or \$21 per week (plus NN Tax)
- All Applicants must have zero outstanding balances with NTUA. If the Applicant does not have a zero balance account, the account will need to be brought current or a payment arrangement must be put into place.
- For a customer whose house is already wired, they will need to hire a licensed electrician to certify that the house wiring meets the National Electric Code. NTUA will provide a form for the licensed electrician to complete.
- For a customer who has an existing cistern, they will be required to hire a plumber to install the NTUA furnished water pump.

Solar Unit Application Process:

If you are interested in having a solar unit installed at your house, you must complete the CARES Act: NTUA's Off-Grid Residential Solar Program Application. You can complete an application by visiting an NTUA District Office OR by calling NTUA. NTUA's telephone number is 1-800-528-5011. When you visit or call NTUA, please explain that you are applying for the CARES Act: NTUA's Off-Grid Residential Solar Program.



After you complete an application, an NTUA representative will call you to schedule a time to visit your home to determine if you are eligible to receive a solar unit. Please feel free to contact NTUA to follow up on your application if you do not hear from NTUA.

If you call to apply and you are selected to participate in the CARES Act: NTUA's Off-Grid Residential Solar Program, you will eventually need to visit an NTUA District Office to sign and verify the necessary paperwork and to pay the establishment fee and security deposit. (If it is too burdensome for you to visit an NTUA District Office because you live in a satellite community, you may be able to make arrangements to mail in the necessary documentations and payments to receive a solar unit. If it is too burdensome for you to get to a District Office, please inform NTUA at the time you apply and explain the circumstances to the staff.)

Installation of Solar Units

Installation of solar units – we follow the same standards as electric line connection when connecting to residential homes.