

# KEEP SAFE

A GUIDE FOR RESILIENT HOUSING DESIGN IN ISLAND COMMUNITIES



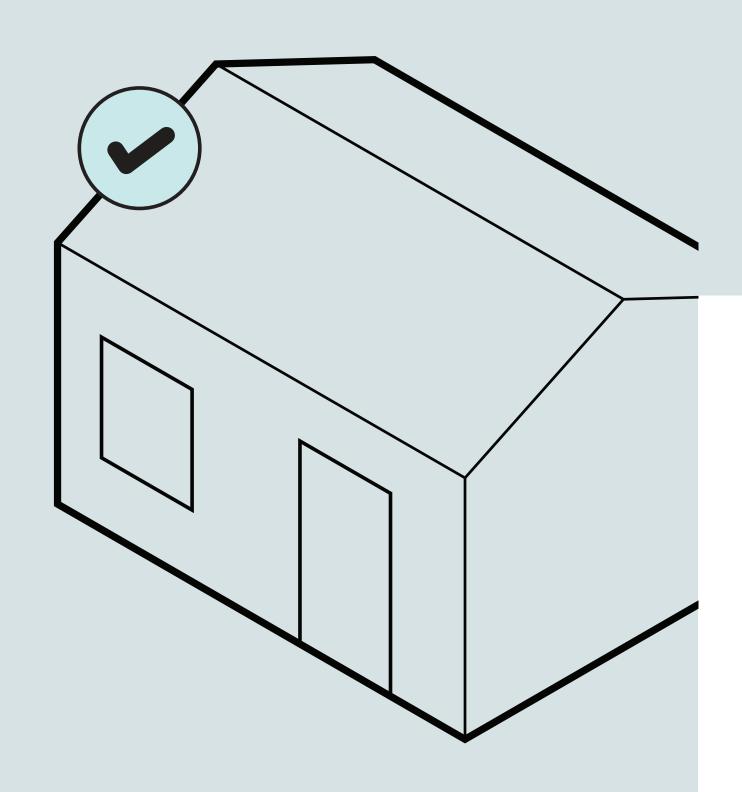












# **PUTTING IT ALL TOGETHER**

How to determine who should be involved in your building or rebuilding, what agencies and regulations are available to help you through the process, and how to find and navigate important resources.



# **GUIDANCE**

### **ACTION PLAN: STEPS**

Once you determine which resilience strategies to implement in your building or home, begin planning how to implement the work.

### YOUR BUILDING TEAM

Your building team should consist of all of the professionals and stakeholders involved in implementing the strategies for housing resilience.

# FINANCIAL AND PROGRAMMING RESOURCES

Resources available for housing repair and construction

### A LIST OF RESILIENCE AND RECOVERY CONTACTS

Contacts and Organizations to help plan and rebuild.

# Rograma Nuella Renacur Jallie de Manualidades Maria Jallie de Rintura - Pec y Dep Humano Jallie de Rintura - Stya Rice 1. Recursión y Departo - Rec y Part Humano 13. Vista at Banco de Ulinembro - Injudo 18. Manualidados par. Sucar 20. Jallie de Manijo de Store Rog 27. Camprelli 28. Octividad Rog. Reco Hell 30. Octividad Rog.

### **BUILDING TO CODE**

The main purpose of building codes is to protect public health, safety and general welfare with respect to the construction and occupancy of buildings and structures.

# HOW TO OBTAIN A BUILDING PERMIT

The following section explains what projects require a construction permit and how you should go about the process.

# WORKING WITH YOUR CONTRACTOR

Tips for working with your building contractor or building professional.

# INSURING YOUR PROPERTY

As you determine your resilience improvements, it is important to understand the implications any building improvement may have on your property insurance premium or deductible, if applicable. Here is a list of sample questions to ask your insurance agent.



# YOUR ACTION PLAN

### **PUTTING IT ALL TOGETHER**

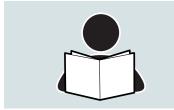
Once you determine which resilience strategies to implement in your building or home, begin planning how to implement the work. This section will help you determine your Action Plan:

- ▶ The steps to be able to implement a resilient strategy or strategies
- ▶ Financial and Programmatic Resources to support your improvement
- ► How to create your Building Team
- ► Working with a Contractor Tips
- ▶ When a Construction Permit is needed with Associated Regulatory Code
- ► Insuring your property and Improvement





Determine the problem or building vulnerability you want to solve for.



2

Read through the Guide and determine the Strategies to resolve the issue(s). Create scope of work for a safer and more resilient home or building.



3

Determine your budget and available Financing and Programming Resources.



Determine if you need a construction permit. Refer to How to Obtain your Building Permit. If you need a construction permit, contact a licensed architect or engineer because they will have to submit certified plans to the Permits Management Office (OGPe, by its Spanish acronym). There are a variety of ways to select a building team, including your architect and contractor, such as formal bidding. \*\*If the structure is located in a flood zone as designated by FEMA, the designer will need to show how this risk will be mitigated.



Contact at least two building professionals (architect, contractor, engineer) to obtain bids, and from there decide who do you want to work with. These individuals should have experience with the work you have in mind. Share this Keep Safe book with them. Refer to working with your contractor for tips.



Build, monitor a project's progress, and process payments in accordance with your contract.



Build your building team. Refer to your Building Team.



Consult with your insurance agent to determine if improvement will reduce or increase your insurance premium and deductible. See Insuring Your Property's questions to ask your insurance agent.



8

Hire selected contractor who will secure workforce, permits, materials, and implement work. Refer to working with your contractor for tips.



9

Develop a contract for the project. Refer to working with your contractor for tips.



Maintain and operate your improvement in good condition!





# **YOUR BUILDING TEAM**

Your building team should consist of all the professionals and stakeholders involved in implementing the discussed strategies for home resilience. Here are some suggested team members:



### MULTIFAMILY BUILDING RESILIENCY TEAM

- ▶ Building owner
- ▶ Owner's representative
- ► Architect
- ▶ Engineer
- ► General contractor

- ► Insurance agent
- ▶ Property manager
- ► Financing partner
- ► Non-governmental organization (NGO)

### SINGLE FAMILY BUILDING RESILIENCY TEAM

- ▶ Homeowner
- ► Architect \*
- ► Engineer \*
- ▶ Contractor
- ▶ Insurance agent

- ► Hardware store merchant
- ► Non-governmental organization (if applicable)
- ▶ Neighbors
- \* To obtain a building permit, you need to work with an engineer or architect or professional certified to provide permits.



08 PUTTING IT ALL TOGETHER 08



# **BUILDING TO CODE**



**>** 

# **BUILDING TO CODE**

Puerto Rico's adoption of new building codes marks a major milestone in the island's recovery, and it sets in motion a roadmap that leads to a safer, stronger, and more resilient Puerto Rico. The 2018 Puerto Rico Building Code (PRBC) represents the first significant revision since 2011 and includes hazard-resistant provisions that provide guidance for safer construction in all the island's 78 municipalities. The 2018

WHAT IS IT IMPORTANT TO BUILD HOUSING TO CODE-WHAT YOU NEED TO KNOW

- ➤ The main purpose of building codes is to protect public health, safety, and general welfare with respect to the construction and occupancy of buildings and structures.
- ▶ Building codes are a series of regulations created through consensus by building and design professionals, experts, product designers, researchers, and scientists that are designed to govern the safe design, construction, repair or alteration, and general maintenance of buildings.
- ▶ Building codes are created at the international level and adopted at the state and local levels. Typically, municipal jurisdictions adopt the model building codes set forth by the International Building Code (IBC) which creates consistency among communities on foundation for codes and prevents them from having to "reinvent the wheel." Codes are constantly improved to reflect building innovation, technological advancements, and/or real-life scenarios in which devastation could have been prevented through better building.
- ▶ Building to code and having appropriate "signoffs" enable you to ensure the property meets regulations should it be transferred to another owner. Moreover, it provides investors or banks some assurance as to the state of completion and safety of the structure.

International Codes are the foundation of the 2018 Puerto Rico Building Code, and these codes form the basis for laws and regulations affecting communities in the U.S. and worldwide

The Planning Board oversees code development. OGPe oversees code compliance, permitting processes, and inspections.

# CODES REGULATING BUILDING DESIGN AND CONSTRUCTION

- A. 2018 International Building Code (IBC) as adopted by the 2018 Puerto Rico Building Code (PRBC) and references
- B. Energy Code ASHRAE Standard 90.1 or International Energy Conservation Code (IECC)
- C. 2018 International Plumbing Code (IPC) as adopted by the 2018 PRBC
- D. 2018 International Mechanical Code (IMC) as adopted by the 2018 PRBC
- E. 2018 International Private Sewage Disposal Code (IPSDC)
- F. 2018 International Fire Code (IFC)
- G, 2018 International Green Conservation Code (IgCC)
- H. 2018 International Residential Code for One- and Two-Family Dwellings
- I. 2018 International Existing Building Code
- J. National Electric Code (NEC)
- K. ICC 700 National Green Building Standard (NGBS)
- L. 2015 International Solar Energy Provisions (ISEP)
- M. Americans with Disabilities Act (ADA)
- N. 2010 Joint Permit Regulation (Reglamento Conjunto de Permisos para Obras de Construcción y Usos de Terrenos )

STRATEGY	01 REINFORCE SITE	02 REINFORCE SITE WITH VEGETATION	<b>04</b> ASSESS PRIORITIES FOR YOUR HOME OR BUILDING
CODE	A, H	A, H, K, L	А, Н
	05 BUILD A STRONG FOUNDATION	06 BUILD STRONGER WALLS	07 BUILD A STURDY ROOF
	А, Н	А, Н	А, Н
	08 ANCHOR, SEAL& PROTECT BUILDING OPENINGS	09 FLOOD PROOF HOME	10 REDUCE THERMAL HEAT TRANSFER
	A, H, D	A, H, D	А, В
	11 INCREASE VENTILATION	12 BENEFIT FROM NATURAL LIGHT	13 CONTROL MOISTURE AND MOLD
	А, В	A, B	A, B, C
	15 REDUCE YOUR ENERGY USE	16 INTEGRATE SOLAR ELECTRICITY	17 INTEGRATE SOLAR THERMAL ENERGY
	А, В	A, B, L	A, B, C, L
	18 INSTALL ENERGY BACKUP	20 COLLECT AND USE RAINWATER	21 IMPROVE SEPTIC WASTE DISPOSAL SYSTEM
		•	

A, C

24 CHOOSE A SPACE TO KEEP

YOUR FAMILY SAFE

**22 PREVENT WASTEWATER** 

**BACKFLOW IN HOMES** 

A, C

A, E, C

A, D

**27 IDENTIFY AND PREPARE A** 

SAFE COMMUNITY SHELTER



# **HOW TO OBTAIN A BUILDING PERMIT**

Historically, many homeowners and contractors in Puerto Rico have not procured required construction permits when building, rebuilding, rehabilitating, or repairing their home. The following section explains what projects require a construction permit and how you should go about the process. If your project is found to have zoning or environmental concerns, additional revisions may be necessary and may require more time for review.

### WHAT YOU NEED TO KNOW

- ▶ Permits can certify that your construction project is built to code. This is essential to not only ensure that your building meets minimum life safety requirements, but it provides the benefit of standards derived from the latest research, product innovation, and science.
- ➤ Since the permit reform in 2009, repairs, rehabilitation, and construction of single-family homes that do not require a zoning change can be submitted electronically through the Permits Management Office's/ Oficina de Gerencia de Permisos' (OGPe, by its Spanish acronym) website. OGPe should be consulted for all permits.
- ► The Planning Board GIS provides location, zoning, flooding, permitting, and other information of the properties and links to the municipalities' zoning maps. See http://gis.jp.pr.gov/GeoLocalizador/index.htm?refresh=501.
- ► If you need utility permits for:
  - Electricity, you will need to consult with the Puerto Rico Electric Power Authority (PREPA).
  - Water, you will need to consult with the Puerto Rico Water and Sewer Authority (PRASA).
  - The following agencies are involved in the permitting process:
  - OGPe is the lead office for construction permits, including permits for site identification and site work (erosion and sedimentation control plan, construction dust, and solid waste management). OGPe can relay your construction documents to an array of agencies to provide input and the necessary permits.
  - Environmental Quality Board (EQB)/ Junta de Calidad Ambiental (JCA) has the main function of protecting and conserving the environment and is the lead agency for environmental permits associated with site work, waste management, and related activities.

- ▶ Step 1: Determine the cost of your project to see if you will need a construction permit. Review the information below to know which types of projects require a permit.
- ▶ Step 2: If your project requires a construction permit, you need to contact a licensed architect or engineer who can assist you in the process of obtaining a permit through OGPe. If the project complies with zoning and can obtain an environmental determination via categorical exclusion, you can get your permit electronically. According to the EQB's Resolution 11-17 of November 21, 2011, a categorical exclusion is defined as "those actions, predictable or routine, that in the normal course of execution will not have a significant environmental impact."
- ▶ Step 3: Take into consideration that you must pay for any licensed professional services and additional fees that include filing fees, taxes, signage, and workers' compensation. See the example for a \$100,000 construction project shown below.
- ➤ Step 4: The licensed professional will need proof that you are the owner of the property. If you are a renter, you will need to provide proof via a formal lease that authorizes you to carry out the project.
- ➤ Step 5: Make sure the licensed professional identifies an inspector to certify that the project was done according to plan. The inspector cannot be the same professional that applies for the construction permit.

# PROJECTS THAT DO NOT REQUIRE A CONSTRUCTION PERMIT

- ► The following renovation projects do not require a permit unless they are part of a larger construction project:
- Painting
- ▶ Sealing roofs
- ▶ Landscaping projects
- Fixing cracks and leaks in a building or structure
- ▶ Plastering existing concrete surfaces
- Installing or removing non-structural interior wall partitions
- ► General maintenance
- ▶ Other minor repairs and construction or substitutions do not require a permit unless the work occurs in historical places. However, a project must be notified to OGPe if it exceeds \$6,000 or the scope of work exceeds six months. The following projects do not require a permit if they meet the abovementioned requirements:
- Simple substitutions
- Repairs to concrete buildings
- ► Simple substitutions in plumbing and electric systems
- ► Simple substitutions in signage

### PROJECT THAT REQUIRE A CONSTRUCTION PERMIT

If your project does not meet the requirements above mentioned, you need a construction permit. The following section describes what you can expect from the licensed professional procuring your permit.

- **1.** Open a case file in OGPe's system. This case file contains information about the owner and requires proof of ownership. All construction projects need to create this file, even if the project is in an autonomous municipality.
- 2. File an environmental determination through a categorical exclusion. The licensed professional will need to submit an environmental determination. If the project complies with zoning and can obtain an environmental determination via categorical exclusion, you can get your permit electronically. According to the EQB's Resolution 11-17 of November 21, 2011, a categorical exclusion is defined as "those actions, predictable or routine, that in the normal course of execution will not have a significant environmental impact."
- **3.** File the construction permit on OGPe's system. The construction permit requires a licensed professional to submit various documents, which include plans and specifications, owner authorization, flood map, septic tank diagram (if needed), certification that construction complies with code, and handling of solid waste, among others.
- **4.** Notice of approval of construction permit. Once filed with OGPe, you will be notified when the permit is ready and of any additional fees that must be paid. When the notice of approval is issued, you will be asked to pay for taxes, workers compensation, and signage. OGPe issues the construction permit after payment is complete.

08 PUTTING IT ALL TOGETHER 08



# **HOW TO OBTAIN A BUILDING PERMIT**

### **OBTAINING PERMITS IN LARGER PROJECTS**

A larger project goes through various stages in the permitting process. Each stage requires interaction with different agencies depending on the project location and complexity. The stages include: site selection, schematic

drawings, design development, construction drawings, construction permits, final endorsements, and use permit. The chart below shows the agencies involved at each stage.



OGPE, San Juan

# EXAMPLE OF PERMITTING COST FOR \$100,000 CONSTRUCTION PROJECT IN SAN JUAN:

Cost	Detail	
\$ 100,000.00	Construction Cost	
\$ 600.00	Stamp and Taxes	
\$ 35.00	Construction Filing Fee	
\$ 75.00	Exclusion Categorica	
\$ 2,288.00	Workers Compensation (CFSE)	
\$ 3,000.00	Tax over hard cost (Arbitrios)	
\$ 2,500.00	Licensed Professional	
\$ 108,498.00		





Humacao



For More information on process visit: https://www.doingbusiness.org/content/dam/doingBusiness/country/p/puerto-rico/PRI.pdf



# FINANCIAL AND PROGRAMMATIC RESOURCES

If you cannot finance your implementation of the resilient strategies on your own, there are a variety of financial and programming resources available to help you do so. Funding for a project can be provided to homeowners or residential building owners through loans, grants, or by participating in a program administered by a federal, state, municipal, or non-profit organization. The following table summarizes some of the institutional resources available and what type of assistance they provide: funding resilient upgrades, range of

direct grants, subsidies, and loans may be available for housing repair and construction. It is important to check newspapers and websites for updates and availability of new programs. These were the programs available at the time of this guide's publication.

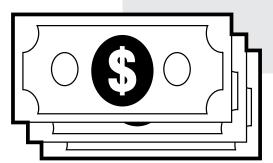
Additional list of resources-visit: https://www.fema.gov/media-library-data/1474548130660-db3c22abcc037416428fe7db69d45926/FundingResources.pdf.

TYPE

RESOURCE

### LOAN

- Single-Family Housing Repair Loans and Grants (USDA) (Section 504 Home Repair Program)
- Disaster Loan Assistance (SBA)
- Single-Family Housing Direct Home Loans in Puerto Rico (USDA) (Section 502 Loan Program)
- Single-Family Housing Guaranteed Loan Program in Puerto Rico (USDA)
- Multi-Family Housing Loan Guarantees (USDA) or (Section 538 progarm)
- Multi-Family Housing Direct Loans in Puerto Rico (USDA)



### GRANT

- Puerto Rico Department of Housing (Departamento de la Vivienda) Repair and Construction Programs
- Single-Family Housing Repair
   Loans and Grants (USDA) (Section
   504 Home Repair Program)
- USDA Emergency Community Water Assistance Grants
- USDA Community Facilities Direct
   Loan & Grant Program
- USDA Water & Waste Disposal Loan & Grant Program

### **DIRECT SUPPORT**

- Weatherization Assistance Program (WAP)
- Puerto Rico Department of Housing (Departamento de la Vivienda) Repair and Construction Programs
- Solar Power Purchase Agreement (PPA)
- FEMA programs
- Range of Non Profit and Institutional Support

### **LOAN PROGRAMS**

### SINGLE-FAMILY HOUSING REPAIR LOANS AND GRANTS (USDA) (SECTION 504 HOME REPAIR PROGRAM)

This program provides loans to very-low-income homeowners to repair, improve or modernize their homes or grants to elderly very-low-income homeowners to remove health and safety hazards. Grants for very low-income seniors may be used to pay for the costs of home repairs and improvements of up to \$7,500 that will remove identified health and safety hazards, or repair or remodel dwellings to make them accessible for household members with disabilities. https://www.rd.usda.gov/programs-services/single-family-housing-repair-loans-grants

# DISASTER LOAN ASSISTANCE (SBA)

The Small Business Administration (SBA) provides low-interest disaster loans to businesses of all sizes, homeowners, and renters. SBA disaster loans can be used to repair or replace the following items (damaged or destroyed in a declared disaster): real estate, personal property, machinery, equipment, inventory, and business assets. Loans for homeowners may range from \$40K-\$200K. www. DisasterAssistance.gov, or call 1-800-621-3362

### SINGLE-FAMILY HOUSING DIRECT HOME LOANS IN PUERTO RICO (USDA) (SECTION 502 LOAN PROGRAM)

Program assists low- and very lowincome applicants obtain decent, safe, and sanitary housing in eligible rural areas by providing payment assistance to increase an applicant's repayment ability. Loan funds may be used to make general repairs and improvements to properties or to remove health and safety hazards including: replacement of heating, plumbing, electrical services, roof, or basic structure as well as weatherization, water, and waste disposal systems. Loans are at a 1% interest rate for very low-income applicants. The USDA direct loan is beneficial for very low-income families who cannot obtain a home loan through traditional means. https://www. rd.usda.gov/programs-services/singlefamily-housing-direct-home-loans/pr

### SINGLE-FAMILY HOUSING GUARANTEED LOAN PROGRAM IN PUERTO RICO (USDA)

This program assists approved lenders in providing low- and moderate-income households the opportunity to own adequate, modest, decent, safe, and sanitary dwellings as their primary residence in eligible rural areas. Eligible applicants may build, rehabilitate, improve, or relocate a dwelling in an eligible rural area. The program provides a 90% loan note guarantee to approved lenders in order to reduce the risk of extending 100% loans to eligible rural homebuyers. https:// www.rd.usda.gov/programs-services/ single-family-housing-guaranteed-loanprogram/pr

### MULTI-FAMILY HOUSING LOAN GUARANTEES (USDA) OR (SECTION 538 PROGARM)

The program works with qualified private-sector lenders to provide financing to qualified borrowers to increase the supply of affordable rental housing for low- and moderate-income individuals and families in eligible rural areas and towns. Eligible uses of the program include new construction costs of the project, acquisition with moderate rehabilitation of at least \$6,500 per unit, and revitalization of Section 515 properties. Development includes family, senior, and farm labor housing properties. It is usually paired up with 9% low-income housing tax credit (LIHTC). Available to Non-profits, for profits and state governments. https://www.rd.usda.gov/programsservices/multi-family-housing-loanguarantees

### MULTI-FAMILY HOUSING DIRECT LOANS IN PUERTO RICO (USDA)

This program provides competitive financing for affordable multi-family rental housing for low-income, elderly, or disabled individuals and families in eligible rural areas. This program assists qualified applicants that cannot obtain commercial credit on terms that will allow them to charge rents that are affordable to low-income tenants. This program funds may also be used to buy and improve land, and to provide necessary infrastructure and facilities such as water and waste disposal systems. This program allows up to a 30-year payback period. https://www. rd.usda.gov/programs-services/multifamily-housing-direct-loans/pr



# FINANCIAL AND PROGRAMMATIC RESOURCES

### **GRANTS**

### PUERTO RICO DEPARTMENT OF HOUSING (DEPARTAMENTO DE LA VIVIENDA) REPAIR AND CONSTRUCTION PROGRAMS

Range of programs funded through the Community Development Block Grant - Disaster Recovery Program (CDBG-DR). These programs are available to support the repair and construction needs of homes and residential facilities. The Housing Department oversees programming of homeowner repair programs funded by CDBG-DR funds.

### SINGLE-FAMILY HOUSING REPAIR LOANS AND **GRANTS (USDA) (SECTION 504 HOME REPAIR** PROGRAM)

This program provides loans to very-low-income homeowners to repair, improve or modernize their homes or grants to elderly very-low-income homeowners to remove health and safety hazards. Grants for very low-income seniors may be used to pay for the costs of home repairs and improvements of up to \$7,500 that will remove identified health and safety hazards, or repair or remodel dwellings to make them accessible for household members with disabilities. https://www.rd.usda.gov/programsservices/single-family-housing-repair-loans-grants.

### **USDA EMERGENCY COMMUNITY WATER ASSISTANCE GRANTS**

This program helps eligible communities prepare, or recover from, an emergency that threatens the availability of safe, reliable drinking water.

https://www.rd.usda.gov/contact-us/state-offices/pr

### **COMMUNITY FACILITIES DIRECT LOAN & GRANT PROGRAM**

This program provides affordable funding to develop essential community facilities in rural areas. https:// www.rd.usda.gov/contact-us/state-offices/pr.

### **USDA WATER & WASTE DISPOSAL LOAN & GRANT PROGRAM**

This program provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas.

www.rd.usda.gov/contact-us/state-offices/pr



### **DIRECT SUPPORT**

### WEATHERIZATION ASSISTANCE PROGRAM (WAP)

The Weatherization Assistance Program (WAP) enables low-income families to reduce their energy bills by making their homes more energy efficient and more affordable to operate. Direct installation and construction work in energy, thermal performance, water efficiency, and associated rehabilitation work is performed by contractors free of charge to the owner and supports a variety of building envelope and efficiency improvements. The average expenditure is \$6,500 per home. http://www. pppe.pr.gov/Programas/Pages/Weatherization-Assistance-Program.aspx.

### PUERTO RICO DEPARTMENT OF HOUSING (DEPARTAMENTO DE LA VIVIENDA) REPAIR AND **CONSTRUCTION PROGRAMS**

Range of programs funded through the Community Development Block Grant - Disaster Recovery Program (CDBG-DR). These programs are available to support the repair and construction needs of homes and residential facilities. The Housing Department oversees programming of homeowner repair programs funded by CDBG-DR funds. https://www.vivienda.pr.gov/.

### **SOLAR POWER PURCHASE AGREEMENT (PPA)**

PPA's can help a housing unit or facility incorporate a solar photovoltaic (PV) system into their facility by providing a third party with rights to use the roof to generate renewable energy that will be "leased" back to the owner at no charge. The PPA will typically finance, build, and operate a renewable energy system. There are a variety of vendors that perform this work, make sure to check references and watch out for fraudaulent vendors. This program should not require an owner deposit.

### **FEMA PROGRAMS**

Assistance from the Federal Emergency Management Agency (FEMA) is available before and after disaster events to help individuals and families affected by hurricanes to take care of necessary expenses and serious needs that are not covered by insurance or other forms of assistance. Assistance to homeowners might include rental support, home repair, and home replacement as well as social services support and other technical assistance. https://www.fema.gov/es/huracan-maria.



# CONTACTS FOR RESILIENCE PLANNING AND PROTECTION

### PUERTO RICO COMMUNITY FOUNDATION

This foundation stimulates community investment and maximizes the impact of each contribution made for Puerto Rican communities so that they may achieve social transformation and economic self-sufficiency through skills development.

Contact: (787) 721-1037 www.fcpr.org

### **AMERICARES**

A health-focused relief and development organization that responds to people affected by poverty or disaster with life-changing medicine, medical supplies, and health programs.

Contact: (203) 658-9500 www.americares.org

### **AMERICAN RED CROSS**

Its purpose is to meet the immediate postdisaster needs of individuals, families, and communities. Explore how they respond to disasters across the country, both big and small, by using their contact information.

Contact: (800) 733-2767 www.redcross.org

### HABITAT FOR HUMANITY OF PUERTO RICO

Habitat works toward our vision by building strength, stability, and self-reliance in partnership with families in need of decent and affordable housing. Habitat homeowners help build their own homes alongside volunteers and pay an affordable mortgage.

Contact: (787) 368-9393 www.habitatpr.org

### **REIMAGINA PUERTO RICO**

Presents pathways to resilience and resources for building, financing and policy.

Contact: (787) 324-1703 www.resilientpuertorico.org

### **MERCY CORPS**

Offers cash grants, technical assistance, workshop hosting, business development training, and support to community organizations.

Contact: (800) 292-3355 / (503) 896-5000 www.mercycorps.org

### **OXFAM INTERNATIONAL**

Partners with communities to protect vulnerable populations and rebuild homes and infrastructure.

Contact: +254 (0) 20 2820000 www.oxfam.org

### **HEART 9/11**

HEART 9/11 provides hands-on training for resilient construction techniques and volunteer roof repair.

Contact: Bill Keegan, billkeegan@heart911.org https://heart911.org/

### PARA LA NATURALEZA

Fosters tourism by restoring cultural and natural assets.

Contact: (787) 722-5834 https://www.paralanaturaleza.org/en/

### **RESILIENT POWER PUERTO RICO**

Designs and installs solar power in homes and community centers.

Contact: (787) 289-9494 info@marvelarchitects.com

# PUERTO RICO SCIENCE TECHNOLOGY AND RESEARCH TRUST

Builds economic capacity and offers educational programming on resilience and well-being.

Contact: (787) 523-1592 https://prsciencetrust.org/

### **ISRAAID**

IsraAID works toward providing access to safe water, mental health, and psychosocial support to communities recovering from Hurricane Maria.

Contact: 972 (0) 3 947 7766 http://www.israaid.org/contact

### PARALLEL 18

Promotes entrepreneurship in Puerto Rico. Welcomes innovators from around the globe to help them scale from Puerto Rico to global communities beyond the island.

Contact: cobi @parallel18.com https://parallel18.com/about.html

### **COLMENA 66**

Non-profit organization that helps to open a business or supports business growth.

Contact: (787) 525-4111

https://www.colmena66.com/en/home

### **CAFE CORMO**

First organic certified coffee plantation in Puerto Rico. Offers courses and certificates unique to the island.

Contact: (787) 600-2332 http://www.uprutuado.edu/academicos/proyectos/cafe-cormo

### GRUPO GUAYACAN, INC.

A non-profit organization that aims to develop, strengthen, and advance Puerto Rico's entrepreneurial ecosystem.

Contact: (787) 641-6028

https://www.guayacan.org/about-grupo-guayacan/

### **ASPIRA**

Provides educational services to children, youth, and economically disadvantaged adults in Puerto Rico. Its programs are aimed at the full development of a person, family, and community.

Contact: (787) 641-1985 https://www.aspirapr.org



# **WORKING WITH YOUR CONTRACTOR**

### TIPS TO SUCCESSFULLY FIND AND CHOOSE BETWEEN SMALL OR LARGE CONTRACTOR COMPANIES

Inform your contractor that you are rebuilding for resilience, and that you want to reduce damage and carry out replacement works in the event of a future natural disaster. Show them this guide, discuss what you would like them to work on, and if they

have experience with any of the guide's strategies. Contact local contractor associations and the Better Business Bureau (BBB) to confirm past references and complaints.

### **BEFORE ENTERING INTO A CONTRACT:**

- ► Set up a formal service agreement (contract for services) with your contractor outlining scope or work scheme, budget, timeframe, and payment schedule. The contract should be signed by the homeowner and contractor. Note: See the AIA Standard Service Agreement below. In the agreement, specify a minimum of 10% retainage on each invoice to the contractor to ensure quality control and progress. Note: This is the best practice in the building industry.
- ▶ Identify a person in yo ur household, neighbor, or friend who can provide quality control oversight of contractor at certain junctions and can function as the owner's representative, especially if the owner has little to no building experience.
- ▶ Before signing the contract, determine whether you save on costs by offering to directly purchase materials and confirm this process with the chosen contractor.
- ▶ On larger projects, consider getting a performance bond to ensure that the work is completed on time and per its established scope.

# With the bond, an insurance carrier guarantees

Show credentials and references.

THE CONTRACTOR SHOULD DO THE

**FOLLOWING:** 

- ▶ Be registered with the Department of Consumer Affairs (DACO, by its Spanish acronym).
- ▶ Give you the address of his office or business headquarters, phone number, and employee identification.
- ▶ Provide evidence of public responsibility insurance and insurance for any damage to your structure. Also state insurance for the workers, as well as payment and performance bond if required.

the payment and/or the performance of the contractor.

- ▶ Provide a contract that includes:
- ► Signed copy of plans and specifications that is approved by the Permits Management Office (OGPe, by its Spanish acronym)
- ► A construction permit granted by OGPe
- ► Employees' insurance from the state for the duration of the construction period
- ► List of the work to be done and expected costs

### AFTER JOB COMPLETION AND UPON FINAL **PAYMENT:**

- ► Have a third party who is knowledgeable about construction (either an architect or engineer [if it is in your budget], or another contractor) inspect the completed work or "commission" the work before final payment. Do not pay for work that is not completed or lacking in quality.
- ► Ask for a set of as-builts (drawings) for completed work.
- ► Get the Certificate of Occupancy before closing out the job and paying for all work
- Ask for a manufacturer's warranty on all equipment to be provided at end of the project.

- ► Ask for labels and specifications on finishes and major equipment installed in case you need to call the manufacturer or make future household repairs.
- ▶ Obtain proof and receipts of payment for all the materials bought for the job and their warranties.
- ► Consider asking contractor for a lien release or waiver which is a legal document signed by a contractor, subcontractor, materials supplier, or equipment lessor stating that they have received payment. This can protect you from future liens against your property.

- ► Work itinerary that includes the start and expected end date
- ► Number of workdays, excluding holidays
- ▶ Penalties for delays
- Specify a paying method of which you can retain 10% until the job is finished.
- Provide warranties for the work and materials used.

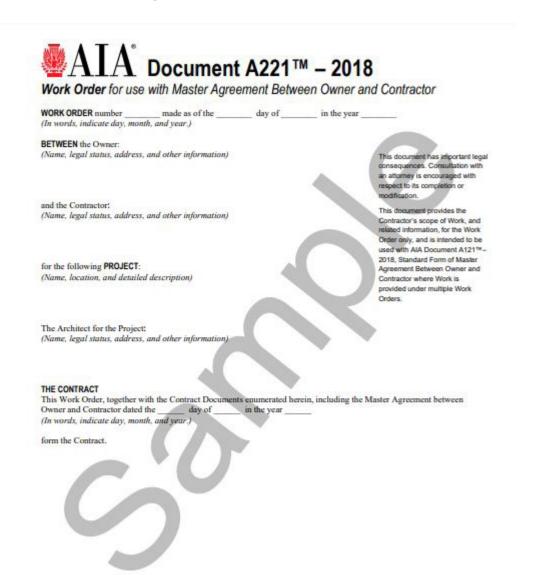
- ▶ Not ask you for money in advance for materials.
- ► Construct by code and as designed by the architect or engineer.
- ▶ \*Note: You should maintain a record of the days the contractor has worked, track the progress of all replacement/repair work, and be present during any inspections.



# **WORKING WITH YOUR CONTRACTOR**

Example of a template contract that can be used between a homeowner and contractor. This template agreement is provided for free and can be downloaded from the AIA webpage.

Utilize the AIA standard form of contract where payment is a stipulated sum: https://contractdocs.aia.org/PreviewFiles/Preview\_A101-2017.pdf.





American Institute of Architects Sample Contract Template

08 PUTTING IT ALL TOGETHER 08



# **INSURING YOUR PROPERTY**

Always purchase sufficient insurance for your property to ensure your home and assets as well as to proceed with the necessary rebuild and repair efforts after an emergency or a natural disaster.

As you determine your resilience improvements, it is important to understand the implications any building improvement may have on your property insurance premium or deductible, if applicable. Here is a list of sample questions to ask your insurance agent. If you

don't have insurance, these questions might help you identify how much your insurance policy would be if you implemented resilience improvements.

Be careful when you negotiate for a cheaper insurance premium (monthly payment) in exchange for higher deductible. If you don't have funding to cover the deductible if there is an event, you won't be repaid by insurance!

### QUESTIONS TO ASK YOUR INSURANCE AGENT:

- ▶ Will your property be valued at actual cash value or 100 % replacement cost?
- ► How much is my deductible—the amount that needs to be paid before insurance can be paidand as yourself do I have that funding on hand should an emergency occur and claim needs to be filed.
- ▶ What other kinds of insurance will you need?
- ▶ Are any of your property coverage policies subject to a co-insurance penalty if your values are understated?
- ▶ Does your policy cover the cost of required upgrades to code (law and ordinate coverage)?
- ► Do I pay deductibles on a per asset basis or per policy basis?
- ► What does your policy require you do if a claim is made?

► What kind of documentation does your insurance company require?

- ► Are you fully covered for loss of income (loss of rent) and extra expenses during a business interruption caused by a disaster? If so, how long is such coverage provided? Is coverage provided for loss of rent or extra expenses incurred both because of on- and off-premises interruptions?
- ► Are you covered for the actions of a government authority that requires evacuation or limits access to a property?
- ▶ How will putting in effect a disaster management plan or upgrading infrastructure to mitigate the impact of a disaster affect your rates or your ability to obtain coverage?
- ► Is there a separate environmental and hazardous materials coverage in addition to other coverage?
- ➤ Do you have appropriate coverage for hazards common in your area (flood, earthquakes, wildfires, etc.)? Does this coverage exist?

List of home insurance providers for flood and other climate hazards in Puerto Rico as of the date of this publication:

American International Group Multinational Puerto Rico

Tel. (787) 767-6400 Tel. (787) 758-8080

Antilles Insurance Seguros Multiples

Tel. (787) 474-4900 Tel. (787) 758-0101

Integrand Assurance Triple-S

Tel. (787) 781-0707 Tel. (787) 749-4600

QBE Insurance Universal

Tel. (787) 765-2100 Tel. (877) 641-7171

MAPFRE USIC group

Tel. (787) 250-5200 Tel. (787) 273-1818